PROFESSIONAL DEVELOPMENT OF ACADEMIC STAFF IN PRIVATE HIGHER EDUCATION

by

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CONTENTS

CHAPTER 1: RESEARCH ORIENTATION

CHAPTER 2: THEORETICAL FOUNDATION

CHAPTER 4: RESEARCH IN ACTION

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

A   Ethical clearance

B   Proof of editing

DECLARATION OF ORIGINALITY

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Declaration

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2.   I declare that this thesis is my own original work. Where other people's work has been used (either from a printed source, the Internet or any other source) it has been properly acknowledged and referenced in accordance with departmental requirements.

3.   I have not used work previously produced by another student or any other person to hand in as my own.

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DEDICATION

This thesis is dedicated to my beloved son, Erné Boshoff, who unexpectedly passed away during the final stage of my studies.

Erné was a living example of the true meaning of living with one's vision in mind and creating one's own living theory while living life, whatever the odds. Firmly believing in his Creator, he saw any obstacle in life as a bend in his road and not the end of the road.

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Oh merciful Lord, how I need to thank Thee …
for walking this long road with me
through both dark and sunny days
providing blessings in many ways.

All my glory unto Thee
Creator and Holy Father of me

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- The management of the Production Management Institute of Southern Africa (Pty) Ltd. (trading as PMI) for granting me permission to use the Institute as research ground, for the financial support provided at the onset of the Professional Development Programme (PDP) and for allowing me to use the physical resources of the Institute.

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- All the participants of the PDP and the interview respondents who provided me the opportunity to construct a deeper understanding of my living practice as mentor in order to improve my own living educational theory.

- My parents for their unconditional love, understanding, support and prayers that carried me through the tiring times while my candle was burning from both ends.

- My children and grandchildren for their continuous support and understanding that there was little time for visits in Simonstown.

- In memoriam, my youngest son Erné, who through his unknowing final motivational e-mail message to friends, carried me through the final tiring and stressful stages of this thesis and whose message prevented me from giving up the battle.

- All my family members, colleagues and friends for the encouragement to continue till the end and for being my messengers in prayer of mercy and strength.

ABSTRACT

A common phenomenon in the private higher education environment is that lecturers are highly qualified subject specialists and conduct research mainly in areas in their fields of expertise. Therefore they are not always well informed about the dynamics of the global educational environment and they do not have an in-depth knowledge of how learning takes place. As a result of this the traditional lecturing style is mainly used during contact sessions and mostly theoretical knowledge is assessed in written examinations.

During class visits that were conducted as part of my duties as quality assurer of the teaching, learning and assessment that take place in the Production Management Institute of Southern Africa (Pty) Ltd (trading as PMI), a private higher education institution, it was noticed that the facilitators of learning present mostly lectures that are based on one-way communication with very little student participation. Learning style flexibility and allowing active student participation during the contact sessions are, in most instances, not considered. This lecturer-centred practice prevents the students from developing responsibility for their own learning process and creating an interest in becoming lifelong learners.

An action research-driven professional development programme was presented to the academic staff of PMI to allow them the opportunity to develop innovative facilitation of learning practices. The programme aimed to create a scholarly approach to establishing a culture of lifelong learning in the private higher education environment – in literature commonly referred to as a scholarship of learning and teaching.

The academic staff members conducted action research on their own practices as facilitators and assessors of lifelong learning. I conducted living theory action research on my style of being a mentor for the participants of the project.

The programme commenced in 2009. The content of and the level on which the programme was presented are in line with a Postgraduate Certificate in Higher

Education (PGCHE) that is offered at a public institution. The participants were introduced to, inter alia, the principles of the Ned Herrmann Whole Brain® theory, Gardner's multiple intelligence theory and Bloom's taxonomy of cognitive levels.

As the first step in the programme all the participants completed the on-line Herrmann Brain Dominance Instrument® (HBDI®). An accredited Hermann Brain Dominance practitioner was contracted to provide feedback to the participants and to explain the principles of this instrument. The HBDI® practitioner is affiliated on a full-time basis with the education faculty of a public higher education institution. He was contracted to facilitate the professional development programme as well.

The success of the programme became evident through student feedback and requests, and feedback received from the participating facilitators of learning. Top level management of PMI also became aware of the successes and it resulted in the inclusion of the development of the academic staff members as one of the main focus areas in the strategic management plan for 2010. It was decided that the programme should be repeated every year in order to ensure the continuous professional development of existing and new academic staff members. PMI was invited to offer the programme in the Agriculture and Science Faculty of a public university.

Parts of the project were showcased at the 2010 and 2012 conferences of the Higher Education Learning and Teaching Association of South Africa (HELTASA) and the Knowledge 2011 international conference.

KEYWORDS:

Action research, continual professional development, Herrmann Whole Brain®, innovative facilitating learning, learning style, lifelong learning, living theory, mentorship, posters, sing-along learning.

ABBREVIATIONS AND ACRONYMS

AoC	Advancing of Credits
AR	Action research
CHE	Council on Higher Education
CO	Critical outcomes
DHET	Department of Higher Education and Training
DHETP	Diploma in Higher Education and Training Practice
DO	Developmental outcomes
DTE	Diploma in Tertiary Education
HE	Higher education
HEI(s)	Higher education institution(s)
HELTASA	Higher Education Learning and Teaching Association of South Africa
HEQC	Higher Education Quality Committee
HEQF	Higher Education Qualification Framework
NQF	National Qualifications Framework
NSAFG	National summative assessment format guidelines
NSF	National Skills Fund
PDP(s)	Professional Development Programme(s)
PGCHE	Post-graduate Certificate in Higher Education
PMI	Production Management Institute of Southern Africa (Pty) Ltd (Trading as PMI)
SAQA	South African Qualifications Authority
SETA(s)	Sector Education and Training Authority (ies)

GLOSSARY

Alternative methods: Facilitating and assessing learning in ways other than the traditional lecturing style and tests and examinations.

Edutainment: The use of media or activities that will ensure that learning takes place and at the same time provide entertainment and enjoyment for the student.

Eish: An expression used by black Africans in South Africa to display emotions such as astonishment, surprise, grievance, discouragement, dissatisfaction and scepticism.

Hawthorne effect: A phenomenon in which human subjects in behavioural studies or an experiment change their behaviour or performance in response to being observed.

Paradigm: "A conceptual system containing basic assumptions on how the world operates" (Baronov 2004:77).

PESTEL analysis: An environmental analysis of the possible national and/or global influences on a business. The aspects included in the analysis are the political (P), economic (E), social (S), technological (T), natural environmental (E) and legislative (L) environments.

CHAPTER 1

RESEARCH ORIENTATION

1.1   INTRODUCTION

The Chinese philosopher Lao-Tzu (604 BC-531 BC) once said that "a journey of a thousand miles begins with a single step" (Moncur 2004). When planning my journey of a thousand miles to personal and professional development for myself and the academic members of staff who are contracted by the exemplar institute, my first question was: Where do I begin? Moncur (*id*) provided the answer by saying that Lao-Tuz's saying can also be interpreted as "even the longest journey must begin where you stand".

You are invited to join me and the participants on our journey towards personal and professional development and/or transformation. This chapter informs you about the context in which the study was undertaken, the main driving forces, the aim and the objectives of the study and you are informed about the relationship between the different role players in the study. I inform you about my life experiences, thoughts and preferred ways of thinking and learning since childhood, which underpin my epistemological foundation. By sharing my experiences you may learn about the value that was added to my life and the lives of others on my journey to finding the answers to my ontological questions: "Am I who I am supposed to be?" and "Do I fulfil my purpose in life?"

1.2   INTRODUCING THE LANDSCAPE AGAINST WHICH THE STUDY TAKES PLACE

In a dynamic global economic environment all businesses strive to achieve the highest level of productivity and standards of quality in order to obtain a competitive advantage.   Many businesses invest large amounts of money and time in the education and training of their employees in order to reach these high standards.

Once acquired, these high standards will allow businesses to be more successful than their competitors.

As part of the team of main role-players in the higher education (HE) environment, both public and private higher education (PHE) service providers have to ensure that productivity and high quality standards are maintained in their respective institutions. The main aim of HE service providers should be to produce graduates who can contribute to making their countries key players in a global economy (Ministry of Education 2001:2). This view is strongly supported by the New Zealand Ministry of Education in its tertiary education strategy document for 2010 to 2015 (New Zealand Ministry of Education 2011). The New Zealand government invests approximately $4 b in higher education each year (*id*:3).

In his 2009 budget vote speech, Dr Blade Nzimande, the Minister of Higher Education and Training in South Africa, said that his department would propose a range of measures to enhance and expand both further education and training and higher education and training opportunities for adults. He pointed out that the field of adult education and training needs re-invigoration, therefore particular attention will be paid to improving success, throughput rates and the quality of higher education experiences. Nzimande stated that approximately 2,8 million of 18- to 24-year olds were neither in employment, nor involved in education or training. This implies that nearly 40 percent (40%) of the South African youth are not productively engaged. He stated that this situation "is a huge wastage of human potential and a squandered opportunity for social and economic development" (Politicsweb 2009). In 2010 it was reported that in a speech prepared for delivery at the National Skills Summit in Pretoria, Nzimande again said that the skills challenge in South Africa needed to be addressed by using universities, universities of technology, colleges and SETAS. Nzimande added that improved synergy and closer working relationships should exist among the institutions that he had mentioned (News24 2010).

With the huge emphasis that has been placed on skills development since 1994 it is important to realise that not only investments in the development of hard skills such as artisan skills can be claimed from the National Skills Fund (NSF),   Investments

made in the development of soft skills such as managerial skills, which are offered by both public and PHEIs, can also be claimed from the NSF. The NSF was established in 1998 under section 27 of the Skills Development Act 27 of 1998 (RSA 1998). It receives 20 percent (20%) of all skills development levies, interest and penalties collected in respect of each SETA, as required by sections 8(3)(a) and 9(a) of the Skills Development Levies Act 9 of 1999 (SabinetLaw 2011).

Soft skills development can be offered on HE level through formal Council on Higher Education (CHE) accredited and South African Qualification Authority (SAQA) registered qualifications that include a work-integrated practical application component as well as through Sector Education and Training (SETA) accredited qualifications. A few examples of SETA accredited, unit standard-based HE soft skill qualifications are the NQF level 5 National Diploma: Occupationally Directed Education, Training and Development Practices (SAQA ID 50333 – EDTP SETA), the NQF level 5 National Diploma: Contact Centre Management (SAQA ID 21792 – Services SETA) and the NQF level 6 Diploma: Local Government (SAQA ID 35956 – LG SETA) (SAQA 2013). More practically-orientated skills training that is offered on HE level comprises courses/modules such as end-user computing, computer-based architectural and technical drawings, clothing manufacturing techniques and food preparation techniques, to mention but a few.

In order to provide better opportunities in HE the South African government planned to allocate large amounts of money to HEIs (estimated at R19,9 b in 2010), skills development through the SETAs and the NSF (estimated at R21,9 b in 2010) (Politicsweb 2009).

Although the large amounts of money mentioned above were allocated to HE, it can still be said that Government has limited resources to provide adequate education and training services in comparison with the skills shortage that is experienced in South Africa. It has been said that the NSF delivery is hampered by "limited skills development and training infrastructure" (SabinetLaw 2011). This view was based on a statement made during a presentation to members of the parliamentary portfolio committee on higher education and training in 2011, when it was conceded

that the NSF had been "characterised by under-spending" ever since its inception (*id*).

PHEIs can assist in reducing the shortage in educational services in the HE environment on condition that the quality of learning that takes place in the PHEIs is on the same level as, or even better than the quality of the learning that takes place in public HEIs. The importance of high quality HE delivery was emphasised by Nzimande when he stated in 2010 that "while we are mindful of the need to maintain and improve the quality of education and training we must also be bold in expanding enrolments, and thus opportunities, while not compromising quality" (News24 2010). The quality of learning that takes place in an educational institution relies heavily on the professional abilities of the academic staff of the institution. For this reason, if PHEIs want to be recognised as worthwhile contributors to the necessary infrastructure for HE in South Africa, they have a responsibility to invest in the professional development of their academic staff.

When considering Nzimande's vision to enhance and expand higher education and training opportunities for adults, one can envision an increase in the number of students who study after hours on a part-time basis and who are employed on a full-time basis. The funding for the studies of part-time students, who are employed on a full-time basis, may be carried by their employers as part of their organisation's skills development plans. The employers can then claim the financial investment in the development of their employees from the NSF. Although PHEIs do not receive any financial grants from Government, they will still be able to assist with the provision of additional educational services, as they will benefit from an increase in student numbers with the possibility of a lower risk of financial losses. The latter will result from the situation that the employers of the students will be the primary clients of the PHEIs and the students will be secondary ones. Financial risks may be prevented through carefully designed service level agreements between the employers of the students and the PHEIs.

Many PHE service providers are entering the HE market as they have identified the opportunity of an increase in student numbers. In their 2003/2004 annual report the Council on Higher Education (CHE) indicated that there were 79 registered private

higher education institutions (HEIs) and in 2008 there were 15 additional provisionally registered PHEIs (CHE 2009). This is an increase of nineteen percent (19%) in a period of four years. In 2011 there were over a hundred institutions registered with the Department of Higher Education and Training offering higher education learning and whose programmes had been accredited by the CHE (CHE 2011:23). The increase in the number of accredited PHEIs has resulted in a more competitive PHE market. PHEIs can create a competitive edge by continuously improving the quality of learning that takes place in the institution. The professional development of the academic staff of an institution can be used as one of the possible ways of achieving a competitive edge based on the quality of teaching (traditional term still used by the CHE and the DHET) and learning that takes place in the institution.

In order to prevent exploitation of the students in the form of paying high tuition fees in return for qualifications that are not accepted nationally or internationally and to ensure standardised quality of education and training on HE level, various controlling bodies and structures of standards have been created and are controlled by Government. Apart from the National and Provincial Departments of Education (DoE) and the Department of Higher Education and Training (DHET), examples of these quality controlling bodies and structures that ensure quality in the HE environment are the Council on Higher Education (CHE), the Higher Education Quality Committee (HEQC), the Higher Education Qualification Framework (HEQF), the South African Qualifications Authority (SAQA), the National Qualifications Framework (NQF) and Sector Education and Training Authorities (SETAs). Accreditation by and registration with the different bodies assure the students of the validity and credibility of the qualifications that they obtain through studying at an accredited and registered PHEI.

1.3   CONTEXT OF THE STUDY

In order for the reader to understand the context of the study fully, information is provided regarding the exemplar Institute and the relationship between the parties involved in the project.

Smit (2001:66) states that in qualitative research the data is collected mostly through the interpretation, understanding and the meanings that are constructed by researchers and therefore the latter can be regarded as the primary research instrument as they are part of the research at all times. In this regard Möller, Higgs and Deacon (2003:112) explain that in hermeneutic research an author cannot be separated from his or her text. Readers of qualitative research reports should be offered the opportunity to gain knowledge about the author in order to be able to "place themselves in the author's shoes". When readers are informed about the context from which the author departs, they most probably will be able to interpret and understand the views of the author better. For this reason I include an introduction of myself. Throughout the thesis I share my reflection on my life experiences in an attempt to initiate any reader's understanding of the different contexts from which I depart in the discussions relating to the different activities in the study and the aspects considered during reflection sessions.

1.3.1   The exemplar Institute

The Production Management Institute of Southern Africa (Pty) Ltd, trading as PMI, is a PHE service provider that has existed for more than three decades. It has a reputation for the delivery of relevant and tailored education programmes that enhance productivity at all levels of employment in a wide range of industries. PMI has access to a considerable network of resources, both locally and internationally, through affiliation with many businesses of different sizes and from different sectors. These affiliations allow the management structure to identify best practice trends locally and globally. PMI is accredited by the Higher Education Quality Committee (HEQC) and registered with the Council on Higher Education (CHE), the Department of Higher Education and Training (DHET) and various Sector Education and Training Authorities (SETAs) (PMI 2010).

The qualifications that are offered by PMI range from level 1 on the NQF to post-graduate level. These include bridging courses and learnerships on levels 1 to 5 on the NQF and six qualifications on HE level. Various short courses are also offered by the Institute. Some of these short courses are credit-bearing courses linked to different levels on the NQF.

Table 1 displays the alignment of the different qualification types in line with the different bands on the 8 level NQF.

Table 1: The structure of the NQF (SAQA 2006)

NQF LEVEL	BAND	QUALIFICATION TYPE
8 7 6 5	Higher Education and Training	• Doctorates • Master's degrees • Professional qualifications • Honours degrees • National first degrees • Higher diplomas • National diplomas • National certificates
Further Education and Training Certificate (FETC)		
4 3 2	Further Education and Training	National certificates
General Education and Training Certificate (GETC)		
1	General Education and Training	Grade 9 ABET Level 4 National certificates

The NQF levels referred to in this thesis are the levels on the NQF as applicable until the end of May 2009. At the time of completion of the study, the process of the re-alignment of the qualifications offered at PMI against the levels of the new Higher Education Qualification Framework (HEQF) had not been completed yet.

Table 2 displays the proposed alignment of the different qualifications on the new HEQF structure.

Table 2: The structure of the proposed new HEQF (DoE 2007: 19-29)

BAND	NQF LEVEL	QUALIFICATION TYPE
Higher Education and Training	10	Doctoral degree
	9	Master's degree
	8	Bachelor Honours degree Professional Bachelor degree Post-graduate diploma
	7	Bachelor Degree Advanced Diploma
	6	Diploma Advanced Certificates
	5	Higher Certificate

To ensure national and international readers' understanding of the explanations of the concepts in question it is important to mention that PMI uses terminology based on the definitions provided by SAQA (2000:5). SAQA (*id*) indicates that:

> By programme we mean a coherent set of courses, leading to a certain degree. In a programme we can distinguish a core curriculum and optional courses, together making up the different ways a student can choose to arrive at the degree.

Some HEIs, both public and private, use the term *module* when referring to a course. For clarity sake the format *course/module* is used when referring to the different courses included in the qualifications offered by PMI.

1.3.2   Different parties involved in the project

PMI mainly focuses on recruiting organisational clients and therefore the students are adults who are employed on a full-time basis and are enrolled for part-time studies. The clients enroll their employees for courses that are related to their daily working environment with the main aim to improve the employees' productivity levels and the general quality level of their work output in the workplace. Many organisations work in close partnership with the Institute and use the students'

research projects as tools to bring about innovative changes and improvement in the organisation in order to develop a competitive edge and to become leaders in their respective industries.

It is important to explain the relationships of the different parties that were involved in the project for the reader to understand the client base of the exemplar Institute and how the relationships could have had an influence on aspects such as the ethical considerations of the study (Figure 1).
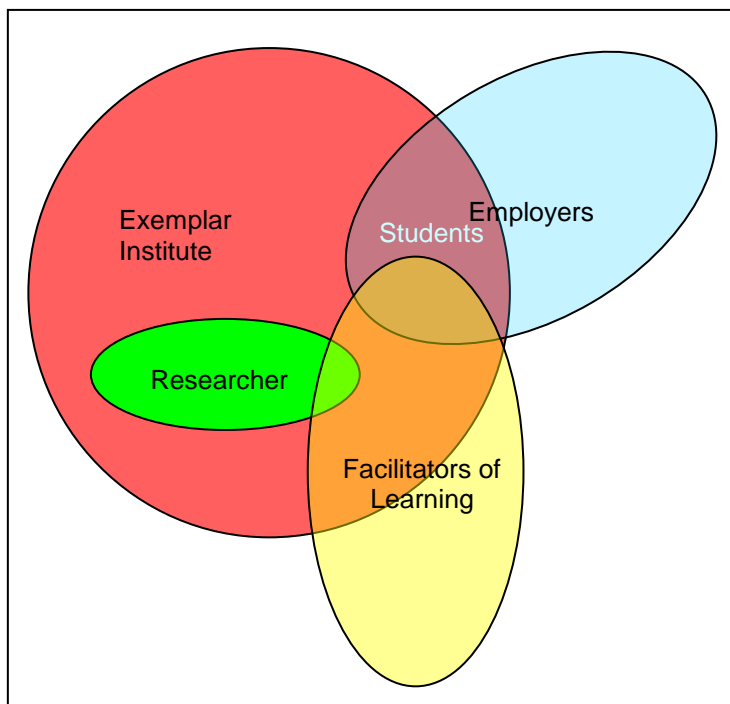
Figure 1: Relationship of participants in the study

- I am a permanent full-time employee of PMI, the PHEI in which the case study-based AR project was conducted. My main responsibilities are the quality assurance of the learning and assessment processes that take place in the Institute. I am also responsible for all staff development initiatives. I have to fulfil multiple roles such as researcher of my own practice, as quality assurer and being a mentor for the participating staff members in professional development programmes (PDPs) that are offered to all staff members, both full-time and part-time, that are employed by PMI Gauteng.

- I am not fully in control of the facilitators of learning as they only report to me regarding the academic part of their relationship with PMI. The operational and administrative part of their relationships, such as contracting, scheduling and mark submissions, is controlled by the Divisional Manager: Operations.

- All the facilitators are part-time contractual employees of PMI and are full-time employees at organisations in industry.

- The students' employers are the primary customers of PMI as the Institute entered into contractual agreements with the employers for being the service provider for the educational development of their human resources.

- The students are the secondary customers of PMI and are all part-time students who are permanently employed by organisations in industry that are the primary customers of the Institute.

1.4   THE MAIN DRIVING FORCES

By reflecting on my experiences as student, facilitator and assessor of learning, quality assurer of learning and assessment, action researcher and mentor for participants in professional development programmes in the public and PHE environment for more than a decade, the following concern became the main driving force of the research study under discussion.

In the HE environment it is a common phenomenon that lecturers are highly qualified in their fields of expertise but many lecturers have never experienced any or only limited educator professional development. Therefore they do not have an in-depth knowledge of how learning takes place and how to facilitate the learning process. Lecturers are also not aware of the different alternative assessment approaches that can be implemented.

Subject specialists conduct research mainly in areas in their fields of expertise and therefore they are not informed about the dynamics of the global educational environment. As a result of this the traditional lecturing style is mainly used during

contact sessions and mainly theoretical knowledge is evaluated (traditional term used on purpose) in written tests and examinations.
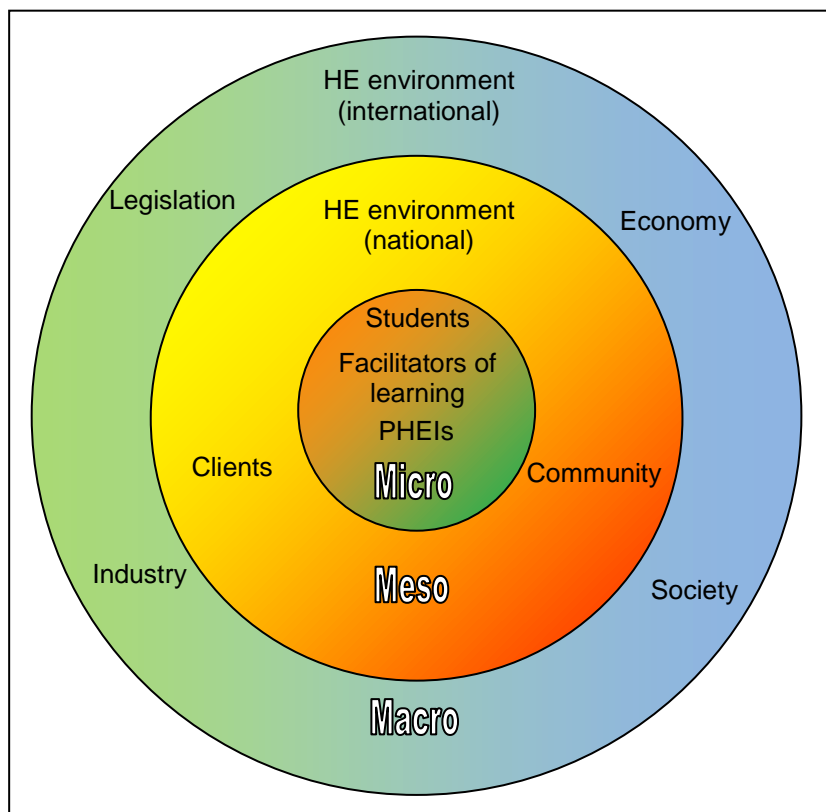
Figure 2: Elements in the environment that can be influenced by this study

Figure 2 illustrates the different elements in the environment that might be influenced by this study. The grouping of the elements was done according to the context of the study.

The need for conducting this research is substantiated in two ways. Firstly it refers to the immediate effects on the micro-environment (Section 1.4.1.1) if the status quo is maintained and secondly, the influences of the meso- and macro-environments (Section 1.4.1.2) are considered.

1.4.1   What if the status quo is maintained?

The situation as described above can have the following direct results, each of which on its own can become a major concern on a national level.

1.4.1.1   Micro-environmental perspective

If no attention is given to the continuous improvement of the quality of learning that takes place in PHEIs, it can have a direct influence on the students, the academic staff members and on the PHE service providers in the following ways:

- **Students**

If the qualifications that the students obtain at PHEIs do not allow them entrance to further studies at other private or public HEIs, they may become de-motivated and they may lose interest in becoming lifelong learners. Such students are then deprived of their democratic right to progress in order to reach their full potential.

The students may not master the knowledge and develop the necessary skills and competencies to be able to change their socio-economic situation for the better and to contribute towards the social development needed in their communities. Some of the skills and competencies needed to progress in today's socio-economic environment and to development the community and society can be listed, inter alia, as critical thinking abilities, entrepreneurial skills, creative problem solving and innovation, leadership skills such as team and relationship management that can result in successful change or transformation for individuals or communities, the ability to empower others through coaching and mentoring, technical skills (the ability to do the job of those whom you manage) and technological knowledge and skills for use as a support system in the daily lives of human kind. The most important skill that is needed to be able to develop all the skills and competencies mentioned above is meta-learning or meta-cognition (the ability to learn about one's own learning and thinking processes (Woolfolk 2007:267) (Section 2.3.5.1).

Additional stress may be placed on graduates when employed in industry if they cannot solve problems and execute tasks responsibly and as independent professionals. The additional stress can be a result of it being assumed that their studies have equipped them to handle their tasks and responsibilities with ease.

- **Facilitators of learning**

Facilitators of learning are generally perceived by the broader society as the main factor for success in the learning process. Therefore they are usually the first to be blamed for the poor performance of students in the world of work after students have completed their formal studies.

If facilitators of learning do not expand their knowledge, understanding and experience regarding the different learning and thinking processes preferred by individuals (their own and those of the students), their methods of facilitating and assessing learning will become obsolete. This can result in their not being contracted by the PHEIs as facilitators of learning and this can have a detrimental effect on their personal socio-economic status and contribute to unemployment in the country.

- **HE service providers**

The credibility and validity (GIED 2004:2-3) of the qualifications offered by PHEIs might be at risk if the students exit with very high marks, achieved by completing assessment tasks based mainly on rote learning. This will result in the situation that other institutions, both public and private, will not accept the students for further studies after completing their studies at PHEIs; it will have a negative effect on both the tangible and intangible assets of the institutions. The assets that will be influenced immediately if an institution loses its credibility are financial assets and the image of the institution.

If a loss of tangible and intangible assets is experienced by an institution, the institution concerned will lose its space in the market and will experience a decrease in profitability. This can in turn result in a loss of job opportunities for the employees of that institution.

1.4.1.2 Meso- and macro-environments

The meso-environmental factors refer to the direct external influences on PMI,

namely its clients, the community in which it operates and the South African private and public HE environment. The macro-environment refers to the indirect external influences on PMI, namely the industry on which the qualifications offered by the Institute is focusing, national legislation relating to both private and public HE in South Africa, the prevailing economic situation of the country, society at large and the international HE environment.

There is a very thin line between the influences that this study might have on the meso- and the macro-environments in which the study takes place and vice versa. For this reason it was decided not to make a clear distinction between the meso- and macro-environments in this section. The influences from the meso-environment might ultimately also be influences from the macro-environments and vice versa. Table 3 displays examples of the ways in which the meso- and macro-environments can influence one another and ultimately the Institute.

Table 3:   Ways in which the meso- and macro-environments can influence one another

TYPE OF ENVIRONMENT		INFLUENCING FACTORS
MESO	Clients of the Institute	Research conducted by the students of PMI can, for example, result in the improvement of products produced in the students' employing organisations, through innovative utilisation of orginisational assets suggested by the students. Industry can be informed about the successes through industry-related interest groups and publications. Successful research supervision done by facilitators of learning can ensure good research outputs and PMI can ensure its place in the market.
MACRO	Industry at large	Changes in the industry in which the client operates can force the client to improve the products or processes or adapt to the changes in and demands made by industry; for example, the manufacturer of motor vehicle spare parts must adapt its product to new specifications set by the motor industry. Industry-related legislation, e.g. the disposal of waste material, will force the client to adapt to the standards

TYPE OF ENVIRONMENT	INFLUENCING FACTORS	
		set by legislation. PMI must then adapt its learning material to stay abreast of the changes in industry and the facilitators of learning must familiarise themselves with the new information.
MESO	HE environment (national)	In order to be accepted in the HE environment and to keep its place in the market, PMI constantly has to find ways in which it can create a competitive edge. For this reason benchmarking is regularly done against other PHEIs as well as public HEIs. Information can be received and PMI can showcase its successes achieved by means of, for example, action research (AR) (Section 2.3) development projects e.g. at conferences such as the annual Higher Education Learning and Teaching Association of South Africa (HELTASA) conferences.
MACRO	National legislation and international HE environment	National legislation set standards for the accreditation of all HEIs, both private and public. In some instances the legislating bodies change legislation according to findings of international research and in a quest to keep the quality of South African education on par with international education, through benchmarking.

Some PHEIs' holding companies are internationally situated and they follow international standards. The private South African based HEIs, such as PMI, must also compete against these PHEIs in the local market. |
| MESO | Community | Every PHEI has a social responsibility towards the community in which it operates. The weaker the socio-economic situation of the specific community, the higher the demand for social community support offered by the Institute. If facilitators of learning facilitate learning in a way that results in lifelong learning for the students, they can be ambassadors for the Institute by sharing their knowledge and experiences in their local communities. |
| MACRO | Society and economy | If the economic situation in the country deteriorates, PHEIs may experience a drop in enrolment numbers as their clients may not have the funds available to, as in the case of PMI, sponsor their employees |

TYPE OF ENVIRONMENT	INFLUENCING FACTORS
	for HE studies. PHEIs do not receive any governmental grants and therefore they might have to declare some of their employees redundant. This will contribute to an increase in the unemployment figures in the country. The higher the unemployment rate, the weaker the socio-economic situation of society. PMI has to offer professional development programmes (PDPs) for the academic staff in order to ensure that the learning that takes place in PMI empowers its clients to keep their respective places in their respective markets to be able to stay economically strong for them to continue enrolling their employees as students at PMI.

More ideas relating to the way in which the meso- and macro-environments can create a need for PHEIs to implement PDPs for their academic staff members are discussed in the sections below.

- **Correlations between the public and PHE environments**

When I became involved in the PHE environment in late 2008, I realised that the same phenomenon that was present in the public HE environment, where lecturers did not have an in-depth knowledge of how learning takes place or how to facilitate the learning process, might also be present in the PHE environment. Before 2008 I was involved in the public higher education environment only and my biggest concerns as a student and facilitator and assessor of learning were the ways in which the learning sessions were presented and the ways in which assessment was conducted.

I was appointed Academic Manager, with the main responsibility to be a quality assurer ensuring that the institute would not lose its accreditation with the Council of Higher Education and its registration with the Department of Higher Education and Training as a PHEI. It also included the task of being the quality assurer of the teaching, learning and assessment processes in PMI, Gauteng. In order to familiarise myself with the prevailing teaching and learning culture of the Institute, I conducted informal class (contact session) visits. While attending these contact

sessions, it became clear that the facilitators of learning are highly educated, well experienced in their specific fields of expertise and well prepared for the contact sessions. However, I noticed that the facilitators of learning presented lectures based mostly on one-way communication. A very small portion of the contact time was used for interaction between the facilitators of learning and the students. Interaction among the students was never used during the contact sessions that were observed. This observation was confirmed during conversations with the administrative programme coordinators, who at that stage were also enrolled students of the Institute.

Learning style flexibility (Romanelli, Bird & Ryan 2009) and allowing active student participation during the contact sessions were not considered when using the traditional lecturing style. Learning style flexibility refers to the principle that individual human beings think differently and they create meaning (learn) in different ways. Therefore different humans benefit from different ways in which learning is facilitated. During a previous AR project (Boshoff 2004b) the students indicated that they do not feel responsible for their own learning processes when the facilitator of learning dictates what they should do and how it should be done. They also do not develop an interest in becoming lifelong learners. One student commented that he does not want to do something that is boring for the rest of his life. This comment relates to the importance of understanding that individual human beings think differently and that they learn in different ways. For this reason a facilitator of learning has to be aware of the different learning theories that can be used to ensure that each student learns in a way that will be most effective for his or her learning process.

Students need to participate in the learning process as learning is not "something done to individuals […], but something that requires participation and empowerment on the part of the student" (Smith & Lovat 2003:71-72); these authors state that learning is the "construction of meaning by the student who utilises it to do something creatively new". The importance of student participation in the learning process goes as far back as Confucius (551-479 BC) who said: "I hear and I forget, I see and I remember, I do and I understand." Many versions of these words can be

found in literature, but the essence is the fact that one creates meaning for oneself and this can only happen through active involvement in the learning process.

In order to familiarise myself with the quality of the assessment practices in PMI at the onset of my employment I analysed a number of the summative assessment examination papers that were used in the Institute. I also analysed examination scripts of the students who sat for the examinations. During these analyses two areas of concern were identified. Firstly, the summative assessment examinations on all levels mainly focused on the theoretical components that are needed to achieve the specific learning outcomes of the course/module. The assessment format allowed very little room for the students to prove competence in using their higher level cognitive skills such as analysis, evaluation and synthesis as described by Bloom (Woolfolk 2007:481).

Secondly, some of the responses to questions in the summative examinations that aimed at assessing the students' ability to apply the theoretical knowledge were almost identical although the students came from different types of industry. The appearance of the same responses was concerning as, in most instances, the questions were posed in a manner that expected from the students to provide examples from their workplace. This created the impression that the students simply needed to repeat the examples that were provided by the facilitator of learning during the contact sessions although they might still lack the ability to apply their theoretical knowledge in different contexts. The level of assessment tasks included in the summative examinations and the similarity in student responses to specific questions correlated with what I encountered as assessor of examination scripts in public HEIs. The correlation between the types and level of questions posed in summative examination papers and the similarity in student responses in both public and private institutions contributed to the belief that the same situation might then also be found when analysing the examination papers and examination scripts in other PHEIs.

If one turns to literature to find evidence that the focus of this research is relevant, it can be mentioned that Mestre (2001:2) mentioned as far back as a decade ago that more research is needed in the areas of facilitating and assessing learning.

Adams and Hills (2007:1) provide motivation for the study when they say that educational institutions often neglect the responsibility of educating their own academics when promoting work-based learning. They indicate that the lecturer (traditional term used on purpose) should be a student of his or her own practice, taught by other academics and supported by his or her educational employer.

- **Clients and industry**

In the case where employers sponsor the employees' studies and allow their employees time off to attend classes, the former may view the time that the employees spend on attending the sessions as a waste if the learning that takes place is not of a high standard. It can be said that the time would be better spent if the employees were productively busy with their daily tasks generating an income for the organisation. This may result in the situation that the employer decides not to support any further employee studies and they will then be deprived of the opportunity to experience professional growth that could help them in advancing in their career paths in the wider industry in which they operate.

The employers might also feel that the financial resources spent on employee studies could be utilised in a better way as the organisation does not receive any return on the investment made in its employees' studies.

Organisations are on a constant quest for zero defect and innovative improvement of their products or services to become leaders in the industry in which they operate. PMI can act as a change agent and consultant for its clients by providing the students the opportunities during their studies at PMI to experience the professional growth needed to develop zero defect processes and innovation in product design and development.

- **Social responsibility of HEIs towards society**

Social reconstructionism is a philosophy based on the belief that the quality of human life can be improved by changing the social order and that people are

responsible for social conditions (Möller et al. 2003:43). Social reconstructionists blame the education system for some societal problems that arise due to a lack of education. They believe that education can be used "as a tool for transforming individuals' lives and shaping a new social order" (*ibid*: 44). This view corresponds with Morley (2003:11) when she states that the concept of a learning society is influenced by the human capital theory that suggests that national prosperity depends on collective and individual cultural capital. Morley (*id*) states that human capital refers to the "stock of individual skills, competencies and qualifications".

Schoeman in Higgs (2004:107) states that "equity is the fair and unbiased treatment of everyone under all circumstances, despite individual differences that may exist" and that "demands for equity in the economic field can only be satisfied if certain conditions are present" (*ibid*: 109). He states that "adequate education and training are prerequisites for worthy citizenship (*id*).

Considering the differences in the South African education system of the past and the current demands for skills development, it can be regarded as a logical reaction to implement staff development practices that will enhance the educators' ability to produce the high-level skills required for the country's social and economic development. Academic staff members should be empowered with the knowledge, skills and competencies, attitudes and virtues to cater for the different skills levels of the students who attend the same contact sessions, in order to achieve equity for all.

As mentioned before, a large percentage of the funding for the studies of the students in PHEIs comes from the skills development funding offered by Government. If the students do not experience any growth after attending the courses, it can be regarded as a waste of the taxpayers' money.

If the students do not develop the necessary skills for progressing towards their full potential, they will not be able to contribute to the transformation and the shaping of a new social order in their communities. This will result in the situation where another generation will suffer inequality as the socio-economic growth of the country will be jeopardised.

- **Legislative point of view**

Looking at the reasons to offer PDPs for the academic staff in a HE institution from a legislative point of view, the following aspects should be considered:

In the South African context, the CHE (2004b:5, 6, 8-12, 16, 18 and 2004c:8, 11, 13, 14, 16) sets clear standards regarding the professional development of academic staff as facilitators and assessors of learning.

The CHE (2004b:9, 10 and 12) emphasises the fact that continuous opportunities should be provided "for academic staff to enhance their competencies and to support their professional growth and development" (CHE *ibid*: 9). The CHE (*id*) is very specific about the fact that the academic staff should be supported in the professional development of both their "teaching" (facilitating of learning) as well as assessment competencies.

Seeing that the facilitators of learning in the HE environment usually fulfil the dual role of facilitator and assessor of learning, it is important for them not only to develop the competencies to create innovative learning-centred interactive learning experiences that will allow for learning style flexibility (explained previously in this section). Facilitators of learning must also be able to develop innovative assessment tasks, apart from written tests and examinations, which will accommodate the different learning style preference of the students. The assessment tasks must also assess the students' ability to use higher level cognitive skills such as the ability to analyse and evaluate information and to create innovative solutions as part of problem solving.

The facilitators and assessors of learning must in actual fact develop their own creative and innovative abilities in order to be able to change their facilitating and assessing of learning practices by moving away from the traditional lecturing style and assessment conducted through written tests and examinations. They can, for example, plan interesting and challenging learning and assessment tasks to be used in their practices. For example, case studies can be developed to include a problem to be solved as a learning activity while facilitating learning during a contact

session, while at the same time, it can be used to assess the level of learning that took place during a previous contact session. The simultaneous use of a case study as a learning activity and as an assessment task can be referred to as integrated learning and assessment. Facilitators of learning should stay abreast of current developments in relevant industries and they can share information regarding the developments with the students and allow them to enter into debates about the significance of the new developments. The students can even be challenged to improve the arguments raised during the contact session. The constant reading and learning about changes and innovation in industry, the habit to evaluate critically the changes and the display of their own ability to be innovative and to think of new ways of doing things, will enable the facilitators of learning to act as role models for the students by displaying the true meaning of the idea of being a lifelong learner.

When considering all the aspects that are described above, there is little doubt that facilitators and assessors of learning must be allowed the opportunity to experience that facilitation and assessment of learning are not individual entities but that both actions are integrated parts of the same process used to ensure quality learning.

To conclude this section one should answer the question that was posed at the beginning of the section, namely: What if the status quo is maintained? Considering all the arguments raised above, it is clear that the traditional lecturing style cannot be used as the only way of "presenting the learning content" and not only written tests and examinations should be used to "test how much the students know". Professional development of academic staff should take place in order to ensure that the Institute can stay abreast of the changes in the international and national HE learning environments, both public and private. Learning should be facilitated and assessed in such a manner that the students can learn about their own learning to be able to maximise their full potential and to have a positive influence on the lives of others in their communities, in their workplace and indirectly on the economic growth of society at large. A culture should be created where all stakeholders appreciate and support the notion of lifelong learning as there will always be something to be learned. Van der Wal (2003:1) supports the idea that we will never stop learning when saying that "there is not a part of life that does not contain its lessons. If you are alive, there are lessons to be learned."

1.5   AIM AND OBJECTIVES OF THE ACTION RESEARCH STUDY

This study aims to create a culture of lifelong learning in the PHE environment. The overarching question that needs to be answered is:

How can an action research-driven professional development programme for academic staff be used to ensure that innovative facilitating and assessment of learning practices are developed that will result in a culture of lifelong learning in a private higher education institute?

The objectives of the study are to:

- determine which aspects should be included in the curriculum of a professional development programme (PDP) for academic staff that aims to create a scholarly approach to establishing a culture of lifelong learning in the private higher education environment;
- implement a PDP in which the participants follow a scholarly approach in facilitating and assessing learning practices that will contribute to the establishment of a culture of lifelong learning;
- provide a living example of being a lifelong learner by answering the question, *How can I improve my own living educational theory by being a mentor for academic staff members who participate in a professional development programme that aims to establish a culture of lifelong learning?*

1.6   ETHICAL CONSIDERATIONS

It should be mentioned that this project focuses on my own practice as quality assurer of the learning that takes place and the assessment practices in PMI while at the same time being the mentor for the participants of the PDP. Therefore this research project does not require that I have direct contact with the students;   I have access to the evidence that is available in the professional development portfolios of the participating facilitators of learning that were created as part of their AR projects done on their individual practice. I also have access to the anonymous feedback forms from the students that form part of the standard quality assurance procedures of the Institute.

1.6.1 Confidentiality and or anonymity

Cohen, Manion and Morrison (2002:61) quote Frankfort-Nachmias and Nachmias when stating that "The obligation to protect the anonymity of research participants and to keep research data confidential is all-inclusive. It should be fulfilled at all costs unless arrangements to the contrary are made with the participants in advance."

Confidentiality and anonymity in this project have been attained in the following ways: Firstly, my contract of employment contains a confidentiality clause that is very clear about the importance of the confidentiality linked to the position of Academic Manager. The result of transgressing confidentiality rules is stipulated very clearly as being summarily dismissal.

1.6.1.1 Facilitators of learning

Confidentiality agreements were entered into with all the participants. No information would be disclosed to or about any party, during and after the completion of the project, unless permission by the participant himself or herself was granted. Reference to individuals is done in a non-personal way by using symbols such as respondent A, B or C that do not relate to the respondents in any manner.

In two instances the respondents preferred the use of their real names in the report of the study. In both cases the respondents provided written permission for the disclosure of their identities through the use of their real names.

When photographic evidence is included in the participants' portfolios, permission was obtained from the specific participants.

As part of the member checking process (Simon 2011:1; Cho & Trent 2006:320-336) parts of the report were verified by participants of the PDP. Each interview respondent received the part of the report that relates to his or her responses in order to verify the correctness of the interpretation of the responses obtained during the interview. The parts of the report that relate to individual facilitators of learning

were forwarded to the individuals to ensure that the report provides a correct account of the activities that took place. The ways in which the feedback received during the member checking process influenced the research process are mentioned throughout the project.

1.6.1.2   Students

The students' anonymity is protected by the confidentiality agreements of the participating staff members' AR projects, the PMI ethical regulations for research and the PMI confidentiality regulations included in all contracts of employment of the academic staff members.

The students were not direct participants in this study. Comments made by the students in casual conversations and information that was obtained during observation in the learning sessions, were reflected on by the participating facilitators of learning. The photographic evidence displaying student involvement used in this report was edited in such a way that the specific students cannot be identified.

The professional development project is offered as a continuous development programme and therefore it is possible to identify the students by linking them to specific sessions in which the data was collected. The facilitators of learning were contracted for several sessions during the running of this project. For this reason no reference is made to dates; neither does the photographic evidence display digital dates.

1.6.1.3   Case study Institute

The report of the study is written in such a way that important information that was collected is not withheld from the reader but the image of the Institute and information that is regarded as confidential by PMI are protected. This was achieved by objective report writing with the use of rich descriptions of the contexts under discussion for the reader to be able to understand the full context of relevant events.

The report was verified by one individual on branch level and one individual on national level who were identified by the Managing Director of PMI as part of the member checking process (Simon 2011:1; Cho & Trent 2006:320-336). Written permission was granted to disclose the name of the Institute as well as my own identity. The latter was necessary as my identity becomes evident in the report and therefore it can be linked to the Institute and the specific branch in which the research was conducted.

1.6.2   Informed consent and voluntary participation

Cohen et al. (2002:51) explain that the principle of informed consent relates to the democratic right to freedom and self-determination. In the research context "informed" means that full information must be provided for the participants to be able to decide whether they want to participate or not.

One aspect of "consent" that refers to self-determination entails that the participants must have the right to refuse to participate or that they may withdraw at any time after the research has begun.

1.6.2.1   Facilitators of learning

During the planning phase the project was explained in full to the participants in a staff meeting. The information was later distributed in writing. The principle of voluntary participation was explained to them in full.

Participation in the project was completely voluntary and therefore anyone who wanted to withdraw from the project could do so without providing any reason for the decision and without being victimised in any way because of the withdrawal.

The participants' personal circumstances were acknowledged and the project was adapted to suit their needs. These adaptions are discussed as part of the findings of the project.

Seeing that the participants' AR projects are classroom-based research projects, it was clearly stated that withdrawal from the professional development project would not imply that they might not or need not fulfil their contractual obligations towards the Institute. It merely meant that they did not have to take part in the data collection process or that they did not have to provide any feedback aimed purely at the research project. These withdrawal conditions were communicated in writing as well. The facilitators of learning were requested to indicate their understanding of the withdrawal conditions and their willingness to partake in the project in writing.

1.6.2.2 Students

Although the students were not direct participants in the AR study, they were informed about the relationship between my own research activities and the research that the facilitators of learning were conducting. This was officially done through a memorandum that was distributed by the academic office.

It was explained to the students that withdrawal from the project would not imply that they might not or need not attend the contact sessions anymore or that they did not have to complete the necessary assessment tasks. It merely meant that they did not have to take part in the data collection process or that they did not need to provide any feedback aimed purely at the research that was conducted by the facilitators of learning.

1.6.2.3 Case study institution

The Managing Director of the Institute was informed about the project by means of a letter of application. The application included full information of the tangible assets that were required for the project. These included, inter alia, the paper, printer and photocopier; the intangible assets such as information, the name of the Institute, curriculum content and the financial resources were outlined. Permission was granted for the use of all the resources as stipulated in the proposal and financial aid was provided for the project.

1.7   SUMMARY OF THE CHAPTER

Chapter 1 provides an overview of the context in which the research took place, the main driving forces, the aims and objectives of the project and the ethical elements that had to be considered throughout the project. The main role players in the study are introduced.

The next step in my thousand mile journey is creating the theoretical foundation for the study.

CHAPTER 2

THEORETICAL FOUNDATION

2.1   INTRODUCTION

The aim of this part of my journey is creating an overview of all the theories that form the integral foundations for the study. In order to achieve the ultimate value in learning through the study, I have to understand my own ontological values and epistemological preferences. As quality assurer of the learning that takes place in the Institute and as mentor for the participants of PDP referred to, I have to acknowledge the different ontological values and epistemological preferences of each of the individual participants of the PDP.

The theories that are discussed are intertwined in the sense that they are applicable to my own learning and professional development process and to the learning and professional development processes of facilitators of learning. At the same time the participants should also understand how the theories relate to the learning of the students attending contact sessions and therefore it can be seen as part of the curriculum of a PDP for academic staff.

The intertwinement does not relate only to the learning theories that are discussed. Even theories relating to, for example, change management, are intertwined. This can be explained as follows: I am aware of possible resistance to the required changes that the PDP aimed to achieve. I know how to manage the possible resistance to the envisioned change. The participants in turn had to be aware of possible student resistance to the new innovative ways in which learning is facilitated and they had to know how to manage the students' resistance to the desired change. The same refers to the students' context, as the students might experience resistance at their places of work when they wanted to implement the innovative ideas that they had created during their learning processes as an enrolled student of PMI.

The main aim or overarching goal of the study is to establish a culture of lifelong

learning by creating a learning environment in which the diversity of humankind is respected in order to allow each individual to develop to his or her full potential. For this reason theories that support the notion of human diversity and the principle that human beings learn in different ways are discussed.

2.2   THE STARTING POINT

On my being employed as Academic Manager at PMI Gauteng in 2008 it was clearly stipulated that the main responsibility that lies in this position is to ensure that the Institute does not lose its accreditation as a PHEI. Therefore the main task has been to manage the resources in such a way that all the regulations as stipulated in legislation and those included in the institutional and programme accreditation criteria as stipulated by the HEQC (CHE 2004 (a) and (b)) are met.

I have entered into the position with the main question: Whom and what do I have to manage and which resources are available? In order to find the answer to this question I decided to attend different contact sessions facilitated by different facilitators of learning to learn more about the prevailing teaching (traditional term still used by the CHE and the DHET) and learning culture of the Institute. I believed that I would be able to find indications of how I would have to adapt in order to fit into the organisation easily. At that stage the question, "What do I need to improve and what do I need to change?" was not even a possibility; neither was the idea that transformation needed to take place.

The theoretical grounding for my first actions taken after being employed in the position of Academic Manager can therefore be linked to asset-based theory. If I had embarked with the question, "What do I need to improve or change?" my actions would have been grounded in needs-based theory. The difference between the two theories is explained briefly in the following paragraphs.

2.2.1   Asset-based theory versus needs-based theory

The "haves" and "wants" (needs) of an organisation refer to the assets of an organisation, be they tangible or intangible. For this reason the two theories that

needed to be considered are the asset-based and needs-based theory.

In contrast with the needs-based theory that focuses on the problems, deficiencies and needs in an organisation (that does not recognise the positive aspects that exist) asset-based theory can be regarded as a positive paradigm. Asset-based theory focuses on positive aspects, such as, inter alia, the capacities and assets that already exist in an organisation and it aims to improve the already positive or good aspects (Eloff & Ebersöhn 2001:148).

Assets in the educational environment are defined by Ebersöhn and Eloff (2003:14) as the "skills, talents, gifts, resources, capacities and strengths that are shared with individuals, associations, the community and organisations." It is not clear what is meant by the single word "resources" that appears in Ebersöhn and Eloff's (*id*) definition as all the assets that they mention can be regarded as resources. In the financial and business environments the term *assets* is used as a synonym for the word *resources*. The distinction that is made is the difference between tangible assets and intangible assets. Intangible assets are those resources that cannot be physically touched, such as skills, knowledge, competencies, experience, a good image and a well-known business name. Looking at the definition as a whole in an educational context, one can assume that the term *resources* used by Ebersöhn and Eloff (*id*) refers to tangible assets such as financial and physical resources − buildings, books and furniture.

The asset-based approach does not ignore the deficiencies and problems experienced in an institution (Eloff & Ebersöhn 2001:149), nor does it imply that the institution does not need external resources. It suggests that external resources can be utilised more effectively if the organisation has already mobilised its own resources (Proctor n.d.).

Proctor (*id*) discusses a project that can be regarded as an example of an organisation that mobilises its own human resources. The asset-based approach has been used within a post-graduate web-based nurses training programme. She states that anything that already exists that can be used is regarded as an asset. In Proctor's project the participants in the project used one another as assets as they

worked together to create the material used in the course. In the instance of the case discussed by Proctor (*id*) internal human sources were used, which resulted in a saving of the financial resources as there was no expenditure for contracting external resources to create the learning material. The PDP that was offered at PMI as part of the study correlates with the project discussed by Proctor (*id*) as the existing human resources within PMI were used for the project.

Every institution has some areas of strength within its borders, among its partners and external stakeholders and it should use these strengths to the benefit of the institution. Ebersöhn and Mbetse (2003:323) explain that external professionals provide information not available in the organisation and their knowledge and skills can be used during the professional development of the staff members of the institution. PMI contracted an external professional who is highly qualified and experienced in the professional development of facilitators of learning to facilitate the learning process of the participants of the PDP that was part of the study. The contracted professional is employed on a full-time basis as a senior lecturer in the faculty of education of a public university and he is an internationally certified HBDI[®] practitioner. He therefore also facilitated the feedback sessions after the participants of the PDP completed the online HDBI[®] assessment (Section 2.3.5.1).

Way, Barrick and Constant (2007:6) state that the asset-based approach is not just a theory; it includes strategies for intervention. With the focus on what is working best and articulating a positive future, faculty and staff are less likely to be defensive and more likely to be energetic, creative and involved in the development process. Advantages that result from using the asset-based approach in a participative development programme are "ownership, shared responsibility, immediacy, relevancy and practicality of solutions, flexibility, mutual support and a caring environment, as well as individual capacity building" (Ebersöhn & Mbetse 2003:323).

In their discussion of asset-based theory Way et al. (2007:6) suggests a process of valuing the best of the resources or assets that already exist in the system. The decisions about actions to be taken to increase the value of the existing valuable assets are done through engagement in dialogue by asking questions about the

best of what is already in the system. The assets that were present within the participants and the exemplar institution that could be further developed are identified in Section 4.3.

2.3   ACTION RESEARCH AS THEORETICAL FRAMEWORK

During the process of arranging the different aspects to be included in the report in a logical order I realised that the discussions in the sections relating to AR comprise discussions regarding finitude theories and discussions on research methodology. This realisation created confusion in my mind as at that stage I could not decide which section of the report the discussion on AR should be included in. I knew that the discussions on the different learning and learning style theories should be explained as part of the theoretical foundation of the study and that the methodology used in the study should be part of the discussions relating to the research design of the study. I then came across the words of Krogh (n.d.) who states that AR "in adult education provides a theoretical methodological framework for the practice of learning, teaching and professional development". When reading the sentence for the first time the word *framework* immediately made sense to me. I have realised that AR is neither a theory nor a research method. It is a framework in which theory and method are combined and where theory supports the methods to result in successful outcomes. I therefore decided to include the discussions relating to the philosophical and theoretical foundations of the study in Chapter 2 in which the theoretical framework of the study is discussed. Discussions on the methodology used during the AR process are presented in Chapter 3 that comprises discussions on the research design of the study.

Through more than a decade's life experience of being an action researcher I have learned the true meaning of the statement of Kemmis and McTaggart (in Cohen et al. 2002:227) that AR is conducted by participants on their own work in order to improve their own practices. I have experienced the value of the activities in formal AR projects as the nature of AR provides opportunities to learn about my own learning and to evaluate my own life experience in a scholarly manner. AR provides one the opportunity to manage one's transformation process and to learn in one's preferred way. However, I have also realised that learning always takes place when

doing AR, no matter whether one uses preferred ways of learning or whether one is challenged to learn through activities that move one to operate outside one's comfort zone. A process of constructing meaning always takes place while doing AR. AR is used as the main process of learning during the PDP to provide the participants the opportunity to become lifelong learners through learning about their own learning, to learn in their own preferred ways and to manage their own professional development or transformation.

2.3.1 Philosophical foundations of the project

Research approaches are commonly divided into two categories, namely qualitative enquiry and quantitative enquiry (Denzin & Lincoln 2005:10; 2003:13). In some instances both qualitative and quantitative data are collected during a research project and this results in a mixed method approach. The participants of the PDP offered at PMI and I collected both qualitative and quantitative data during the study and therefore it can be said that all parties involved in the study followed a mixed method approach. The philosophical foundations of both qualitative and quantitative research are discussed in the paragraphs that follow.

For centuries already, the philosophical foundations of education and educational research have been deeply rooted in Greek philosophy. Greek philosophy is based on three main pillars, namely metaphysics, which relates to reality, epistemology that relates to knowledge, and axiology, which relates to values.

The different elements of the Greek philosophy can be summarised as follows:
- Metaphysics deals with the study of reality and it can be subdivided into ontology and cosmology. Ontology stems from the word *ontos* (that which is) and focuses on issues related to nature, existence or being. It refers to phenomena that exist and that cannot be wished or thought away. It will exist, whatever the circumstances. Cosmology explores the nature and origin of the cosmos (universe) (Möller et al. 2003:17-18).

- Epistemology deals with the nature of knowledge and how we come to know things. It can be explained as the study of how humans make sense of and

come to understand the world that they live in and how they learn (Möller et al. 2003:17-18). Cugno and Thomas (2009:112) refer to Ellington (sic) who defines epistemology as a theory of knowledge that justifies beliefs and is sometimes referred to as "ways of knowing" with an understanding of what counts as knowledge and how one comes to know things. Hughes, Denley and Whitehead (n.d.:13) also refer to personal knowledge when discussing epistemology. From the discussions by Hughes et al. (*id*) it can be deduced that personal knowledge refers to knowing about and understanding the way in which one as an individual constructs one's own views and theories about the way in which one should live.

- Axiology can be subdivided into ethics that explores issues related to morality and conduct, and aesthetics that is concerned with beauty (Möller et al. 2003:18). I believe that ethics can also include integrity and that aesthetics does not refer purely to physical beauty. It also refers to appeal, fascination, amazement, charisma, and transcendental and spiritual awareness. I would dare to go so far as to say that it also includes love. Aesthetics can be linked to human feelings. The axiology leg can therefore be associated with our value systems. In layman's language, it refers to "that which matters in life".

The philosophical foundations of the study under discussion are explained in the paragraphs that follow.

2.3.1.1   Ontological stance of a qualitative approach to research

In qualitative research phenomena are studied in their natural settings and the meanings that people have about that which is researched should also be considered; therefore it is mostly interpretive.

Smit (2001:67) states that it is assumed that the reality that is constructed by the researcher and the participants in qualitative research is based on the participants' point of view of what they see when looking at the context in which a study is conducted. Therefore it can be said that the ontological position of qualitative research acknowledges the fact that there are different ways of making sense of

what is happening in any specific context. In an educational environment different ways in which learning takes place should be catered for (learning style flexibility) in order to allow the students to, in their own preferred ways, make sense of what is happening in different contexts.

The readers of qualitative reports must be able to see how the researcher and the participants regard the phenomenon that is investigated. It is also important that the readers are able to make their own sense and create their own reality of the phenomenon under discussion. Guba and Lincoln (1989:223) state that the reports must therefore provide rich descriptions of the experiences in the situation. This view is also supported by Goodall (2008:42-46). Reporting on the different events that are part of the study is done in a rich narrative style that aims at allowing the reader to create a mental picture and understanding of the physical context in which each event took place as well as the prevailing human relations and emotions at the time of the different events that are discussed.

2.3.1.2 Epistemology and axiology of a qualitative approach to research

The epistemological foundation of qualitative research is not based on facts but on values and value judgements. Events are understood through a mental process of interpretation that is influenced by interaction with the social context (Smit 2001:71). The reference that is made to values and value judgements leads one to consider ethical values such as, inter alia, the trustworthiness of the data that is collected, the fairness of consideration given to the different viewpoints expressed during the research process, whether some data has been ignored to create a preferred view of that what is under study and whether any of the respondents have been deceived to obtain the data. In order to ensure that the interpretation of the data that was obtained during the data collection process is fair to all the participants and that the viewpoints expressed in the report are correct, a process of member checking (Simon 2011; Cho & Trent 2006:320-336) was used to ensure that the findings of the study are not based on my own beliefs only, but that the report reflects the viewpoints of the participants of the PDP and the interview respondents.

According to Schwandt (2003:299) interpretivist epistemologies emphasise that one must grasp the situation in which human actions acquire meaning to say that one has an understanding of the particular action or behaviour that is studied. The inquirer should understand the research matter or situation as a whole (for example background, intensions, context and language game) for the inquirer to understand the different parts (acts, sentences and sayings) of a situation.

At the onset of the study I was already aware of the terminology used in the subject matter and the theories on which the discussions are based in the different subject fields. I was also aware of the different sayings and expressions used by the students during general discussions. Examples are the use of the word "mula" when referring to money and the use of the word "eish", which is an expression used by black Africans in South Africa to express different emotions such as irritation, astonishment, surprise, grievance, discouragement, dissatisfaction and scepticism. To ensure that I understood all the situational aspects mentioned by Schwandt (*id*) mostly primary data was collected through observation during the contact sessions that were facilitated by the participants of the PDP. Through regularly attending the contact sessions offered by the participants of the PDP prior to the onset of the PDP, I had a substantive amount of baseline information against which I could evaluate the professional development of the participants of the PDP that had taken place since the onset of the PDP.

2.3.1.3   Ontology and axiology of the quantitative approach

The ontological position of quantitative research lies in realism of which the philosophical foundations are based on the ideas of Aristotle that objects of sense or perception exist independently of the mind (Möller et al. 2003:21). Smit (2001:65) cites McMillan and Schumacher who state that quantitative research is based on a logical positivist philosophy that implies that evidence collected in research is a single objective reality and it does not consider the feelings and beliefs of individuals. Möller et al. (2003:60) state that followers of the positivist philosophy view human beings as biophysical beings that can be analysed, explained and controlled through methods of natural sciences with no consideration for their feelings, values and attitudes.

The quantitative data that was collected through the HBDI$^®$ reflects, in numeric format, the participants' preference for use of the different biophysical parts of the brain as theorised by Herrmann (Section 2.3.5.1). Although the participants' responses to the different question contained in the HBDI$^®$ could influence the outcome of the individual assessments, my own feelings, values and attitudes could not influence the results obtained through the online assessments.

The validity of the quantitative data that was collected through analysing the student results obtained during formative and summative assessment tasks and examinations can be verified against the records that appear on the PMI student database. The data is presented with the use of scatter and radar graphs and pie charts as well as histograms and therefore the narrative explanations of the information obtained can be verified against that what is presented in graphical format.

2.3.1.4   Epistemology and the quantitative approach

The epistemological foundations of quantitative research is based on the beliefs that humans learn through their senses and through experience and that the only true knowledge that can be discovered is that which can be tested in the physical world (Möller et al. 2003:22, 58). Smit (2001:71) indicates that the positivist paradigm concentrates on the belief that knowledge is constructed through logical reasoning based on known facts and objective observations and experiences. An example of how the use of quantitative data analysis results in learning through experience and logical thinking during the PDP, is the analysis of student results after changing the format of assessment instruments (Section 4.7.4).

The distinctive characteristics that are linked to both qualitative and quantitative research necessitate the consideration of the different meta-theories that form the philosophical foundations of a mixed method study. An overview of the two meta-theories, namely phenomenology and hermeneutics that form the philosophical foundations of my mixed method AR, is provided in the sections that follow.

2.3.1.5 Hermeneutic Phenomenological Approach

The characteristics of the two meta-theories, phenomenology and hermeneutics, closely intertwine and therefore the final approach can be referred to as a single theoretical approach, namely the hermeneutic phenomenological approach. Support for combining the two theories is found in the fact that Gallagher (2000:141) uses the word "hermeneutical" as an adjective for the noun "phenomenon" by stating that "[…] educational research itself […] is a hermeneutical phenomenon".

a) Hermeneutic Approach

Hermeneutics is the science of interpretation of meaning and sense in human actions (Danner 2000:4; Möller et al. 2003:110). Möller et al. (*ibid*:111) identify the main elements of hermeneutics as communication, interpretation and understanding. Guba and Lincoln (1989:143) indicate construction of meaning as another element of a hermeneutical process. If one wonders why a hermeneutical approach should be followed in educational research the answer can be found in the view of Gallagher (2000:141) who states that learning itself is an interpretational process. Gallagher (*id*) states that both the object studied by educational research and educational research itself is hermeneutical.

Gallagher (*id*) believes it would be reasonable to claim that the main object in educational research is learning and the main objective is to learn about learning. This statement reminds of Woolfolk's (2007:27) reference to meta-learning/meta-cognition, which refers to sharing meaning with oneself and learning about one's own learning and the way in which one prefers to learn. The AR-based PDP offered at PMI can be regarded as hermeneutic as the main object that is studied by the participants is their own learning and the learning of the students attending the contact sessions. Through my AR activities my own and the learning of the participants is studied.

Gallagher (*id*) further states that in educational research the object studied consists of everything connected with educational processes, with learning at the centre. The participants of the PDP were introduced to and experienced various aspects relating

to learning, such as the role of a facilitator of learning in the learning process, different learning theories, influences on learning such as ergonomics, material and media used, various innovative learning activities and ways to assess learning, to mention only a few.

Guba and Lincoln (1989:143) indicate that constructs are created by the self (a person) and that they are not part of the objective world that exists outside the person. This can be explained by saying that although a person is part of the objective world in which he or she lives, each individual's prejudices, values and beliefs can influence the meaning that is constructed of the world in which the individual lives. The PDP allowed the participants to experience how the different thinking style preferences of humans can have an influence on the way in which they learn.

Guba and Lincoln (1989:143) indicate that a person creates new constructs after interaction with new information, contexts, settings, situations and other individuals (not all of whom may agree), by using a process that is rooted in the previous experience, belief systems, values, fears, prejudices, hopes, disappointments and achievements of the constructor. One creates new constructs by systematically integrating new information in a way that makes sense to one. The characteristics of these constructs depend on the level and sophistication of the new information and the constructor's ability to appreciate, understand and apply the new information. AR allowed the participants to reflect constantly on the results of their actions and to interpret and understand what has happened as a result of their actions during the contact sessions. The participants could then use the new constructs when developing new innovative facilitating and assessment of learning activities.

Another important consideration in the decision to use a hermeneutical approach lies in the aim for credibility in research. Möller et al. (2003:117) refer to Gadamar when saying that a hermeneutical approach creates a critical attitude towards reporting. Möller et al. (*ibid*:117) state that a hermeneutic approach helps a researcher to understand and consider his or her own prejudices as the researcher becomes aware of and takes into consideration his or her own subjectivity. The principle of placing oneself in another person's shoes allows one to take note of and

consider the views held by others regarding the phenomenon that is researched. The aim of a hermeneutical approach to urge the researcher to understand and consider his or her own prejudices also fits in with the phenomenological approach discussed in the paragraphs that follow.

The views of others are considered through the communication that takes place during the mentoring process, the constant return to literature and by implementing a member checking process (Simon 2011:1; Cho & Trent 2006:320-336).

b)   Phenomenological approach

Phenomenology has two foundations, "that which appears to people, that which they are aware of through their senses (these can be objects or situations) and a thoughtful consideration of that which appears to them in order to understand it" (Möller et al. 2003:94). Phenomenologists argue that the main aim in life should be to discover the real world that is (exists) and that what it could be (become) (Romm 2006:20). Phenomenologists also remind us that humans are part of the world and that they should be studied in relation to the world in which they exist.

The idea that humans are part of the world is rooted in the philosophy of existentialism, which refers to the theory of human existence that creates the awareness that we each have our own being and becoming (Vandenberg in Higgs 2004:176-177). It is believed that human beings explore life and that the understanding of their experiences and the construction of new meaning enable them to transform themselves and their world. The transformation is possible when human beings understand their situations and themselves. It can therefore be said that humans must be able to answer the questions, "Who am I?" and "Where do I belong?" Once these questions can be answered one can then ask, "How do I get to where I want to be?" One wonders why humans who live in a world where the majority of human beings strive towards freedom of, inter alia, speech, association and religion, tend to "think in boxes" and why they do not strive towards freedom of thinking that will ultimately allow them to, as Wiesel (1972) puts it, "become fully you".

Vandenberg's (in Higgs 2004:176-177) view that individuals have their own being and becoming reminds one of the theories of Herrmann (Section 2.3.5.1) and Gardner (Section 2.3.4.2) in which it is indicated that different individuals construct meaning in different ways. When reading Vandenberg's (*id*) statement that transformation is possible when human beings understand their situations and themselves, while keeping Herrmann's view that people think differently in different situations in mind, it can be said that humans explore life in a Whole Brain® way.

The central theme of existentialism is humans' awareness of their finitude. This awareness makes one question the meaning of life. Vandenberg (in Higgs 2004:177) refers to Harper when stating that this awareness of one's finitude stimulates the need for freedom, engagement, becoming oneself as a whole person and the development of the courage to be. Heinz von Foerster (as cited by Petree, 2003) suggested that we call ourselves "human becomings", based on the fact that we change our behaviour due to the different influences on our lives. Theorists such as Maslow (Grobler, Wärnich, Carrell, Elbert & Hatfield 217:218) and Herzberg (*id*:219-210) indicate that humans aim at reaching their full potential and only once they have achieved their goals are they satisfied with their lives. Maslow (*id*:217) believes that self-actualisation and reaching one's full potential can be achieved through either a formal or informal real-life developmental process comprising opportunities that allow one to construct new meaning and realities. Maslow provides examples such as goal-setting, decision-making and being accountable for one's decisions, broadening one's exposure to new information and experiences and by being challenged with optimum innovative and risk-taking opportunities as developmental opportunities that can result in reaching one's full potential. The PDP offered all that is included in the list mentioned by Maslow as participants could manage their own practices, were exposed to new information and were challenged to develop innovative learning and assessment of learning activities.

An advantage of the phenomenological approach is that it enhances the validity and credibility of any research project as "it works by asking us to put aside all theories, prejudices and ideologies and look at what is actually happening, [it is] essentially a call to ruthless honesty" (Higgs & Smith 2006:56). Möller et al. (2003:101) refer to this as the removal of hindrances. This removal of hindrances ensures that the

essential characteristics of a phenomenon can be identified and described more objectively. A more objective view is obtained by the fact that a phenomenological approach allows the use of a mixed method research approach that can include qualitative as well as quantitative methods.

Another advantage of using a phenomenological approach is that it can enhance the ontological value of a research project. Möller et al. (2003:100) indicate that the main objective of phenomenology is to reach ontological understanding. In other words, it aims to reach an understanding of "that which exists" in relation to the world (context) in which it exists. The previously mentioned hermeneutic principle of placing oneself in the shoes of another can also contribute to enhancing the ontological value of an AR research study as the researcher becomes part of the world (context) in which the phenomenon under study exists.

To conclude the discussion of the philosophical principles on which the study is based, one can consider the words of Cohen et al. (2002:229) who state that participants in AR are "enlightening themselves about the relationship between circumstance, action and consequence in their own situation, and emancipating themselves from the institutional and personal constraints which limit their power to live their own legitimate educational and social values."

The statement of Cohen et al. (*id*) can be interpreted as referring to the situation where AR is used by individuals to interpret that what is happening or appearing around them to better understand the world (context) in which they exist. A better understanding of the world (context) allows the individual to construct new meaning of the phenomenon studied. The newly constructed meaning that was obtained through AR makes action researchers aware of their finitude and they use the newly constructed meanings in a way that empowers them to be who they are (human beings) and to become who they want to be (human becomings).

My experience is that the continuous awareness of possible changes that can be made to improve or transform my professional practice and the observable successes that I have achieved through AR create a ripple effect. The constant reflection on and evaluation of my actions has become a part of my daily living. It is

a fundamental part of my being and it provides a framework for my actions to be taken in my process of becoming fully me.

2.3.2   Living theory

In the paragraphs that follow a broad overview is given of the origin of a new paradigm of AR as educational research that emerged in 1971 from the work of Whitehead (2006). The new paradigm differs from the known paradigms such as those of Kemmis and Zuber-Skerritt referred to by Cohen et al. (2002:236). The new paradigm of living theory AR as a way of doing educational research emerged when Whitehead experienced that he was not able to generate a valid explanation of his educational influence from his own learning, from the learning of others and from the learning of the social formations in which he lived and worked (Whitehead 2006). He states that he also could not generate a valid explanation for his educational influences in learning from any of the educational theories that existed at that time, whether taken individually or in any combination (*id*).

Whitehead decided to research the possibility that individuals could generate their own valid explanations of their educational influences in learning. He explains that his idea of a living theory approach to educational research emerged when he was trying to answer the question, "How do I improve what I am doing?" (*id*). Whitehead realised that he can improve his own practice after reflecting on what he had seen after watching a video recording of one of the learning sessions that he facilitated.

Whitehead realised that he "existed as a living contradiction" (*id*) as he believed that he had established conditions in his classroom to support enquiry learning. By watching the video recordings, it became clear to him that his questioning style and the way in which he structured the resources in the classroom were actually hindering the development of enquiry learning (*id*).

Whitehead (*id*) further realised that his action and reflection cycles were consistent with the then newly emerging notion called AR, but he also realised that there was a difference in his approach. Whitehead (*id*) explains that the ontological grounding of the standards according to which he makes his judgements was based in his

commitment to the values that he used to give meaning and purpose to his existence. He (*id*) mentions that in order to contribute to educational knowledge and theory and to legitimise his explanations, he identified the need to establish new standards that he could use when judging the practice that he was living. Through AR Whitehead (*id*) realised that his standards of judgement allowed him to account to himself for the life that he was living and he could explain his educational influences on his own learning.

In his discussions Whitehead asks the question, "How do I improve what I am doing?" (*id*) but at the same time he mentions that he realised that his actions in the class resulted in exactly the opposite from what he wanted to achieve and that he had to set new standards. This indicates that he actually needed to transform his practice as he had to do things completely opposite from what he was used to if he wanted to achieve his original goal of establishing conditions in his classroom to support enquiry learning. Whitehead's question should therefore be, "How do I transform my practice in order to achieve what I want to achieve?"

McNiff (2002) starts her discussion about the living theory approach to research by stating that the text is as much Whitehead's as it is hers due to their twenty five year learning partnership.

McNiff (*id*) states that

> *Action research is a term which refers to a practical way of looking at your own work to check that it is as you would like it to be. Because action research is done by you, the practitioner, it is often referred to as practitioner based research; and because it involves you thinking about and reflecting on your work, it can also be called a form of self-reflective practice.*

McNiff (2002) states that personal enquiry and forms of self-study are acknowledged as equally valuable forms of research as traditional empirical investigations are. She indicates that it is assumed that the researcher already knows a great deal. This knowledge might be intuitive or only roughly worked out, but the researcher still has the answers in him- or herself. This idea can be seen as

enough evidence for an action researcher to include references to his or her previous work as part of the references of a current study. This is the reason why I referred to my previous AR projects (Boshoff 2000a; 2004b and 2007) in various discussions in the report of the current study.

Whitehead (2009:104) explains a living theory as follows:

A living theory is an explanation produced by an individual (sic) *for their educational influence in their own learning, in the learning of others and in the learning of the social formation in which they live and work.*

The rich information that appears in AR reports can be used by other researchers or practitioners in the reported fields of study. The idea that others can learn from the experiences of action researchers relates to Whitehead's reference to the influence that living theory action researchers have "on the learning of others and […] the social formation in which they live and work" (Whitehead 2009; 2004). Zuber-Skerritt (in Seerane 2004) indicates that action learning, which forms part of AR, is based on trial and error, among other methods of learning. If the information in AR reports is used by others when, for example, in the context of the current study, newly employed academic staff members read about leader practices of well experienced facilitators of learning, the idea of reinventing the wheel can be prevented. The readers can constantly return to the AR reports of others and the information can then be used to act as point of departure for the further development of the readers' own practices or it can enhance the credibility of the findings of other AR projects.

Whitehead (2009) substantiates the use of various research approaches when conducting living theory research in an attempt to be inventive in the creation of both one's living educational theory and one's living theory methodology. He compares living theory with various qualitative research approaches, namely narrative, phenomenological, grounded theory, ethnographic and case study research as described by Creswell (2007). Whitehead (2012:6) states that each of these methodological approaches includes methods that are distinctive to and useful in a living theory enquiry which aims to answer the question of: "How do I improve what I am doing?"

When considering the aim of the study which is to create a culture of lifelong learning in the PHE environment it is important to mention Whitehead's (2009) view on the similarities and differences between living theory and ethnographic research. He (*id.*) states that "living theory is similar to ethnographic research in paying attention to the cultural norms within which the researcher is acting and researching. It differs from ethnographic research in that it does not focus on an entire culture group." In living theory the researcher explains an individual's educational influence in his/her own learning, in the learning of others and in the social formations in which the researcher is living and working. Living theorists create an understanding of cultural influences in the explanations of their educational influences in learning. They create social validity for their work by demonstrating an awareness of the normative background from within which the researcher is speaking and writing.

When interpreting Whitehead's (*id.*) views it becomes clear that the main difference between the mentioned approaches and living theory is that in the mentioned approaches the focus is on reporting on the experiences of "many individuals who share in the same process, action, or interaction" (Creswell 2007:68) whereas living theory focuses on the reporting of the experiences of the researcher as an individual. Whitehead (*id.*) states that Creswell's (2007) omission of the auto-ethnographic approach "is serious because living theory research permits the inclusion of the 'I' of the researcher in explanations of educational influence, whilst giving primacy to cultural influences in the explanation". A living-theory-methodology includes both the 'I' of the researcher and socio-cultural and socio-historical influences in such explanations (Whitehead 2012:7). The reference to socio-cultural and socio-historical influences in living theory research allowed me to provide rich information regarding my history of learning since childhood (Section 4.2). My historical living experience as a learner throughout my life is the main driving force in my current practice as facilitator of learning. I see it as my calling to prevent that students, in their quest to reach their full potential, experience the same limitations as those which I had experienced in my learning since childhood.

Although McNiff (2002) states that "[t]he word 'prove' does not exist in action research", the scholarly approach of AR urges one to refer constantly to literature applicable to the area of one's practice that one wants to improve or transform.

Correlations between the work of the living theorist and information that is found in literature can enhance the credibility of statements and claims that are made in a living theory-based AR report. I have experienced that even during the final reporting and revision stages of the current study, I was urged to return to literature to get answers to new questions that arose or substantiation for new ideas that were created during the reporting and revision processes.

The idea of a constant return to literature is also mentioned by Du Toit, de Boer and Bothma (2010). They indicate that an action researcher should read more widely than the area of one's practice that is being researched, as by studying relevant sources from other disciplines, such as management, mentorship, communication, knowledge management, quality assurance, professional development and research, one can develop a holistic and inter-disciplinary view of one's practice. This for me is true as I have found valuable information that I could use that is not usually associated with educational practices. An example is the kaizen philosophy regarding continuous improvement. This information appears in literature of the study field quality management in the manufacturing industry (Section 2.5).

2.3.3   Limitations of living theory-based action research

When studying the writings of McNiff (2002) regarding AR that is based on living theory, one can actually call her concerns the limitations of living theory-based AR. McNiff's (*id*) concerns also relate to the general experiences of action researchers who follow the more conventional ways of doing action research as described by Kemmis (1982) and Zuber-Skerritt (1996 in Cohen et al. 2002:236). It is important that an action researcher is aware of the limitations experienced when doing AR based on living theory as the theoretical grounding of the project. This awareness will ensure that the participants in the project continuously ask the question: How will I ensure that any conclusions I come to are reasonably fair and accurate? (Whitehead 1989 in McNiff 2002:351).

McNiff (2002) states that the traditional forms of research are still dominant and that AR reports therefore still tend to be judged according to traditional criteria. Most of these criteria focus on technical issues such as the systematic process of data

gathering, analysis and interpretation. McNiff (2008:353) refers to her experiences in an environment where action researchers' reports are judged by assessors who actively maintain their commitments to abstract theory as allegedly the only form of academically legitimate theory.

McNiff's (*id*) view is confirmed by Whitehead (2006) who very clearly states that although a living theory approach is easy to comprehend it is difficult to implement due to the hegemony of the cultural and power formations in the academic environment that determine what is recognised as valid knowledge.

McNiff (2002) states that "the word 'prove' does not exist in action research". In PMI research that focuses on the improvement of processes, procedures and the quality of products in the manufacturing environment, of which the results can be quantified, is conducted mostly by students. Quantitative research projects are believed to produce the most significant results. At one stage the students were not allowed to do qualitative research as part of their studies as the results were perceived to be insignificant as the outcome could not be proven quantitatively. For this reason the significance of my findings and that of the participants of the PDP might also be questioned.

Whitehead's (2006) statement that a researcher who is doing self-study research may insist on self-identification can be another reason for criticism. McNiff (2008:351-364) has an in-depth discussion regarding the significance of the "I" in educational research. Even the conventional AR theorists refer to the use of "I" and "we" in AR reports. Boshoff (2007:83) refers to Kemmis and McTaggart when stating that the reflective dialectical perspective of critical social science tends to see practice from the perspective of the insider group, whose members' interconnected activities constitute and reconstitute their own social practices and that the reports of this perspective are written in the first person or the plural of the first person ("I" or "we"). Brown and Gray (2004:1) agree on this view, as in a discussion about creating a culture of learning, they state that practitioners who aim at creating a culture of lifelong learning should answer the questions, *How have we – the practitioners and stakeholders in the art of creating learning cultures – learned what we know? What do we need to learn next?*

Throughout her discussions McNiff (2008:351-364) refers to the fact that we all have different epistemological and ontological values. Although action researchers can provide concrete evidence of how they improved their practices by evaluating their actions against their own epistemological and ontological values, the intellectual value of their work is still not appreciated, although there is also evidence of how their improved practices have had a positive influence on the lives of others in their social contexts. McNiff (*ibid*:353) states that in order to maintain the relevance of higher education for people's lives, there needs to be engagement with new forms of scholarship of which the focus is the generation of practitioners' practical theories. When considering the cognitive processes and the level of cognition that take place when creating one's own living theory, from a constructivist paradigm (Section 2.4.2.1), one should rather say that practitioners construct their own practical theories.

A generally accepted idea in life is that a spirit of innovation ensures successful progression. It can therefore be argued that the spirit of innovation in living theory-based educational research should then also be accepted and its intellectual value should be appreciated. The preferred learning style of the reader should not have a negative impact on the perceived value of the research. The readers of reports on living theory-based AR should be aware of the different learning theories and learning style theories to understand the ways in which the researcher constructs meaning of the phenomenon under study.

2.3.4 Learning theories

It is important to consider the different cognitive levels on which the learning outcomes should be achieved. SAQA (2010) published the prescribed level descriptors that should be considered at each level of study in South Africa. Different taxonomies are available that can be aligned to the different level descriptors as published by SAQA (*id*). Examples are Bloom's taxonomy (Woolfolk 2007:481; Hess, Jones, Carlock & Walkup. 2009:1), Webb's Depth of Knowledge (Hess et al. 2009:1) and Gagne's taxonomy (Van der Horst & McDonald 1997:32-43).

Van der Horst and McDonald (*id*) refer to Gagne's taxonomy when classifying a number of learning outcomes that should be achieved in learning activities. The following learning outcomes are classified:

- Motor skills (physical capabilities)
- Verbal information (verbal communication)
- Intellectual skills (discrimination, concrete concepts, defined concepts, rules, higher order rules)
- Attitudes (personal feelings or beliefs)
- Cognitive strategies (how to learn)

In order to fit the purpose of this study only theories referring to cognitive strategies are discussed. Each of the theories lends itself to an in-depth study that will result in lengthy discussions. However, an overview of the theories that contain the most appropriate information relating to the study is provided. The theories that are referred to in the study are Gardner's multiple intelligence theory and Bloom's taxonomy. A broad overview of constructivism is also provided.

2.3.4.1   Bloom's taxonomy

Starting in 1948, Benjamin Bloom led a group of educational experts who attempted to improve college and university examinations. Bloom and his team developed a classification system (taxonomy) of educational objectives (Chapman 2006). The objectives were divided into the following three domains:

- Cognitive
- Affective
- Psychomotor

Although behaviour from all three domains happens simultaneously (Woolfolk 2007:481), for the purpose of this study, only the cognitive domain is discussed.

In 1956 Bloom and his colleagues published the following list of six basic objectives of the thinking or cognitive domain:

1. Knowledge: Remembering or recognising something without necessarily understanding, using or changing it.

2. Comprehension: understanding the material being communicated without necessarily relating it to something else.

3. Application: Using a general concept to solve a particular problem.

4. Analysis: breaking something down into parts.

5. Synthesis: creating something new by combining different ideas.

6. Evaluation: judging the value of material or methods as they might be applied in a particular situation (Woolfolk 2007:481).

In 2001 Anderson and Krathwohl published the first significant revision of the taxonomy (Hess et al. 2009:1). The new structure retains the six basic levels, but in a slightly different order. The names of the levels have been changed to verbs to indicate the cognitive processes involved. The new descriptors are the following:

1. Remembering (knowledge)

2. Understanding (comprehension)

3. Applying

4. Analysing

5. Evaluating

6. Creating (Synthesis) (Hess et al. 2009:3).

Table 4 is an extract from the PMI document that prescribes the format that should be followed when compiling assessment tasks and examinations. For each cognitive level examples of keywords that can be used in the questions or instructions relating to the different cognitive levels are provided.

Table 4:   A summary of Bloom's taxonomy (PMI 2011:2)

Level	Category	Key Words
1	**Remembering**: Recalling information. Recognising, listing, describing, retrieving, naming, finding.	**Key Words**: define, describe, identify, know, label, list, match, name, outline, recall, recognise, reproduce, select, state.
2	**Understanding**: Explaining ideas or concepts, interpreting, summarising, paraphrasing, classifying,	**Key Words**: comprehend, convert, defend, distinguish, estimate, explain, extend, generalise, give examples, infer, interpret,

Level	Category	Key Words
	explaining.	paraphrase, predict, rewrite, summarise, translate.
3	**Applying**: Using information in another familiar situation, implementing, carrying out, using, executing.	**Key Words**: apply, change, compute, construct, demonstrate, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, use.
4	**Analysing**: Breaking information into parts to explore understandings and relationships, comparing, organising, deconstructing, interrogating, finding.	**Key Words**: analyse, break down, compare, contrast, deconstruct, differentiate, discriminate, distinguish, identify, illustrate, infer, outline, relate, select, separate.
5	**Evaluating**: Justifying a decision or course of action, checking, hypothesising, critiquing, experimenting, judging.	**Key Words**: appraise, compare, conclude, contrast, criticise, critique, defend, describe, discriminate, evaluate, explain, interpret, justify, relate, summarise, support.
6	**Creating**: Generating new ideas, products or ways of viewing things, designing, constructing, planning, producing, inventing.	**Key Words**: categorise, combine, compile, compose, create, devise, design, explain, generate, modify, organise, plan, re-arrange, reconstruct, relate, reorganise, revise, rewrite, summarise, tell, write.

Bloom's Taxonomy is a simple and effective model, both for explanation and application of learning objectives, teaching and training methods, and measurement of learning outcomes. This might be the reason for it being the most widely used system of its kind in education. It supports the classical "knowledge, attitude and skills" structure of learning and evaluation (Chapman 2009).

When analysing the level descriptors for the South African National Qualifications Framework (NQF) (SAQA 2010) one can identify all the cognitive processes as described by Bloom. This then serves as evidence that all the levels of the South African education system are based on the learning principles involving the cognitive domain as explained by Bloom. Even the COs and DOs (2000:18-19) prescribed for all qualifications in South Africa can be aligned with the different levels of Bloom's taxonomy (Section 2.3.4.1).

The cognitive processes identified in Bloom's taxonomy act on four kinds of knowledge, namely factual, conceptual, procedural and metacognitive (Woolfolk 2007:481). The correlation between the four areas of knowledge and the kind of

knowledge used in the four quadrants of the brain as explained in Ned Herrmann's Whole Brain® theory is indicated in Section 2.3.5.1.

2.3.4.2   Gardner's multiple intelligence theory

Some theorists believe that "intelligence is a basic ability that affects performance on all cognitively oriented tasks, from computing mathematical problems to writing poetry or solving riddles". Gardner explains that "an intelligence is the ability to solve problems and create products or outcomes that are valued by a culture" (Woolfolk 2007:112).

Howard Gardner's multiple intelligences theory represents a definition of human nature from a cognitive perspective. It refers to the way humans perceive and are aware of things (Chapman 2009). Gardner believes that humans have several separate mental abilities. He identifies nine separate intelligences but stresses that there may be more kinds of intelligence. His belief of separate abilities is based on the evidence that brain damage, for instance such as that caused by a stroke, often interferes with functioning in one area, such as language, while the other areas are functioning without any interference (Woolfolk 2007:114).

Gardner identified eight multiple intelligences that can be summarised as follows:

- **Logical-mathematical (number and reasoning smart):**

  Ability to discern logical strings and numbers

- **Verbal-linguistic (word smart):**

  Sensitive to sounds and meanings of words and language functions

- **Visual-Spatial (picture smart):**

  Perceiving images and space correctly

- **Audible-Musical (music smart):**

  Appreciating sound, rhythm, pitch and forms of musical expressiveness

- **Interpersonal (people smart):**

  Being sensitive to other people's expression of feelings

- **Intrapersonal (self-smart):**

  Detailed self-awareness and self-knowledge

- **Bodily-kinaesthetic (body smart):**

Ability to control body movement

- **Naturalist (nature smart):**

Awareness and knowledge of and appreciation for fauna, flora and features of the natural world (Chapman 2009; Woolfolk 2007:114; Morris 2007).

Different views exist regarding the number of intelligences that have been identified, accepted and later rejected by Gardner. Chapman (2009), Woolfolk (2007:114) and Morris (2007) refer to eight multiple intelligences, including naturalist intelligence. Waterhouse (2006:207), on the other hand, states that Gardner combined the interpersonal and extra personal intelligences into a single intelligence and he then added the naturalist intelligence. Smith (2002; 2008) mentions a ninth and a tenth intelligence, namely the existentialist and moral intelligences that were considered by Gardner. Smith (*id*), however, states that Gardner added only the naturalist intelligence but not the existential and moral intelligences. In contradiction to this Sisk (2010) refers to spiritual intelligence as the tenth intelligence that Gardner added.

Due to the contradictions found in literature it was decided to include only the eight intelligences (Chapman 2009; Woolfolk 2007:114; Morris 2007) for which the fewest contradictions exist in literature in the theoretical grounding of the study.

Figure 3 is an example of how Gardner's multiple intelligences can be represented by using the visual (picture smart) intelligence.

Gardner differentiates intelligences from learning styles and believes that people do not have consistent learning styles (Woolfolk 2007:115). However, other theorists such as Lazear (2008) expand upon this theme by providing many sample exercises for each of Gardner's intelligences. One of the advantages of this action of Lazear is that it assists educators to expand their thinking about avenues for teaching that will allow for learning style flexibility. This can prevent the misuse of Gardner's theory by educators who have a simplistic view of the theory and who then attempt to incorporate learning activities to fit all the intelligences in each learning session, no matter how inappropriate the learning activities might be (Woolfolk 2007:115).
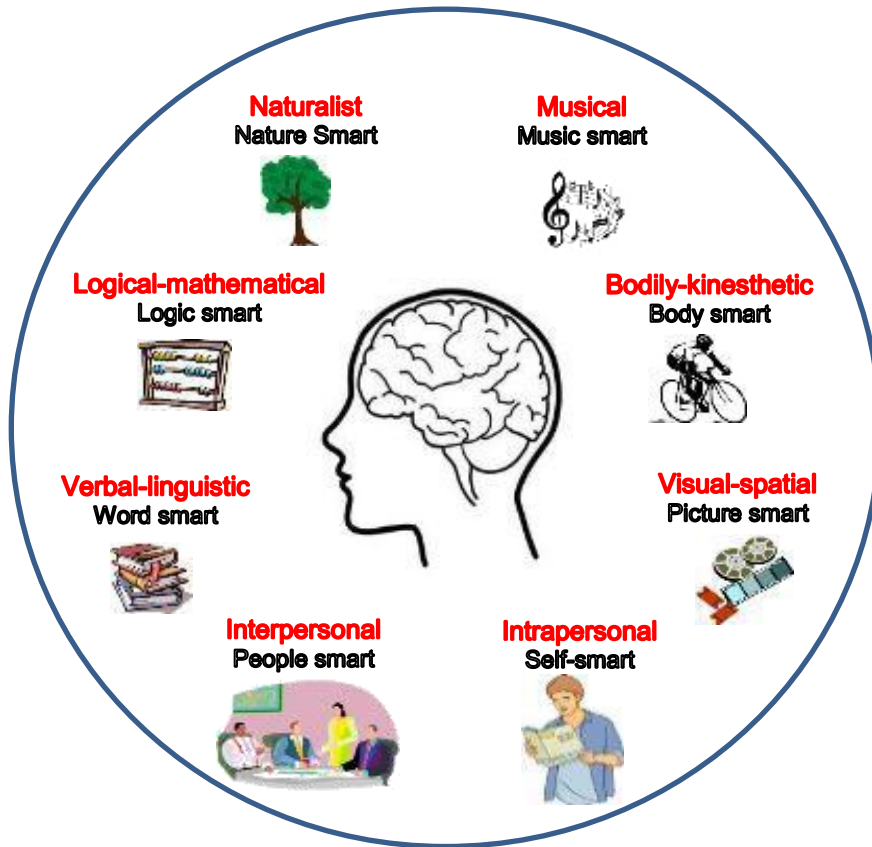
Figure 3: A 'picture smart' representation of Gardner's eight multiple intelligences

The fact that Gardner stresses that there may be more kinds of intelligence and that he does not see those that he has identified as the ultimate list provides enough reason to believe that Gardner has an open view on learning and would not object to the incorporation of his theory with other theories during learning sessions.

It can be said that constructivism forms the basis of both Bloom's taxonomy and Gardner's multiple intelligence theory as both theories are based on the principle that learning entails more than receiving and processing information transmitted by another person. Constructivism is based on the principle that individuals have an active role in building understanding and making sense of information by interpreting the information in relation to particular situations (contexts) (Woolfolk 2007:344). Bloom's taxonomy refers to the depth of the meaning that is created and Gardner acknowledges that humans have different learning styles and will therefore use the different intelligences in different ways and combinations. Therefore each person's understanding of a situation will be different from that of another person.

2.3.5   Learning style theory

Romanelli et al. (2009) quote Curry when stating that learning styles can be broadly defined as "characteristic cognitive, effective, and psychosocial behaviors (sic) that serve as relatively stable indicators of how students perceive, interact with, and respond to the learning environment". Romanelli et al. (2009) state that many scales for categorising learning styles exist and that the different scales for classification have more similarities than differences. The focus of the scales is on environmental preferences, sensory modalities, personality types, and/or cognitive styles. Learning styles are considered by many to be one of the factors of success in higher education (*id*).

Coffield, Moseley, Hall and Ecclestone (2004:79) identified 71 different approaches to learning that were then classified into five "families" (groups of similarity). They then selected particular theorists or research studies to examine in depth, based on the following criteria:

- The texts chosen were widely quoted and regarded as central to the field as a whole.
- The learning styles model was based on an explicit theory.
- The publications were representative of the literature and of the total range of models available (for example experiential, cognitive and brain dominance).
- The theory has proved to be productive – that is, leading to further research by others.
- The instrument/questionnaire/inventory has been widely used by practitioners – teachers, tutors or managers (Coffield et al. 2004:6).

Models and instruments of learning styles that were found to be the most influential and potentially influential, were then reviewed. 13 of the 71 learning style theories were chosen for an in-depth review (*ibid*:8). The following theories, models and instruments were reviewed from the different groups of similarity:

- Group: Learning styles and preferences are largely **constitutionally-based** including the four modalities: Visual, auditory, kinaesthetic and tactile:
  - Dunn and Dunn model and instruments of learning styles
  - Gregorc's Mind Styles Model and Style Delineator (GSD)

- Group: Learning styles reflect deep-seated features of the **cognitive structure** including "patterns of ability":
  - Riding's Cognitive Styles Analysis (CSA)

- Group: Learning styles are one component of a **relatively stable personality type**:
  - Apter's Motivational Style Profile (MSP)
  - Jackson's Learning Styles Profiler (LSP)
  - Myers-Briggs Type Indicator (MBTI)

- Group: Learning styles are **flexibly stable learning preferences:**
  - Allinson and Hayes' Cognitive Styles Index (CSI)
  - Herrmann's Brain Dominance Instrument (HBDI)
  - Honey and Mumford's Learning Styles Questionnaire (LSQ)
  - Kolb's Learning Style Inventory (LSI)

- Group: Move on from learning styles to **learning approaches, strategies, orientations** and **conceptions of learning:**
  - Entwistle's Approaches and Study Skills Inventory for Students (ASSIST)
  - Sternberg's Thinking Styles Inventory (TSI)
  - Vermunt's Inventory of Learning Styles (ILS).

Only the Herrmann Whole Brain® theory is discussed as it is the main theoretical grounding of the study.

2.3.5.1   Herrmann Whole Brain® theory

Ned Herrmann started doing brain-related research in May 1976 while working at General Electric (GE) as head of management training. His research commenced

during the process of improving the management training that was offered at GE. The main objective of the management training was to create a competitive advantage for GE over its competitors. Herrmann realised that in order to optimise the learning that takes place during the training sessions, the different learning style preferences of the participants in the planned workshop should be known.

Herrmann commenced his research based on the findings of Sperry's brain research done in 1975. Sperry began to reveal the dual specialisation of the brain after making a multitude of discoveries by observing patients who had their brain hemispheres separated by a procedure to sever the corpus collossum in order to cure epilepsy. Sperry found that the left hemisphere of the brain appeared to have the function of logical, analytical, sequential and rational thinking. The right hemisphere "tends to perceive the world and other people in a global mode, instantaneous, intuitive, visual, synthesizing, emotional and expressive. It finds solutions through sudden and spontaneous intuition". The left hemisphere proves the perceptions of the world "in logical, analytical and scientific manner. The left hemisphere breaks down everything into different elements [and] the right hemisphere, […] considers the global whole and searches systematically for connections, analogies and similarities" (Herrmann International 2008; 2009:2). These findings have been demonstrated and observed again and again in laboratory tests, as well as in healthy subjects and patients with lesions in one or the other hemisphere.

Herrmann included in his studies some findings about the limbic system, a dual structure that is buried deep inside the brain and that directs our affective and interpersonal processes (Herrmann International 2008). Herrmann found that each of us has access to all four quadrants but we clearly have preferences for some over others. He synthesised the findings of his research into a metaphoric four quadrant graphical representation of his Whole Brain® theory (Figure 4).
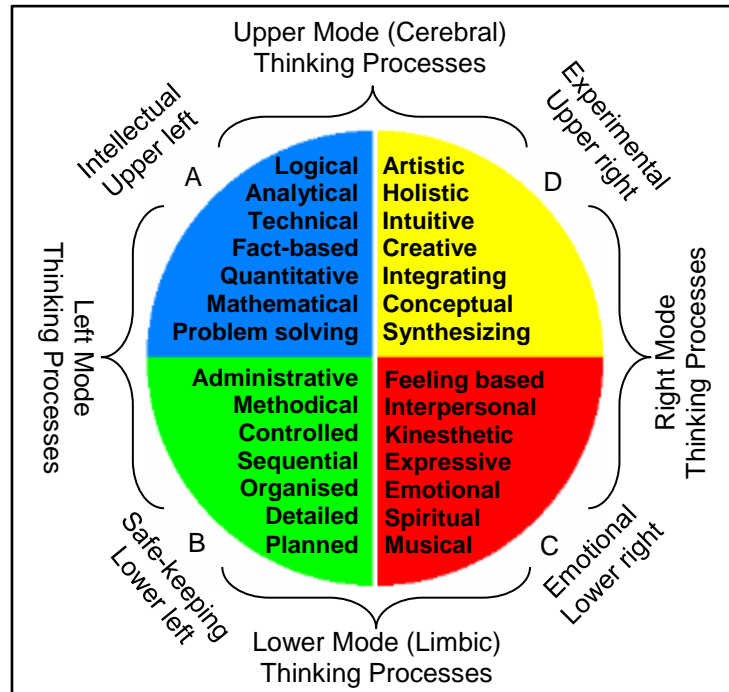
Figure 4: **Herrmann's metaphoric Whole Brain® model (Adapted from Morgan and Herrmann-Nehdi 2007)**

Coffield et al. (2004:78) state that Herrmann (1989) acknowledges that elements of socialisation, such as parenting, teaching, life experiences and cultural influences have a far more significant effect on the way one uses the specialised brain than genetic inheritance. This list of social influences that appears below is far from comprehensive when considering the number of other social influences that have been identified as possible influences on one's way of thinking, learning and living. Some of the influences mentioned are culture (Saville-Troike 1978; Woolfolk 2007:195-196), religion, socio-economic situation (Dotson et al. 2009), parental involvement and strictness (Möller et al. 2003:87; Christenson & Havsy 2001:6-7), politics (Bloodworth et al. 2001:4-5; Steyn et al. 2003:134-147), self-concept and sense of belonging (Christenson & Havsy 2001:6-7; McCombs 2001:8-9; Schaps et al. 2001:20-21; Greenberg et al. 2001:22-23), actions of teachers (Bloodworth et al. 2001:4-5; McCombs 2001:8-9), peer pressure (Bloodworth et al. 2001:4-5; McCombs 2001:8-9), power structures (Cohen et al. 2002: 30), symbols such as language, graphics or gestures as used, for example, in advertising (Möller et al. 2003:179) and positive and negative life experiences (reality itself) that can have an influence on one's self-efficacy (O'Donnell et al. 2007:144), learner's goal

orientation and commitment (Elias 2001:16-17; Hawkins et al. 2001:18-19; Schaps et al. 2001:20-21).

Herrmann realised that a formal tool was needed to measure the preferences of the participants in the GE management development workshop accurately. He then started doing research in partnership with a psychiatrist, Dr Todd Mikuriya. This research resulted in the creation of the Herrmann Brain Dominance Instrument (HBDI[®]) (Herrmann International 2009:3).

The HBDI[®] consists of 120 questions and the results of the questions are presented in a visual, easy to read, graphical format depicting the mental or thinking preferences of the individual who has completed the questions. Newer additions that were added to the HBDI[®] product range provide for pair, team and organisation profiles.

The Herrmann Whole Brain[®] theory is used as the main theoretical foundation for the study, in combination with the HBDI[®], as extensive and on-going validation studies have been performed on the HBDI[®]. These include content- and criterion-related evidence of validity, face validity to users and professionals and internal and external construct validity. Intensive tests to prove reliability of the scores have been performed (Bunderson n.d.). The initial electroencephalogram (EEG) testing and correlation with other valid instruments are used in the validation process (Herrmann International 2009:3; Coffield et al. 2004:79).

The metaphoric Herrmann Whole Brain[®] model and the HBDI[®] were viewed as significant enough to be reviewed as one of the 13 theories, models and instruments to be included in the Coffield review. After the Coffield review it was concluded that Herrmann's metaphoric whole brain[®] model and the HBDI[®] constitute one of six recommended models for use in education and training practices (Coffield et al. *ibid*: 139; Du Toit et al. 2010:13). The criteria that were used during the evaluation of the 13 originally chosen theories for in-depth investigation are internal consistency, test-retest reliability, construct validity and predictive validity. The other theories included in the final list are those of Allison and Hays, and Apter and Vermunt, which fulfilled three criteria and Entwistle and Myers-Briggs, which fulfilled two of the criteria.

Herrmann is included in the list fulfilling two criteria, namely test-retest and construct validity.

Looking at the vast number of possible influences on the way in which individuals learn and think, it can be said that learning style theories should follow a generic approach as it will be close to impossible to create a style or a theory for any specific group. Herrmann's Whole Brain® theory fulfils this criterion as it has a holistic approach in the sense that it does not focus on only one personality trait of a person and it does not categorise people into "specific boxes"; it supports the idea that humans differ. This is one of the most significant reasons why I prefer to use the Herrmann Whole Brain® theory as theoretical grounding for my practice as mentor and facilitator of learning. I am against any form of marginalisation or stereotyping, especially in an educational environment, be it based on culture, race, gender, religion, politics, socialisation, intelligence, brain preference or preferred learning style. I will always work towards providing equal opportunities for all to learn and to reach their full potential and to allow them to develop in such a way that they will be able to assist in solving or preventing social problems they experience in their lives. My philosophy is that everyone should be respected for who he or she is. A facilitator of learning should support students to move forward from their current position (the *here and now*) into a better life (*there and then*) through education. This can only happen if education follows a balanced approach where the different learning styles of each individual are respected in combination with being challenged to become Whole Brain® individuals.

Woolfolk (2007: 196) states that it is dangerous and incorrect to assume that all students have the same learning style. She continues by saying that facilitators of learning should not prejudge how a student will learn best on the basis of assumptions about the student's culture (*id*). Her view can be applied to all types of socialisation. In the case of the older student, as is the case in this study, the students were exposed to many opportunities for further development in their workplaces and some of them moved through the ranks of the organisational structures to be in management positions. They became part of the working community and had to adapt to the culture of the organisations in which they work. This exposed them to new social groups and cultures and their view of the world

might have changed. How they experienced the world when they were young may not be the same as how they experience the working community in which they are employed. The way in which one responds to environmental circumstances is in the end still a personal choice.

In the context of the study it is especially important to follow a generic approach in which students are not marginalised or stereotyped in any way. The age range of the students is 19 to 62 years; all racial groups are represented. Many religious groups are represented, including Christian, Muslim, Hindu, Rastafarian and traditional African religions. Seeing that South Africa has had a free democracy for 20 years, not all African students can be regarded as coming from traditionally developing African cultures. Students who now study in the PHE environment sometimes come from families with mixed marriage parents or they are in mixed marriages themselves. One of the white students adopted an African child. In a few instances black South African students come from families in which both parents are professionals from the higher income group; they grew up in traditional white suburban areas, attended multi-racial private schools and are now in management positions that place them in a high income bracket. A high income allows them to provide their children with the same type of non-traditional African background. The salary structures in the manufacturing industry are of such a nature that in most cases, even on shop floor level, the students earn above breadline salaries or wages. Both South African and international students from all over Africa, coming from different educational and socio-economic backgrounds, are enrolled. Even the level of education at which students enrol at the exemplar institution differs significantly. Some of the students hold Master of Business Administration (MBA) or Master of Business Leadership (MBL) qualifications and in one instance the student holds a doctorate in chemical engineering. The rationale for them to enrol on levels lower than the qualification which they hold is to obtain specialised knowledge that is needed in the manufacturing industry. In some instances the students moved into top level management positions without holding formal qualifications and are now studying at an older age as a result of changes in company policy that link the level of progression to the level of qualification obtained. For this reason it sometimes happens that a factory manager and a machine operator from the same company sit in the same class.

In most businesses the cultural backgrounds of the employees are respected, but in the day-to-day activities the organisational culture keeps the employees together as a team. The secret of success in such a mixed environment is to use a generic approach in which all the students are allowed equal opportunities to excel and to be challenged, no matter their social background or thinking style preferences. It can be regarded as discrimination if a facilitator and assessor of learning departs from generalised assumptions about a student's social background. The facilitator of learning should ensure that he/she makes an effort to know each individual student and to support individual students, based on their specific situations and needs (Woolfolk 2007:196). Fairness in assessment can be ensured when the differences in students are not used as the criteria for assessment; the expected outcomes related to the specific field of specialisation must be the only criteria against which success is measured.

Genetic inheritance does have an effect on the way in which one experiences the world and should therefore not be disregarded or underestimated. It can in some instances have a significant influence on one's way of thinking and doing, more so than socialisation.

I grew up in a very close-knit family, with one brother. We had the same biological parents and we were equally wanted. Even the fact that the male child arrived first with the female child second, is referred to by my mother as being the answer to a prayer. We experienced equal alone time with our parents as there was distinct allowance of time for each of us, where one was tacitly excused as some matters were personal to either me or my brother. That taught respect for each other's privacy and to entertain ourselves and to be comfortable in our own presence. Wherever our parents went both of us went along and we had therefore similar life experiences during holidays and family outings. Fairness was the keyword in our family. Examples are that the size and cost of birthday and Christmas presents were the same, only the one that transgressed a rule was punished and the punishment for the same type of transgression was implemented consistently.

Although the environment in which we grew up was quite identical, there have always been very distinct differences between us. There has been hardly any

change in my brother's behaviour, beliefs, conduct and the way he sees the world since childhood. He is meticulously neat in all that he does. Only one example is the way in which his wardrobe is organised – the clothes are stored according to colours in the colour wheel. He is very good at following rules and doing his chores on time, never arrives late for anything and believes there is not a grey area in any situation.

I, on the other hand, have always been regarded as the weird rebel of the family. I prefer to try new things and to constantly change my viewpoint based on knew information. I had to work hard to change my bad habit of arriving late wherever I go and my wardrobe can be described as organised chaos.

CarteBlanche News once broadcast a video showing how the different members of a family think differently (Herrmann International n.d.). The two brothers in the video also displayed completely different viewpoints and ways of doing things although they grew up in the same environment.

The Herrmann Whole Brain[®] theory also acknowledges that people think differently in different situations. The HBDI[®] profile includes the results of how the individual thinks in a situation that creates stress. The design and delivery of lifelong learning experiences may be more effective in promoting "whole person" and "whole organisation" development if it is designed in a way that considers different learning and thinking style preferences (Coffield et al. 2004:84).

Through many years of research done by Herrmann it can be said that the way in which we think has an influence on the way we do things. For example, the way in which we learn (De Boer, Bothma, Du Toit & Scheepers 2012) and communicate (Herrmann International Africa (HIA) 2005:18) depends on our thinking style preferences. The metaphoric Herrmann Whole Brain[®] model and the HBDI[®] have been successfully used in many contexts such as in leadership (Herrmann-Nedhi 2010), coaching (Herrmann-Nedhi 2009), change management (Morgan & Herrmann-Nehdi 2007:9), team development (De Ridder & Wilcox 1999) and education (Herrmann International 2006), to name only a few.

There are many ways in which the principles of the Herrmann Whole Brain® theory can be used in different contexts. The discussions below focus on the most applicable aspects relating to the context of the PDP, namely learning, facilitating learning, communication during the mentoring relationship and managing resistance to change. The different aspects are only briefly described as each of the mentioned aspects can be a study on its own.

a)   Whole Brain® learning and facilitating learning

De Boer et al. (2012) identified the different learning preferences of individuals, aspects that individuals may struggle with in the learning environment and the expectations of students based on their learning style preferences. Ways of facilitating learning that will be most beneficial for students with preferred learning styles from the different quadrants of the metaphoric Herrmann Whole Brain® model are identified. Although comprehensive lists relating to the different aspects mentioned are provided, only a few items from the lists are mentioned to act as examples in the paragraphs that follow.

De Boer et al. (2012) indicate that students with learning styles preferences based in the A-quadrant of the brain prefer activities that entail analysing, theorising, logical processing and quantifying. It can therefore be said that A-quadrant dominant students will enjoy learning activities that include numerical and mathematical calculations and they prefer doing quantitative research. They also enjoy the analysis of data provided in graphs such as histograms and scatter charts. A-quadrant dominant students struggle with vagueness, impreciseness and a lack of logic. Facilitators of learning must therefore ensure that precise instructions are provided in learning activities and assignments. Errors such as the incorrect numbering of questions in examination papers will lead to frustration for students with A-quadrant dominance.

In order to fulfil the expectations of A-quadrant dominance students, the purpose and objectives of the learning activity should be explained to the students. They also expect to receive information about sources in which they can read more about the views of experts on the different topics under discussion. A-quadrant dominance

students prefer electronic communication for student support rather than personal discussion sessions with the facilitators of learning. The traditional lecturing style in which the lecturer provides information and explanations to the students suits the learning style of A-quadrant dominance students.

Students with brain dominances that are based in the B-quadrant of the Whole Brain® prefer activities that entail organising, sequencing and practising. They are not comfortable when they receive an assignment to complete in which it is expected of the students to use initiative with no clear guidelines of what should be included in the final product. They expect to receive specific guidelines in writing to be sure that they have not missed anything that should be included in the final assignment.

Learning activities should allow such students to be actively involved and contact sessions should be well-structured. The different steps in an activity should be clearly outlined and a time limit should be set for the completion of each activity. B-quadrant dominant students thrive on repetition and therefore the facilitator of learning should have various similar exercises for the same outcome. Frequent formative assessments with speedy feedback will allow the students to evaluate their own performance on a regular basis in order to be able to keep track of their progress.

Students with C-quadrant based learning styles enjoy learning activities that allow movement and interaction with others. They also prefer to internalise the information that is shared during the contact sessions and therefore want to be involved in the learning activities. C-quadrant dominant students struggle with activities that entail large numbers of quantitative data that need to be analysed. Learning activities that entail qualitative analysis should be included in learning activities and case studies can be used to fulfil this expectation of the C-quadrant dominant student. Students enjoy having icebreakers in which they can learn more about their peers and share their personal experiences with their peers. The inclusion of music in the learning activities can support the need for movement when used in combination with rhythmic movements and different types of music can be used to create the emotional setting for the various activities.

The most dominant descriptors in the way that D-quadrant dominant students learn are explore, discover, conceptualise and synthesise. They are uncomfortable with learning activities that contain strict rules and guidelines that do not allow a large amount of flexibility and in which strict timelines have to be adhered to. D-quadrant dominant students benefit the most from learning activities that allow them to see the bigger context into which the topic under discussion fits. They even prefer to explore other subject fields in order to discover information in the other fields that can be related to the topic at hand. D-quadrant dominant students prefer to present what they have learned in visual ways, such as on posters, concept maps, photographs and drawings, to mention only a few. Learning support material should include visual images, such as graphs and photographs and visuals, such as MS PowerPoint presentations, can be used very successfully during contact sessions.

When considering the different learning style preferences and the learning discomforts of the different quadrants in the metaphoric Herrmann Whole Brain® model as identified by De Boer et al. (2012) it can be said that there are some correlations between the A- and B-quadrant preferred learning styles. Therefore learning activities can be developed that fulfil the needs of both these two quadrants in the same activity. The same can be said about the C- and D-quadrant learning preferences and discomforts. Students with A- and B-quadrant dominances prefer fact-based detailed information, clear guidelines and timelines in a controlled and organised setting with the focus on quantitative research. Students with C- and D-quadrant dominances prefer a more relaxed learning environment that allows fun activities, such as interpersonal interactions, the use of music and visuals with freedom of choice of how to reach the learning outcomes. Mostly qualitative research is preferred.

In order to ensure a fair learning environment for all students, facilitators of learning should be aware of the different learning style preferences and discomforts and they must develop learning activities that will allow equal opportunity for all students to be comfortable in as well as challenged by the learning process.

b)   Whole Brain® communication

Effective communication is one of the most important aspects that can ensure a successful mentoring relationship. As is the case with learning, individuals prefer different ways of communication. The preferred thinking styles of individuals can have an influence on the choice of the medium of communication and the content of the message.

As the thinking style preferences of individuals form the basis of their naturally preferred way of doing things, it follows that correlations will exist between the ways in which individuals prefer to learn and the ways in which they prefer to communicate. Herrmann International Africa (HIA) (2005:18) provides a list of aspects that should be considered to ensure effective communication with individuals based on their Whole Brain® preferences. Different aspects to consider when communicating with others, including examples of how the principles can be applied, are summarised below.

When communicating with individuals with A-quadrant dominance one should provide the "**what**" (*id*) of that which is communicated. The message should include:

- the purpose of the communication;
- the aims and objectives of what is included in the message;
- the logic behind what is to be achieved;
- indications of analyses on which assumptions and underlying theories are based;
- brief and precise factual information with quantification where possible;
- references to substantiate the facts.

Individuals with A-quadrant dominance prefer electronic communication such as e-mail and basic slide presentations. Slides should not contain animation or sound and must not be overloaded with text. Only key words must be displayed. The technical layout, such as the background, bullets used, spacing and spelling of the slides and the e-mail must be consistent and error free.

When communicating with Individuals with B-quadrant dominance one should

provide the "**how**" (*id*) of what is communicated. The message should include:

- thorough explanations;
- references for substantiation;
- action plan to be followed with indication of step by step processes;
- policies and criteria to be used for control purposes;
- detailed timelines;
- contingency plans to prevent digression.

Individuals with B-quadrant dominance prefer communication in writing, whether electronic or in hard copy. When slide presentations are used the information should be concise and presented in bulleted or numbered format. As with A-quadrant communication, the technical layout as explained above must be consistent and error free.

In a mentoring relationship with A- and B-quadrant dominant mentees the same principles as those for written communication should be applied during mentoring sessions based on verbal communication. The mentor can provide the main discussion points in written format and the discussions should be to the point. The sessions should be scheduled as a diary inscription and the planned starting time and duration should not be deviated from.

As is the case with learning style preferences, right brain dominant individuals prefer a completely different approach to communication than that preferred by left brain-orientated individuals.

When communicating with Individuals with C-quadrant dominance one should consider the "**who**" (*id*) of what is communicated. The message should include:

- information on how what is communicated will influence others, either positively or negatively;
- ways in which the views of all are collected;
- the general feeling about what is communicated;
- assurance of no hidden agendas;
- information on support systems in place where needed;
- whom to meet with when additional information is needed.

Individuals with C-quadrant dominance prefer verbal communication and where possible in person. Discussion should be open and informal. It should be started by setting a stress-free environment, for example by asking about the person's well-being, previous holiday or view on contemporary matters in the news at the time. Body language, facial expressions and tone of voice are very important and should not portray antagonism. A two-way communication style should be adopted. Technology can be used to overcome the constraints that prevent two-way communication from taking place. Apart from telephones and cellular phones, Skype (software that allows live online video calls) can be used.

When written communication is used, the content of the message should be the same as mentioned above. The information should be presented in a rich narrative style. Slide presentations can include appropriate animations and music and photographs of what is discussed, with some showing the people that are involved. The presenter's voice and body language should display the same message that is included in the presentation.

When communicating with Individuals with D-quadrant dominance one should consider the "**why**" (*id*) of that which is communicated. The message should include:

- information on why what is communicated is necessary;
- ways in which it will have an impact on the future;
- how what is communicated fits in the big picture;
- information on the conceptual framework on which the content of the message is based.

Whether written or verbal, individuals with D-quadrant dominance prefer interactive ways of communication with fun aspects attached to them. The use of colourful visuals that display the big picture such as mind and/or concept maps, charts, flowcharts and organisational structures are important. Innovative ways of presenting the information such as the use of metaphors, drama, videos, games and interactive webpages ensure that the message is conveyed effectively.

In written communication the message can be enhanced by using different font styles and colours in combination with graphics. When hard copies have to be produced coloured paper can be used instead of white paper. D-quadrant dominant individuals will, however, remind you of the impact that hard copies have on our natural footprint.

In a mentoring relationship with right brain dominant individuals mostly verbal communication should be used. C-quadrant dominant mentors and mentees benefit from group discussions in which different viewpoints can be presented. Mindmaps and concept maps may be the outcome of mentoring sessions based on verbal communication with individuals with D-quadrant dominance.

The way in which one listens to what someone says or reads what someone has written is just as important in the communication process as the way in which the message is conveyed. If the listener listens only from his or her preferred thinking style perspective, some of the information in the message will be lost. Considering the aspects mentioned by HIA (2005), it can be said that the same aspects should be considered when listening to or reading a message. When listening in a Whole Brain® way one should continuously ask questions from all the quadrants of the Herrmann Whole Brain® model as stated in Table 5.

Table 5: Questions to be asked when listening in a Whole Brain® way

QUADRANT	QUESTIONS TO BE ASKED
A	• What are the aims and objectives of what is communicated? • Which facts are included in the message? • What proof is provided for the assumptions that are made? • How significant are the numerical statistics that are provided? • Where can I read more about this?
B	• Which dates, times and places are mentioned? • What is the timeframe? • What resources are needed? • What are the processes that will be followed? • What are the possible constraints? • How can the constraints be prevented or managed?

C	• Whose names are mentioned? • Who will be affected? • How will it affect others? • What are the feelings of others about this? • Are the views of others considered? • Who has used or done it before and how successful was it? • Do the body language, facial expressions and tone of voice of the communicator correspond to the message that is conveyed?
D	• Why is this so important? • Where does it fit into the big picture? • How will it impact on other significant issues? • What are the benefits for the future? • Does it fit into the strategic plan, mission and vision?

If all the answers that are applicable to the specific message have not been answered, the listener should ask the communicator to answer the questions for which no answers have been provided.

Facilitating learning is a two-way communication process and therefore facilitators of learning can use the list of questions effectively during the learning activities that they facilitate. They can ensure that all the questions are answered during the contact sessions in order to be sure that a Whole Brain® perspective has been created regarding the learning activities. Students can use the questions during self-evaluation sessions to determine whether they have a Whole Brain® perspective of what is studied.

c)   Managing change or transformation in a Whole Brain® way

Knowing the Herrmann Whole Brain® profiles of the participants involved in a change or transformation process can assist in managing resistance to the envisioned change or transformation process. Morgan and Herrmann-Nehdi (2007:9) refer to the persuaders to change mind sets as identified by Gardner when indicating how the different persuaders fit into the metaphoric Herrmann Whole Brain® model. In the discussions in this section only the term *change* is used but it implies inclusion of the term *transformation* and it should therefore be read as *change and/or transformation*.
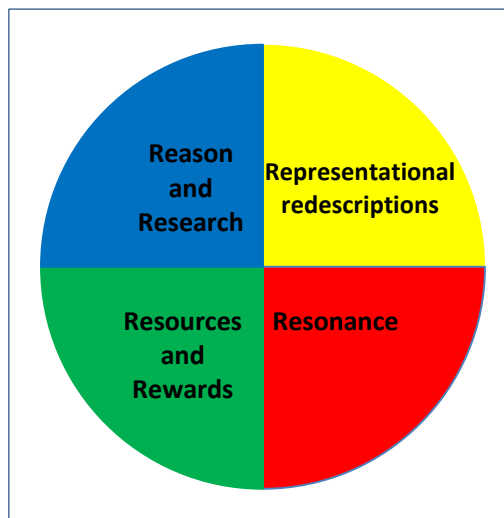
Figure 5: **Graphical representation of how Gardner's persuaders to change or transformation fit into the metaphoric Herrmann Whole Brain® model (Morgan & Herrmann-Nehdi 2007:10)**

The following actions are to be taken relating to the different persuaders for people to be willing to change (Figure 5):

- Reason and Research: All the facts that are provided to the participants must be supported by research behind the change.

- Resources and Rewards: Participants must be provided with the resources to make the change and there must be a reward system in place to sustain it.

- Resonance: Change agents must ensure that the envisioned change is in line with the participants' values and that they feel that the change is the right thing to do.

- Representational re-descriptions: The change must be explained in as many ways as possible, considering as many different mind sets and thinking style preferences as possible to explore the change and its impact (Morgan & Herrmann-Nehdi 2007:9)

Discussions on how the principles relating to preventing and managing change were used in the PDP appear in Section 2.5.2.

In conclusion it can be said that the principles of the Herrmann Whole Brain® theory can be used in all aspects of life as the way that humans think determines how they act. In the context of the PDP it can be said that once a facilitator of learning is

aware of the different learning theories and understands his or her own preferred learning style and knows its impact on the level of learning that takes place, he or she can develop Whole Brain®-based learner-centred activities. The Whole Brain® approach challenges all students and all have an equal opportunity to develop their full potential (Du Toit et al. 2010:12) through a process of lifelong learning.

2.4   LIFELONG LEARNING

The terms *lifelong learning* and *a culture of lifelong learning* are popular terms that are currently used in all spheres of education and work environments. In the following paragraphs I share my thoughts of how I tried to make sense of what the terms really refer to. Literature has also been consulted in order to ensure true understanding of the concepts.

2.4.1   What is lifelong learning?

When thinking of the meaning of the term *lifelong learning* before searching for literature sources to determine what others think, two ways of interpreting the term come to mind. The first idea is that "we will never stop learning for as long as we live". The second idea is that "for as long as we live, we will never forget what we have learned, how we have learned and what the best way for us to learn is". "When considering the idea that "we will never stop learning for as long as we live" the words that first come to my mind, are those of Krishnamurti (2003:57) who says that "there is no end to education. It is not that you read a book, pass an examination, and finish with education. The whole of life, from the moment you are born to the moment you die, is a process of learning". Senge (1990:142) states that "people with a high level of mastery live in a continual learning mode. They never arrive. It is a lifelong discipline ... Paradoxical? Only for those who do not see the journey as the reward."

Morley (2003:12-13) also refers to an endless journey by saying that continuous improvement can be seen as "to travel hopefully, but never to arrive". This view supports the idea that there will always be something new to be learned. One will never arrive at a point in life where one knows everything or can do everything and

therefore humans will never stop learning. However, the use of the word *hopefully* creates a concern. It can be interpreted as an indication that humans do not have to take responsibility for their own learning. It seems to mean that humans will just have to wait patiently in the hope that they will learn something and that they will just have to accept their fate if no learning takes place. This can be compared to someone who is looking for a job but never sends out a curriculum vitae or never reads the job advertisements in the paper but then complains that he or she cannot find a job while saying that "hopefully something will come my way". Furthermore, continuous improvement is a process of constant, wilful activities to learn more and to improve one's own knowledge, competencies and ability to have a deeper understanding of the world in which we live. Active participation in one's learning process is not grounded in hope; it is grounded in a vision and a planned strategy and mission to reach the set goal as stated in the vision statement. In some instances it also involves more than just improvement in our lives. In some instances we might find errors in our thinking (Möller et al. 2003:19) that are significant enough that transformation, rather than development, needs to take place. Morley's (2003:12-13) statement that lifelong learning represents a disaggregation of education and age can also be seen as in indication that no matter how old we are, there will always be something to be learned.

Other theorists agree with the view that we will never stop learning, no matter what our age is. Higgs and van Wyk (2007:111-121) refer to ideas such as respect for older students and the sense of being different that older students experience in HEIs. This can be seen as evidence that, currently, even older people enrol for formal HE studies and not only younger students as was the case in the past. This is the case at PMI as the average age of the students enrolled at PMI is in the late thirties. The ages of the students enrolled at PMI at the time of the study ranged from 19 to 62. The age range of the students at PMI is living evidence of the idea of no matter how old one is, one can still learn.

When considering the second way of interpreting the term *lifelong learning*, that "for as long as we live, we will never forget what we have learned, how we have learned and what the best way for us to learn is", the term "learning that lasts" Mestre (2001:2) comes to mind. However, Mestre (*id*) refers to only one aspect of "learning

that lasts" when he states that "the flexible application of knowledge across life's different contexts and situations" is "learning that lasts". He makes no mention of knowing about the learning process itself and the ability to develop higher cognitive competencies. He just refers to the ability to remember something and then know how it can be used in another context at another time.

Atkins (1995:29) extends the view of what lifelong learning is by saying that lifelong learning entails that students should also acquire knowledge about their own conceptual development, cognitive acceleration and general knowledge. Woolfolk (2007:267) refers to the process of learning about your own knowing and learning as meta-cognition and describes it as "knowledge about our own thinking processes". SAQA also states that as part of lifelong learning a student must be able to reflect on and explore a variety of strategies to learn effectively (SAQA 2000:19).

By considering both interpretations of the term *lifelong learning*, namely "we will never forget what and how we have learned" and "we will never stop learning" as discussed in the foregoing paragraphs, one realises that lifelong learning is actually a merger of the two interpretations. SAQA (2000:18-19; Van der Horst & McDonald 1997:49-50; Van der Merwe 2003:14 in GIED 2004:39) displays the idea of a merger of lifelong learning when identifying the seven critical outcomes (CO) and five developmental outcomes (DO) that should be achieved through lifelong learning to contribute to the full personal development of each student and the social and economic development of society. It is compulsory to ensure that the intention underlying any course or programme of learning offered in South Africa, on any level of the NQF, is to make individuals aware of the importance of all the COs and DOs to be achieved in any qualification. This is one of the criteria considered when applying for accreditation of a qualification at the CHE and for the registration of the qualification on the new HEQF through SAQA.

The seven critical outcomes (COs) that are stipulated by SAQA (2000:18-19) are:
> CO 1. "Identify and solve problems and make decisions using critical and creative thinking.

CO 2. Work effectively with others as members of a team, group, organisation and community.

CO 3. Organise and manage themselves and their activities responsibly and effectively.

CO 4. Collect, analyse, organise and critically evaluate information.

CO 5. Communicate effectively using visual, symbolic and/or language skills in various modes.

CO 6. Use science and technology effectively and critically, showing responsibility towards the environment and the health of others.

CO 7. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation."

The levels of cognitive competence (Bloom in Woolfolk 2007:481; Hess et al. 2009:3) that are addressed in the COs are **understanding** the world that we live in, **applying** the knowledge in different contexts, **analysing** data, **evaluating** the significance of the information derived from the data **analysis** and using the information to **criticise** actions**,** ideas, beliefs and concepts, to name only a few, and then **creating** solutions for problems or creating new things, for example theories, cultures, products or new ways of doing things. I find it interesting that SAQA, which is the standard setting authority for all qualifications offered in South Africa, places the ability to solve problems and to take decisions as being CO 1 whereas the Ministry of Education (2001:7) places it last in the statement that identifies the focus stipulated in the national plan for HE in South Africa.

SAQA (2000:19; Van der Merwe 2003:14; Van der Horst & McDonald 1997:50) identified the following developmental outcomes (DOs):

DO 1. "Reflecting on and exploring a variety of strategies to learn effectively.

DO 2. Participating as a responsible citizen in the life of local, national and global communities.

DO 3. Being culturally and aesthetically sensitive across a range of social contexts.

DO 4. Exploring education and career opportunities.

DO 5. Developing entrepreneurial abilities."

The merging of the two ways of interpreting the term *lifelong learning* as "that for as long as we live, we will never forget what we have learned, how we have learned and what the best way for us to learn was" and that "we will never stop learning for as long as we live" can also be seen in the DOs. DO 1 refers to the interpretation of how we have learned and DO 4 refers to development for the future. While following a career path one constantly has to experience professional growth in order to stay ahead of the changes and innovations that happen in one's environment in order to progress.

The COs and DOs are relevant to the learning process of all the parties involved in the study. It is extremely important that the facilitators of learning know about these outcomes and that they know what the meaning of each is and how to facilitate learning in such a manner that the students will be able to reach all the outcomes during the period of time in which the course/module is offered. At the same time, the students must be informed about the existence and meaning of the COs and DOs and they must learn about their own learning in order to decide how they will ensure that they reach all the outcomes during their studies. Student awareness can be created by including the COs and DOs in the study material as part of the introduction to the course/module. The COs and DOs can also be included in brochures that provide general information and regulations to the students. Achievement of all the outcomes is necessary to fulfil the legislative regulation as set by SAQA and it will allow the students to develop towards reaching their full potential.

It is also important that the facilitators of learning develop competence in using higher order thinking in their own professional learning process, especially as they must be able to use higher order thinking on a level higher than the students in order to prevent a situation that a student is not challenged enough and the student is then not motivated to learn. The facilitator of learning may lose confidence in him-

or herself if the students can display competence in using high order thinking on a level higher than the facilitator of learning can. The facilitators of learning should also be able to develop professionally to their full potential and therefore they also have to learn about their own learning in order to know how to achieve the COs and DOs at best.

In my own role as mentor for the participants of the PDP, I have to ensure that all the COs and DOs are fulfilled during the run of the PDP. I also have to ensure that opportunity is created to allow the participants to experience professional growth that will allow them to reach their full potential. I constantly have to think of ways to challenge the participants always to go a step beyond the level that they have reached through an experience that contributed towards their own professional development. I had to improve on my own competence in using higher order thinking to be able to prevent a situation where the development process, of both the participants and my own, stagnates due to a lack of my own abilities to use higher order thinking.

Section 5.4.1 provides examples of how the COs and DOs were reached through the activities included in the PDP and how I have reached the COs and DOs through my own professional development process.

The statement made by Higgs and Van Wyk (2007:114) that educating for life is lifelong learning, can be perceived as an indication of a merger of the two ways of interpreting the term *lifelong learning* as it seems that the two interpretations cannot easily be separated. It is believed that Higgs and Van Wyk's (*id*) statement indicates that in order for humans to survive in the world that they live in they will continuously have to re-evaluate and improve or develop their knowledge, skills and competencies and even acquire new skills and competencies as part of their own professional development. Humans also continuously have to re-evaluate their values and attitudes and the necessary changes need to be made in order to be, for example, more culturally and aesthetically sensitive and to become responsible citizens in their communities. A continuous self-development process will enable humans to better adapt their behaviour to the ever changing life situations or they may be able to manage themselves better during a change process. This, however,

is reactive behaviour. In some instances they may be able to manage the change process in such a way that the result of the process is to their advantage. This is a more pro-active and therefore positive approach towards change in the environment.

Lifelong learning is not only a never-ending process as it also entails that each person should learn about his or her own learning. The understanding that humans are different and would therefore prefer to learn in different ways makes it necessary to consider different theories regarding learning itself and different ways in which humans prefer to learn, before one can discuss facilitating and assessing lifelong learning.

The PDP offered at PMI introduces the participants to different theories on how learning takes place. The focus is mainly on the learning of the participants of the PDP and not only on the learning of the students. It is important that the participants experience the advantages of a learning environment that respects and understands that human beings have different ways of constructing meaning and making sense of the world that they live in. If the participants become more aware of their own learning processes and experience the value of learning in their own way, they will be more motivated to move away from the old paradigm of being lecturers (traditional term used on purpose) who are transmitters of knowledge by using mainly the traditional lecturing style which is based on one-way communication. The transformation from being a lecturer to being a facilitator of learning will be easier once the participants have experienced the advantages of learning in one's own preferred way. Once the participants can build on positive experience, they will realise the importance of creating an environment in which the students are not always challenged to learn in ways that are not part of their preferred learning styles but in which they will be allowed to learn in their own preferred ways as well. This will result in the development of learning activities that allow for student participation in the learning process, which in turn, will result in the students becoming more responsible for their own learning and a culture of lifelong learning may be established.

In order to explain the concept *culture of lifelong learning* the ideas of various authors have been combined: Merriam-Webster (2013); Woolfolk (2007:164); Fryer (1997; 1999:8) and Kemmis and McTaggart (1992:16) to name only a few. It can be said that culture is the characteristic substance and forms of the language and discourse, activities and practices, and social relationships and organisation constitute the interactions of a group. Culture encompasses the knowledge, values, attitudes, traditions, bundle of signs, symbols, beliefs, myths and ways of thinking, speaking and doing that characterise the ways of life that guide the behaviour of a group of people and allow them to solve the problems of living in their environment. Jones and George (2003:98) include shared expectations as part of culture as these can influence the way in which individuals or groups interact with one another in an organisation. One of the definitions for culture provided by Merriam-Webster (2013) is that it is the act of developing intellectual and moral faculties, especially through education. Culture is therefore something that is socially learned.

As with any body of knowledge, culture can become outdated as a result of the dynamic world in which its followers exist. It should therefore be re-evaluated on a continuous basis as part of the process of continuous improvement in a dynamic environment. Cultures that are found to be of no value to the group should be done away with entirely and new ones should be developed. This is significantly true in the profit-based HE context where organisations expect from educational service providers to provide education that will ensure swift returns as well as lasting results. Modern organisations expect that individuals, especially those who have received formal education, will be able to cope with the expanded responsibility placed upon them to identify steps that companies must take to remain competitive for years to come. This is only possible when authentic learning took place during the learning opportunities that were part of their formal education.

The students must be able to apply the knowledge, skills, competencies, values and virtues that they have developed in real-life situations at their workplaces. For this reason there should be a moving away from a culture of using only the traditional lecturing style during learning sessions in HE as well as a step away from written examinations in which only the ability to memorise is tested as the final determination of a pass or a fail. Woolfolk (2007:195) cites Tharp who states that "a

central task of educational design is to make the organization (sic) of teaching, learning and performance compatible with the social structures in which students are most productive, engaged, and likely to learn. Social structures or social organisation in this context means the ways in which people interact to accomplish a particular goal. In the context of the study the goals that should be reached are the professional development of the student and the acquiring of the necessary knowledge, skills, competencies, values and virtues that can contribute to the existence of a stable economy that can ensure more job opportunities and a decrease in poverty rates.

It is important that individuals and organisations strive to develop a culture of learning at every juncture in order to stay informed about organic and adaptive approaches organisational leaders can take to design enduring success. If educational service providers can initiate the development of a culture of lifelong learning and organisations can become learning-orientated the continuation of the learning process that was started during the student's formal education will be guaranteed. As the student progresses in his or her career, more demanding challenges will arise and the student will have to revisit his or her own learning to determine the most appropriate way to learn in every specific situation.

Learning happens with and through other people and it can therefore be said that learning is fundamentally social. Who we are, who we want to become, what we care about or what is of value to us and which communities we wish to join, determine what we choose to learn (Brown & Gray 2004:3). Learning is also a matter of changing identity and not just acquiring knowledge. Learning *about* is quite different from learning *to be* (Brown & Gray 2004:3). Learning *to be* occurs primarily through gaining membership of a community of practice and by actively participating in the specific community. All citizens in a community should therefore contribute to the development of a learning culture by taking responsibility for their own learning and for helping one another learn (Conner & Clawson 2004:327).

A culture of lifelong learning can be created in an organisation, community or society in which people feel the need to become continuously better, to grow intellectually, emotionally and spiritually. Individuals need to realise that personal

growth can only happen by learning new and more things and learning about ways in which they can improve their own learning. An environment must be created in which individuals can regard acquiring new skills or updating their existing ones as part of everyday life (Department of Education and Employment, Sheffield 1997) where learning takes place each day, all day (Conner & Clawson 2004:354). The learning community or society must be characterised by opportunities for all to participate according to their own varied preferences and priorities (Fryer 1997). The responsibility for learning is shared by all the stakeholders in a learning community or society starting with each individual being responsible for his or her learning.

Jones and George (2003:237) state that organisations in which a culture of learning exists spring from attempts of managers trying to maximise the ability of individuals and groups to think and behave creatively, thus maximising the potential for organisational learning to take place. Brown and Gray (2004:5) state that becoming learning organisations or communities entails deliberate organisational and/or communal cultural changes. Old instincts must be abandoned and new practices must be cultivated. In old paradigm learning practices learning usually meant training, knowledge was information and 'content was king' (*ibid*:6). In the new paradigm of lifelong learning the focus is on authentic learning that relies on participation, experience as well as the learning processes and preferences of individuals (Fryer 1997). Lifelong learning can be seen as *learning to be* and one can say that lifelong learning can be seen as learning by objective.

Brown and Gray (2004:7) state that corporate practitioners must start taking advantage of authentic practice if they want to change the learning culture in an organisation. Until they do so practitioners cannot master the dual art of knowledge-sharing and innovation. Authentic practice through which authentic learning takes place refers to the daily activities of corporate practitioners in which they have to solve real-life problems (Woolfolk 2007: 613). In the corporate environment learning is defined as "a relatively permanent change in a person's knowledge [base] or behaviour that results from practice or experience" (Jones & George 2003:421). McNiff (2008:353) supports this when stating that there needs to be engagement with new forms of scholarship of which the focus is the generation of practitioners' practical theories. The idea of learning "from practice or experience" fits the

principles of both the traditional approaches as well as a living theory approach followed in AR. The learning community as a whole, whether formal or informal, should therefore start accepting the knowledge and views of action researchers as authentic. This is especially true in formal AR projects that are formally reported and peer-reviewed and in some instances formally assessed in the formal education environment. It can therefore be said that a culture change is needed not only in the learning process, but in the assessment of the learning that took place through AR as well.

Brown and Gray (2004:8) state that we must face the challenge of learning to unlearn. Unlearning can be seen as a move away from known behaviour that we are familiar and comfortable with towards new and perceived to be better behaviour. Unlearning is not an easy process, especially when the behaviour or views that need to be changed have been part of one's life for such a long time that they have become habit. Habits are consistent and often unconscious patterns that express our character and determine our effectiveness. Covey (2004:47-48) defines a habit as the intersection of knowledge, skill and desire. Knowledge refers to knowing what to do and why to do it. In the context of unlearning it can be said that knowledge refers to knowing what not to do and why it should not be done. Skill refers to how to do. All three the elements must be present to form a new habit. The important message from Covey's (2004) work is that habits are learned behaviour and therefore they can be changed.

Brown and Gray (2004:15) state that a learning culture can be changed by adopting the view of "we participate, and therefore we are", which relates to the African proverb of "it takes a village to raise a child". When relating what Covey (2004:49) says about the levels on a maturity continuum of learning, the following can be said: The first level is dependence and the focus is on the "you" in the relationship. In this instance the learner does not take responsibility for his or her learning. What needs to be learned is determined by others and the responsibility is placed on others, such as the facilitator of learning who is then blamed if learning does not take place. The second level is independence where the focus is on the "I" – the learner believes he or she can learn independently, can carry the responsibility on his or her own and he or she can choose what needs to be learned. The final level is

interdependence where the focus lies on "we" – we can do it, we can co-operate, we can combine our talents and abilities and create something greater together. Culture refers to group behaviour and therefore a culture of lifelong-learning can be created once the different stakeholders acknowledge their interdependence.

We do not know how to create culture for those who come after us as we live in a dynamic world. However, a change in the current learning culture will hopefully result in fundamentally changing the way we think about how, what and when we learn, and how we can apply learning to practice to ensure a better world for all. As the late Nelson Mandela put it, "Education is the most powerful weapon which you can use to change the world".

2.4.2   Facilitating and assessing lifelong learning

In literature the theories on learning are generally referred to as "learning theories" and the different ways in which humans prefer to learn are generally referred to as "learning styles". Therefore, in all discussions the terms learning theories and learning styles are used. The different theories that form the theoretical foundation of my own professional development and transformation processes and those of the participants of the PDP are discussed in the sections that follow.

Morley (2003:7) states that traditionally teaching and learning in HEIs was focused on disciplinary theoretical knowledge. She states that the situation has changed as HE knowledge is currently evaluated for its pragmatic value during problem solving. Therefore, the main focus is no longer only on acquiring theoretical disciplinary knowledge; there is also a new focus on learning how to learn, which fits in with the principles of lifelong learning that students must learn about their own learning. Morley (2003:12) states that changes have been made to allow for the new focus on lifelong learning. A few of these changes that directly influence the learning process are the introduction of new modes of delivery and there has been a move away from traditional written examinations. Assessment strategies started to include alternative assessment methods such as portfolio and project work, AR projects and the recognition and accreditation of work-based learning.

If one should consider Morley's (*id*) statement in the South African context it can be seen as a generalisation at the time, as even today there is a heavy reliance on examinations as summative assessment task in the HE environment, both public and private. Even formative assessments rely mainly on tests as it is good assessment practices to use the same type of assessments as formative assessment that will be used in the summative assessment to familiarise the student with the standard that will be expected from the student in the summative assessment task or examination. In many instances assignments and projects are used as an additional formative assessment task in combination with mostly theoretical written tests.

Sections 2.4.2.1 and 2.4.2.2 provide an overview of different ways in which learning can be facilitated and assessed that are believed to contribute positively to the process of lifelong learning. Inclusion of these discussions was necessary in order to validate the actions that were taken by the participants of the PDP referred to in the study. Although the PDP referred to in the report of the study is offered continuously, activities that could have had an immediate positive impact on the situation, where mostly the traditional lecturing style and written tests and examinations are used, had to be found. Only learning through dialogue is discussed in Section 2.4.2.1 as this can be implemented more easily than some other activities such as those discussed in Chapter 4. Dialogues need no additional media and therefore it is also the most cost effective method that can be implemented immediately. In an environment where the facilitators of learning are used to mostly talking, it is also the method that they will be the most comfortable with during the implementation of more learning orientated learning experiences. Additional learning orientated facilitation methods that have been implemented and analysed in depth are discussed in Chapter 4.

2.4.2.1   Facilitating lifelong learning

Evidence of the beliefs that learning-centred facilitation of learning is more effective than educator-centred teaching can be traced as far back as around 530 BC when Confucius said: "I hear and I forget. I see and I remember. I do and I understand." Mestre (2001:3) agrees with the principle that students should be actively engaged

in the learning process as he states that the educator should be the facilitator of the learning process rather than a transmitter of information. It is quite ironic that Mestre refers only to "knowledge acquisition" when he refers to the facilitation of learning that will ensure "learning that lasts". He does not refer to the skills, competencies, attitudes and values that should be developed during the learning process (GIED 2004:40). Mestre (2001) makes no mention of meta-learning skills that are also referred to as meta-cognition by Woolfolk (2007:267).

Around 427-347 BC Socrates involved the students in the learning process by using dialogue during the learning sessions. Möller et al. (2003:19) refer to what is known as the Socratic Method of teaching when stating that:

> *In dialogues, Socrates asks questions that force students to examine critically their notions about life, truth, beauty and justice. As they interact with Socrates, the students discover the errors in their thinking and formulate clearer, more accurate ideas about life's questions. The Socratic Method, then, is one of teaching through inquiry and dialogues in which students discover and clarify knowledge.*

These words indicate that Socrates also believed in more than just knowledge acquisition as they also refer to the critical examination of the aesthetic value of beauty and the ethical consideration of justice. The latter is also a concern of Freire (2004). The additional values of dialogue as a way to facilitate learning that are not mentioned by Möller et al. (*id*) can be explained by way of a practical example, when referring to a narration of Freire (2004:36-38).

Freire (*id*) narrates a situation that he experienced during one of his lectures to an agrarian audience, where the members of the audience communicated freely with him and were actively involved in the learning session. For no apparent reason the conversation was suddenly followed by a disconcerting silence. Freire (2004:36) commented on this experience by saying that it would have been meaningless for him to keep on talking. He states that he used something in the discourse of the audience and made a problem of it for them in order to bring them in dialogue again.

In other words, he also realised that the audience have to participate in order to gain something everlasting from the learning session.

Freire's (*id*) actions can be seen as more than just bringing the audience in dialogue again. His actions relate to various educational principles, some of which are:

- It refers to problem based learning as he used a problem from the world that the audience live in, to involve them again.

- The use of a problem from their own environment also added pragmatic value to the dialogue as they could solve a problem that they experience in real life by taking part in the discussion. The immediate application of the knowledge also fits in with one of the characteristics of adult learning (andragogy), namely that adults are motivated to learn if they can get immediate value from the learning that takes place.

- Problem solving is regarded as a life skill which is part of lifelong learning.

- It can be said that his actions were based on the theory of social constructivism. Freire wanted the audience to learn from one another through the ideas and perspectives expressed by different members of the audience in an environment in which all views are respected and valued (not only those of a privileged few) in order to create high self-efficacy for all participants. In such an environment the participants will feel free to contribute to solving social problems (Mc Combs 2001: 8).

- It supports the notion of Whole Brain® learning (Herrmann International 2008) as effective problem solving entails the use of all four quadrants of the brain.

Gravett and Peterson (2002:281-291) describe "teaching as dialogue mediation". They state that the conversations between the facilitator of learning and the students are exploratory and interrogative. The dialogic process implies cooperative and reciprocal inquiry. In contrast with lectures that are based on one-way communication that causes the focus to be on the facilitator of learning, dialogue mediation actively involves the student, the associated learning outcomes to be achieved and the facilitator of learning. This means that when dialogue is used during the contact sessions, the focus is neither on the facilitator of learning nor on the student. Dialogue mediation is learning-centred as the main focus is on the learning process itself.

One of the pitfalls of using dialogue during learning sessions is the students' reluctance to participate in the dialogues. During a previous AR project (Boshoff 2007), some of the reasons for this reluctance were identified as being low language proficiency, shyness and low levels of self-efficacy. Great successes were experienced by having an open communication relationship between the facilitator of learning and the students as well as between the students themselves (Boshoff 2007:91-149). Different approaches were used to ensure that the students would take part in the communication process during the contact sessions. Although the students were adult students, puppets were used to overcome shyness (*ibid*:134-137). In one of the cases (*ibid*:96-99) an interpreter/translator was used to ensure that language inefficiency would not hinder two-way communication during the learning process. In various instances (*ibid*:39; 97 and 106) it is mentioned that the experiences and narrations of Freire (2004) had a big influence on the actions that were taken during the AR project that was reported in 2007.

Only the use of dialogue as a learning activity is included in this section. The reason is that full analyses have been done of a variety of activities that involve more physical student participation. The results of these analyses are presented in Chapter 4. The learning-orientated learning activities that were analysed comprise individual tasks and group tasks that include the use of case studies, observation and student presentations. Creativity activities used are poster designing, and singing and dancing.

2.4.2.2   Assessing lifelong learning

During the contact sessions that were offered as part of the PDP that is referred to in the study, the participants of the PDP were introduced to different ways in which lifelong learning can be assessed. The study mainly focuses on the facilitating practices of the participants as these could have had an immediate effect on the student learning that takes place during the contact sessions. The summative assessments in PMI are still conducted by means of written examinations and therefore the focus is on facilitating lifelong learning with only little attention paid to assessing lifelong learning. Reference is made mainly to assessment as part of the learning process.

Three written examinations set by one of the respondents were analysed to determine whether the examination papers did assess the students' ability to use all the cognitive competencies as explained in Bloom's taxonomy. The examination papers were analysed to determine whether allowance was made for learning style flexibility according to the Herrmann Whole Brain® theory. The results achieved by the students who wrote the examination were analysed to determine whether there is a correlation between the results achieved by the students and the level of allowance for learning style flexibility and also considering the cognitive competences, as described by Bloom, that were assessed in the examination paper.

As mentor of the participants of the PDP that is referred to in the study I had to recall my experiences of the time when I was studying towards the Diploma in Higher Education and Training Practice (DHETP) at the University of Pretoria (UP) as part of my own professional development as facilitator of learning. This was needed as the reflection reminded me about effective ways in which assessment can be used to promote lifelong learning for both the students and the participants of the PDP.

One of the successes of the DHETP that was offered by UP in 2000 was the fact that the principle of *practise what you preach* was used in nearly all the modules that were offered and mostly in the assessment of the learning practices. As I strongly believe in the idea of *practise what you preach*, the DHET offered in 2000 and the current PGCHE that is offered at UP are used as benchmark throughout the study. Some of the contact sessions of the DHET were still offered mainly by using the traditional lecturing style. Different assessment methods were used, such as portfolio assessment, action research projects, presentations, case studies, model building, posters, metaphors, observations, reflection reports and practical application projects. The success of the assessment strategy that was followed was that we as students and practising facilitators of learning could experience the different assessment methods and we could see the way in which the tools were developed and how they can be used in one's own practice. We could also experience how the facilitation of learning and the assessment of the learning outcomes are integrated and we could identify the level of lifelong learning that takes place when using the different methods. Here lifelong learning refers to both

the interpretations of "we will never stop learning" and "learning about our own learning". I have experienced the idea of creating a culture of lifelong learning as now, more than a decade later, I still follow all the principles that I have learned during my own learning as a student. The words of Confucius always come to mind when I reflect on my experiences as a student studying towards the DHETP: involve them and they will understand.

Apart from the assessment methods that were used, we as students experienced the value of self-, peer- and group assessment (Lotriet 2000:9). Our experiences allowed us to understand the meaning and the value of using the principles of the constructivist (Conceição-Runlee & Daley 1998, Botella 1993, DeLashmutt & Braund 2001, Woolfolk 2007:344-346, Möller et al. 2003:36-37, Terhart in Curriculum Studies 2003:25-44 and Hambrock-Johannes 2006:21-45) and social constructivist learning theories (McMahon 1997, De Bono 2007, Gravett 2001:38, Woolfolk 2007:48; Jacobsen, Eggen & Kauchak 2002:5, 19 and 144) in one's practice as facilitator of learning. The ways in which we were assessed as students allowed us to learn about our own learning and the value of learning style flexibility while at the same time we learned about how to be facilitators of learning and assessors of learning that allow for learning style flexibility.

The professional development of the participants of the PDP was assessed through an action research project in which the evidence was collected in the form of a portfolio of professional development. AR is a well-balanced activity when measured against the Herrmann Whole Brain® theory. The A-quadrant (analytical) is catered for by the analysis of data that is collected continually during the research process. It is not just a once-off analysis process. Quadrant B (organising) is catered for through the continual planning of the different activities to be included in one's practice and the plans are then implemented. AR caters for the C-quadrant (emotional) as an AR project in the educational environment always involves other human beings. Kemmis and McTaggart in Cohen et al. (2002:227) state that action researchers do AR not only to improve their own practices, but also to determine how well they work with and for others. The continual development of innovative ways in which one's own practice can be improved fulfils the needs of the

D-quadrant (creative). A comprehensive discussion on AR appears in Sections 2.3 and 3.2.

During the contact sessions that were offered at the onset of the PDP referred to in the foregoing paragraphs, the participants were introduced to assessment methods that they can use in their practice as facilitators of learning to assess students' learning. The use of rubrics (Jacobsen, Eggen & Kauchak. 2002:319;321; Du Toit & Vandeyar in Maree and Fraser 2004:134; GIED 2004:49-43; Potgieter & Du Toit in Maree and Fraser 2004:215-216; Andrade & Du 2005:1-11; Foden 2006:87-90), observation sheets and checklists (Van der Horst & McDonald 1997:190-191; Jacobsen et al. 2002:317318; Le Grange in Maree and Fraser 2004:185197; Foden 2006:86-87) and case studies (IMC Multinational 1992:10-13; Kenwright 2002:65) were introduced to the participants of the PDP referred to in the study. The use of case studies as a learning activity is discussed in Section 4.4.3.1.

2.5   UNDERSTANDING ORGANISATIONAL DEVELOPMENT AND TRANSFORMATION

Any development or transformation that takes place in a working environment is experienced as change. Change, development or transformation is something that does not happen overnight. It is a process of which all the steps have to be planned in detail to prevent the process from being a failure. Not only the change process itself should be planned; the use of the resources should also be planned carefully. As human resources are the only resource that reacts when acted upon, it is the one resource that should be given specific attention and management should try and pre-empt the reactions of the human resources during the change process. The idea that the results of the change can have a positive effect on the organisation is usually not immediately considered by the human resources that will be affected by the planned changes.

One of the objectives of the study is to change the way in which learning is facilitated in PMI and therefore it would be wise to include an overview of the different types of change that are experienced during an organisational development process.

One can start the discussions about change by asking the question: What is change? After studying different sources such as Bartol and Martin (1994:197-228); Hellriegel and Slocum (1992:714-739); Jick and Peiperl (2003); Luthans (2002) and Lynch (2006), to mention only a few, it was found that none of the sources provides a specific definition for the term *change*.

The first ideas that come to mind if one considers the meaning of the term *change*, without trying to provide a formal definition for the term, is that things are not the same as they used to be or that things are done in a different manner than before.

Geel (2005:12-13) cites Kimbrough and Burkett (1990:131) who define *change* as a deliberate effort to alter any prevailing situation by influencing or modifying the functions, structure, technology and/or purpose of the organisation. Geel also indicates that Stoner and Freeman (1992:408) define planned change as the deliberate design and implementation of innovation, a new policy or goal or a change in operation, philosophy, climate or style.

Stoner and Freeman's (1992:408 in Geel 2005:12-13) reference to philosophy as an example of something that can be changed, leads one to think of the kaizen philosophy. Imai (1986 in Morley 2003:13) states that kaizen is a philosophy that "assumes that our way of life – be it our working life, our social life or our home life – deserves to be constantly improved". Improvement in our lives can only be achieved when changes are made in the ways that things are done. In some instances radical transformation of our actions, beliefs and values is needed to develop, for example, new relationships and a positive and healthy lifestyle.   Richrath (2006:37) states that kaizen can be translated as continuous improvement and it is to a large extent the outcome or end result of a change process. The improvement can happen as a reaction to an actual problem or it can result from the application of hansei.

Richrath (2006:36) quotes Brownlee in Liker (2004:258) who states the following:

> *Hansei can be loosely translated as 'reflection' but it is much deeper*
> *than that. It is the recognition that however well something has been*
> *done there are always flaws and reflection serves to reveal and*

> *'apply one's mind' to avoiding these flaws in the future. It is about being "… honest about your own weaknesses. [...] If you are recognising your weaknesses with sincerity, it is a high level of strength".*

When kaizen is the result of hansei the process is much more likely to lead to genuine continuous improvement, because it views the situation holistically and it strives to do things better. Hansei can be seen as a proactive process as problems are pre-empted and this will enhance the kaizen outcomes. When kaizen is the reaction to a problem it is frequently limited to the solution of that specific problem and is continuous only in the sense that it follows some previous improvement and may or may not be followed by a further improvement (Richrath 2006:37).

The asset-based theory as discussed by Eloff and Ebersöhn (2001:148), Ebersöhn and Eloff (2003:14), Eloff and Ebersöhn (2001:149), Proctor (n.d.), Ebersöhn and Mbetse (2003:323) and Way et al. (2007:6) can be regarded as being integrated into the kaizen principles. The focus of kaizen is to use the existing resources in the organisation in such a way that better results can be achieved. It is not always used as a reactive measure but, as in the asset-based approach, it can also be used in order to be proactive and to prevent negative results that can be experienced by an organisation.

During the planning stages of the PDP that was offered by PMI it was decided to use the kaizen philosophy as point of departure when explaining the reason for the implementation of a PDP for the academic staff employed at PMI. All the academic staff employed by PMI are full-time employees in the manufacturing industry and most of the manufacturing organisations use the kaizen principles in their daily operations. They would therefore be able to relate to the reason for the changes to the ways in which things are done in PMI and their understanding could prevent resistance to the developmental process.

2.5.1 Different types of change

Ackerman (in Jick & Peiperl 2003:xvii) identify three types of change, namely

developmental change, transitional change and transformational change.

Ackerman (*id*) explains that:

- developmental change is the improvement of something that already exists but that does not fulfil the current expectations or standards.
- Transitional change is a slow step by step process of transforming a situation into what it should be. During transitional change things are not the same as they used to be, nor what they aim to become.
- Transformational change is a radical process of moving towards something that is believed to be possible or necessary and the new state is usually unknown until it begins to take shape. Most of the variables are not to be controlled and it is a rushed process.

Figure 6 provides a graphical representation of the different types of change that are applicable to the study. The change that took place during the study can be viewed as transitional development as it contains aspects of both developmental and transitional change as explained by Ackerman (*id*).
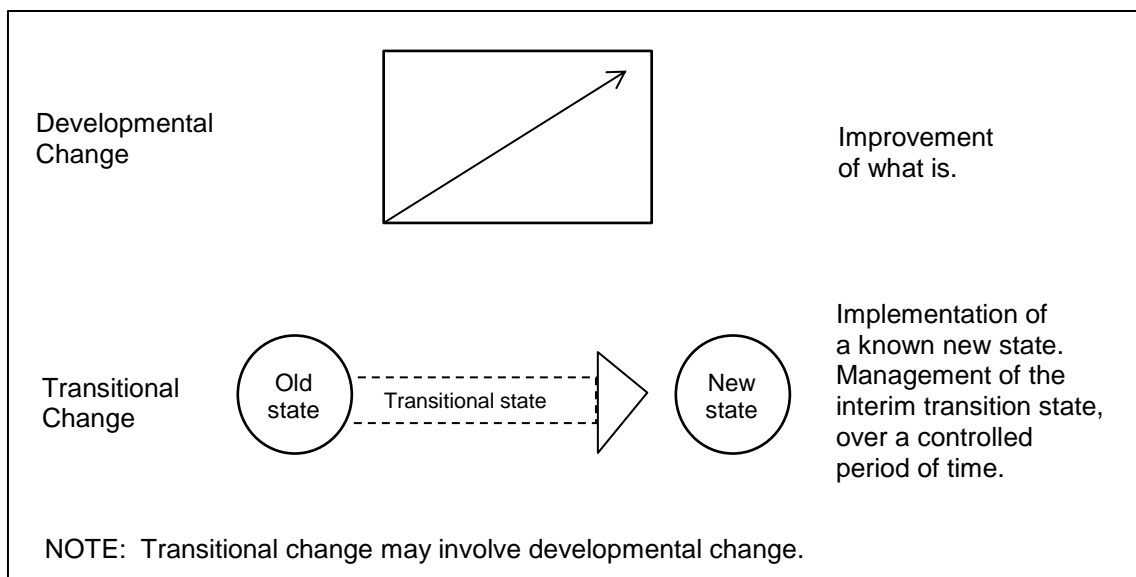
Figure 6:   The two perspectives on change that are applicable to the study under discussion (Ackerman in Jick & Peiperl 2003: xvii)

The change that took place during the PDP is developmental (*id*) as the standard of the facilitating of learning did not fulfil the criteria of the standards set by the CHE as very little student participation was catered for when using the traditional lecturing

style during the contact sessions. The project aimed at developing the academic staff members' facilitating and assessing of learning skills in order to ensure that the standards expected by the CHE could be fulfilled and that the students could learn about their own learning to become lifelong learners.

The change that would result from the implementation of the PDP can also be seen as transitional as it is a slow process as the participants are not employed on a regular basis and therefore the desired outcomes of the PDP can only be reached over a long period of time. Since the onset of the PDP I have had a clear vision of what the required state would be and I had to manage the development process of the participants in such a way that the process did not come to a standstill during the times that they were not contracted. This is done through mentoring and continuous communication to motivate the participants to do literature study regarding different learning theories and innovative facilitation of learning and assessment of learning methods that they can implement in their practices once contracted again.

Govender's (2011:7) graphical representation and explanation of continuous improvement correlates with that of Ackerman's (in Jick & Peiperl 2003:xvii) explanation of developmental change. Govender introduces another aspect of change when he explains continuous improvement as a radical straight line upward that is a continuous movement from a level below the expected standard to a level above the expected standard (Figure 7).
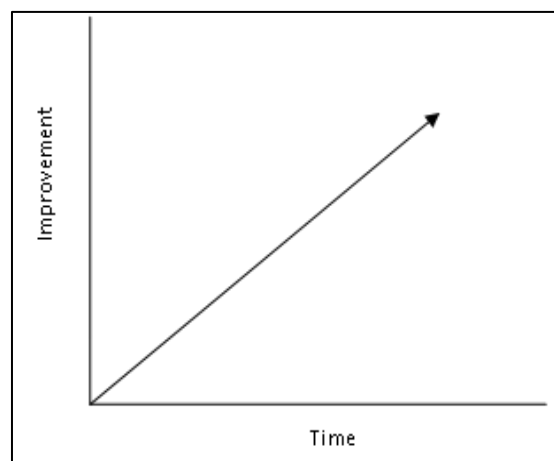
Figure 7:   **Diagrammatic representation of continuous improvement (Govender 2011:7)**

Govender (2011:7) provides an additional graphical representation that displays continual development (Figure 8) in an attempt to explain the difference between continuous and continual development processes.
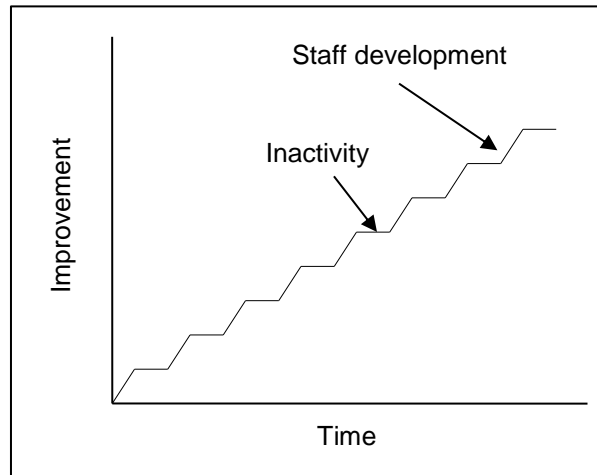
Figure 8: **Diagrammatic representation of continual improvement (Adapted from Govender 2011:7)**

Govender's (*id*) explanation of continual improvement as a gradual process of improvement through a staggered but upward movement correlates with Ackerman's (in Jick & Peiperl 2003:xvii) explanation of a step by step process.

The radical improvement (upward movement) that is evident may be attributed to periods of improvement brought about through, for example, PDPs. The horizontal part of each step with no upward movement is experienced where improved processes are implemented, piloted and established. Continual improvement is seen as a process of improving and then holding processes in stability and therefore continuous improvement is seen as an aspect of continual improvement. When considering the viewpoints of both Ackerman (*id*) and Govender (2011:7) it can be said that a continual developmental transition took place during the implementation of the PDP that was offered by PMI.

2.5.2 Managing change

One aspect that crystallised while studying different sources on how to manage change is that the word *change* is immediately connected with the idea of improvement. This was experienced during a learning session that I facilitated at PMI, prior to the onset of the study. De Beer and Clarke (2010) define change as

"[…] the process of leaving behind the familiar to venture into the unknown and to do things in a way that was not done before for the purpose of improvement."

Although the tendency exists to link a positive connotation to the word *change*, there can be situations where change is not for the better as it may have detrimental results. Throughout my career I have experienced a few situations that can act as examples of situations that can cause poor change results. Some of these situations are when the change process was not planned correctly, incorrect information was used to decide upon the objectives of and actions to be taken during the change process, the buy-in of all the parties involved had not been not obtained and only internal factors were considered and external environmental influencing factors were ignored. These situations can be related to the poor management of the change process.

2.5.2.1   The roles of the different participants in the change process

Through experience I have learned that change is not a process that happens by itself. The change process should be well planned, different role players who will be involved in the change process should be identified and the aims, objectives and proposed processes should be communicated to all the role players in the process to ensure that the change process has a successful outcome.

Whenever I think of the term *change*, I am reminded of the elements of a habit and the way in which a bad habit can be changed or a new habit be formed. The elements of a habit and the process followed to change or form a habit are contained in the curriculum of the subject Entrepreneurship and Business Management N5 which I studied and facilitated for eleven years at a college for FET. The tendency that exists to link a positive connotation to the word *change* corresponds with the idea of changing or eliminating a bad habit in order to improve one's personality or a situation.

Smit (1999a:26), and Bruwer and Cilliers (1995:26-27) state that habits consist of three elements, namely knowledge, skills and desire. It is explained that knowledge refers to knowing why a habit should be changed, what is needed to be able to

change it and where assistance can be obtained during the process. Skills refer to the fact that one knows how to change the habit and desire refers to the motivation or inspiration for wanting to change a habit.

The reasons and the desire for the envisioned change that was one of the aims of the PDP that was offered to the academic staff of PMI are discussed in the sections in which the rationale, aims and objectives of the study are explained. The discussions in the paragraphs that follow focus mainly on the element of knowledge, but more specifically on knowing who the participants in the change process are and what the roles of the different participants are in order to ensure the success of the change process.

The different participants in the change process that resulted from the implementation of the PDP are the following:

- PMI as the case study institute
- The participants of the PDP
- The facilitator of learning who presented the curriculum of the PDP to the participants
- Myself as the mentor for the participants

a)   PMI's role in the change process

The main role of PMI as the case study institute was to provide the resources that were needed to implement the PDP successfully for the participants. Both tangible and intangible resources were needed. The intangible resources that were provided by PMI are the permission for the participants to do research on their own practices while facilitating learning within PMI. Permission was also granted that PMI could be used as the case study in my study. Permission was granted to disclose the name of the Institute. The tangible resources that were provided by PMI are, inter alia, the financial resources that were needed to remunerate the facilitator of learning from the public institution who presented the contact sessions at the onset of the PDP, the venue in which the PDP was offered, the stationery used, such as paper and files in which the participants' portfolios of evidence had to be filed and photocopy and printing facilities.

b)   The role of the participants in the change process

The roles of the participants were to:

- become scholars of their own practices as facilitators of learning;
- conduct action research on their own practices as facilitators of learning;
- implement the newly introduced ways of facilitating learning and assessing learning;
- review and report on the successes and progress of the PDP;
- identify obstacles that can prevent the successful implementation of the PDP.

c)   The role of the presenter of the PDP in the change process

The roles of the facilitator of learning from the public institution were to introduce the participants to the Herrmann Whole Brain® theory, present the curriculum content of the PDP and to facilitate the learning process during the contact sessions.

d)   My role as mentor for the participating facilitators of learning in the change process

My role as being the mentor for the participants entailed:

- attending the contact sessions of the PDP in order to know what was said during the contact sessions to be prepared for later reference to it by the participants;
- familiarising myself with the different Herrmann Whole Brain® profiles of the participants to be able to mentor each individual according to his or her own preferred thinking style and to challenge them to develop their least preferred brain quadrants;
- being an observer during the contact sessions offered by the participants in order to provide feedback on their progress and achievements;
- assisting the participants with the capturing of the video and photographic evidence of the learning activities that they facilitated;
- facilitating the participants' process of reflecting on their successes and identifying areas for improvement in their practices;
- facilitating the process of the participants developing innovative learning activities and assessment opportunities;

- motivating the participants to continue with their professional development process during times when they felt as if they could not think of anything new creative and innovative learning activities;

- ensuring that the integrity of the learning that took place in PMI was maintained;

- dedicating time to assist and support the participants in all aspects relating to their practices as facilitators and assessors of learning.

When considering the diversity of the roles of the different role players in the PDP who aimed at bringing about change, it becomes evident that all role players should be completely dedicated to the development or change process in order to ensure the success of the project.

2.5.2.2   Managing resistance to change

A wide range of literature is available in which reasons for human resistance to change are discussed. When considering different sources, of which some date back more than a decade ago, I found that the lists of possible reasons for change has not really changed much over the years. By reflecting on the comments that were made by the participants after they had been informed about the PDP, while it was still in the planning phase (Section 4.12.2) I had selected the most appropriate possible reasons for resistance to change as described by Lynch (2006:775), Jick and Peiperl (2003:xxi), Gerber, Nel and Van Dyk (1999:490), Smit (1999b:36-37), Wilson-Kirsten (2000:37-49) and Hellriegel and Slocum (1992:723-724) when considering ways in which I can prevent resistance to the change that might have been experienced as a result of the implementation of the PDP that was offered at PMI.

The different anticipated reasons for resistance against the implementation of the PDP and the actions that were taken to prevent resistance are mentioned below.

- **Uncertainty about what the future might bring** – participants might think that they will not be contracted again if they do not partake in the project.
  - Action taken: The e-mail in which the facilitators of learning were invited to

participate in the PDP specified that the awarding of contracts will not be influenced by participation or non-participation in the PDP.

- **The fear of the loss of benefits** – facilitators of learning might think that they will lose their additional income if they take part in the PDP (B-quadrant).
  - Action taken: The PDP contact sessions were scheduled to take place after the normal contact session hours and therefore the participants could still facilitate learning during the normal contact session hours for additional remuneration while participating in the PDP.

- **Lack of interest** – some facilitators of learning are not full-time educators and therefore they may not have the interest to learn more about how learning takes place.
  - Action taken: During a facilitator forum meeting the facilitators of learning were informed about the importance of the on-going improvement of the quality of teaching (term used by the CHE) and learning in HE as regularly mentioned at CHE workshops and at conferences such as the HELTASA annual conferences. A facilitator of learning from a public university was contracted to facilitate the original sessions to provide more validity to the programme and the facilitators of learning were promised that the sessions would be offered in a very entertaining manner.

- **Pessimism** – some of the participants have been educators for many years already and they believe that alternative learning styles cannot be successful.
  - Action taken: The facilitators of learning were informed that they could implement the new ways of facilitating learning in a step by step process with full support from me as their mentor.

- **Low tolerance for change resulting in irritation** – the actions included in the programme took them out of their comfort zones as they had to act outside their personal preferred way of thinking.
  - Action taken: The facilitators of learning were promised that they would receive full support from me as their mentor. They were also informed that all participants would at some stage be pushed out of their comfort zones

and for this reason the programme would be offered in a fun way with no intention of humiliating anyone. Every participant could determine how far he/she was willing to participate.

- **Fear of inability to develop the new skills and behaviours** – a large amount of creativity is required to facilitate learning in a manner that all students can learn and not all of the facilitators of learning have strong creative abilities.
  - Action taken: All participants completed the Herrmann Brain Dominance Instrument (HBDI®) online and a certified practitioner provided feedback. This allowed the participants to understand their own thinking styles and to develop ways in which to develop their own creativity skills. The students were also informed about the changes that would take place during the learning sessions and therefore the participants were supported by the students.

Through experience in the workplace I have learned that least resistance to change is experienced by leaders and managers who practise what they preach and who lead by example. For this reason the facilitators of learning who are contracted by PMI are always welcome to attend the contact sessions that I sometimes facilitate. It creates an opportunity for the facilitators of learning to observe how the principles that are discussed during the contact sessions of the PDP offered by PMI can be implemented in one's practice. The observation sessions also provide living examples that can be referred to during the feedback sessions after I have attended contact sessions facilitated by the facilitators of learning as part of my normal duties.

Mahatma Ghandi suggested: "Be the change you want to see in the world." This phrase can also be interpreted as an urge for one to practise what one preaches. If one is passionate about the change that one wants to bring about one should also support the participants in the change process. One of the ways in which the participants can be supported in the change process is through implementing a mentoring process.

2.6   MENTORSHIP

Grobler et al. (2006:314, 392) define a mentor as an experienced manager who, after mastering his or her own job, provides guidance to a junior manager or professional and facilitates the junior manager's or professional's personal development. When relating Grobler's definition to the PDP that is offered by PMI it can be said that I am the experienced manager with twelve years of experience as a facilitator of learning. I have conducted three formal action research projects in order to improve my own practice. The facilitators of learning are the junior managers or professionals. It is also not incorrect to refer to the facilitators of learning as managers, as one of the roles of a facilitator of learning is to manage, inter alia, the students attending the contact sessions, the learning resources and time. A facilitator of learning, as in the case of a manger, has to plan the activities in a contact session, organise the availability of the resources needed and ensure that the quality of the learning that results from the planned activities is according to set standards. Facilitators of learning are also leaders as they have to ensure that the students stay motivated during the learning process and that the students take up responsibility for their own learning.

2.6.1   Mentorship as part of the professional development of facilitators of learning

While studying different literature sources to find information relating to mentorship as part of the professional development of facilitators of learning, I found sources that date back to 1998 and 1994 but the information that is provided is still relevant to the PDP that has been offered at PMI since 2009. Although the sources refer to teacher training, the information can be related to a PDP offered to facilitators of learning in HE. In the discussions that follow, I relate the information that was provided in the sources to the context of a PDP for facilitators of learning in HE.

Furlong, Hirst, Pocklington and Miles (1988:132) distinguish between four dimensions of facilitating learning that they argue should be present in all PDPs for facilitators of learning. These are direct practice, indirect practice, practical principles and disciplinary theory. When summarising the views of Furlong et al. (*id*)

it can be said that the different dimensions entail the following: Direct practice can be regarded as the practical experience that a facilitator of learning gains while facilitating learning; indirect practice refers to the learning that takes place during the contact sessions that are offered as part of a PDP regarding practical matters to consider while facilitating learning; practical principles entail the study of the principles of learning and their use, and disciplinary theory entails a critical study of the practice and principles based on the knowledge of the fundamental theories of education and research.

Furlong et al. (*id*) indicate that the professional development of facilitators of learning should include a combination of the theories in education and practical experience.

Furlong et al. (*id*) indicate that only facilitators of learning who stand in the practice can help with the development of the participants of a PDP regarding practical experience as they can provide the knowledge of what happens in a real-life classroom. This view fits closely the phenomenological perspective that in order to understand the world, one should be where what one researches or investigates is happening. Furlong et al. (*id*) suggest the use of mentoring programmes to ensure the success of the practical experience gained through a PDP offered for facilitators of learning.

Mynard and Furlong (1994:71) describe the mentoring process in PDPs as an active process in which the participants of a PDP have an active role in their own learning process. During the mentoring approach experienced facilitators of learning can assist the participants of a PDP to obtain practical knowledge about the four "S's" of education, namely students, situations, subject matter and strategies.

Mynard and Furlong (1994:71) describe the four "S's" as follows:
- Student refers to knowing the students in the class. The facilitator of learning must learn about the students' background, interests and capabilities. Through experience I can also add that the facilitator of learning must be aware of the constraints in the personalities of the students and have knowledge about the psychic closeness that should exist between the students and the facilitator of

learning (Boshoff 2007:142-149). When considering the capabilities and constraints of the student it can be added that the facilitator of learning should be aware of the different thinking style preferences of the students as described by Herrmann (Section 2.3.5.1) as the way in which we think also influences the ways in which we learn.

- Situation refers to knowledge about the ethos, demands and constraints in that specific learning institution.

- Subject matter relates to content knowledge as well as pedagogical content knowledge that entails the knowledge of how to present the content knowledge in different ways in order that others understand the subject content and different appropriate manners in which it can determine whether the presentation has been successful or not. The latter is usually done through formative and summative assessment. Therefore it can be said that facilitators of learning should also know about the different forms of assessment that can be used during formative and summative assessment tasks.

- Strategies refer to the alternative ways in which the learning process can be facilitated. This is not just the theoretical knowledge of the strategies that may be used, but the practical knowledge of determining the most appropriate strategy to facilitate the learning process in specific situations. I strongly believe that one can combine learning and assessment activities and the facilitators of learning should also be made aware of this time-saving, but still authentic, combination.

2.6.2   Models for mentoring

Maynardt and Furlong (1994:78-82) describe three different mentoring models but they make it clear that the different models used in separation will not be sufficient enough to support participants in a PDP. The different models fit different stages in the professional development process. All three models must be utilised at the different stages of a PDP. The three models as discussed by Maynardt and Furlong (*id*) are explained in the paragraphs that follow.

2.6.2.1　The apprentice model

This model is used in the early stages of the professional development of a facilitator of learning to allow the newly employed facilitator of learning to receive first-hand practical experience. The facilitator of learning needs an interpreter to explain what is happening in the learning session to see and understand the rationale of the actions. The interpreter role can be fulfilled by the mentor. In this model the facilitator of learning is allowed to become actively involved in the planning of the presentation as well as the presentation of the learning content to a small group of students.

The apprentice model fits in with the general practice in PMI as newly appointed facilitators of learning attend induction sessions in which they are briefed about the general conduct in terms of facilitating the learning content and the assessment methods used within PMI. It is a normal part of my responsibilities to present this part of the induction process. The standard induction discussion includes the following:

- The order of activities during the contact session that have proved to be working in PMI when considering the different circumstances of the students in PMI.
- Practical ideas for learning activities that can be used to enhance student participation.
- The assessment processes and procedures prescribed by PMI.

The newly appointed facilitators of learning are then allowed to plan the contact sessions on their own and they also present the learning content and plan and conduct the formative assessment.

2.6.2.2　The competency model – systematic professional development

In the competency model facilitators of learning receive information on a predefined list of competencies and the mentor has the responsibility to assist the facilitators of learning to develop their practices systematically. The mentor observes the facilitator of learning while facilitating learning with a list of pre-defined criteria and the mentor provides feedback to the facilitator of learning.

After the initial stage of adopting the mentor's styles and ways of doing, the facilitators of learning are given control of the learning facilitation and they must develop their own styles of doing and they learn through practical experience.

One of the disadvantages of this model is that facilitators of learning can find ways of doing things that they are comfortable with and they can stop learning. The mentors must then remove all forms of support and challenge the facilitators of learning to experiment with other styles of facilitating learning in order to extend their range of style and competencies continuously. This can also be linked to the idea that the facilitators of learning must become lifelong learners themselves.

The competency mentoring model also fits into the PMI environment. All newly appointed facilitators of learning receive the peer assessment form that is used during observation sessions of their conduct during the contact sessions. The criteria include aspects such as subject knowledge, allowance for student participation, questioning styles, confidence displayed during the presentation, audibility and the efficient use of the learning resources. Observation is done during the second contact session after being employed and a formal feedback session takes place at the end of the day. During the feedback session ideas of how to improve their practices are provided to the facilitators of learning. Being the observer during the contact sessions is a normal part of my duties in PMI.

2.6.2.3   The reflective model – from teaching to learning

This model entails that the facilitator of learning alternates between being practically involved in the teaching, and the process of learning more about the theoretical part of the learning process.

In this stage of development the facilitators of learning are urged to switch the focus from their own teaching (traditional term used on purpose) performance to a focus on the successes of the students' learning that takes place. They need to develop a deeper understanding of the learning process and move beyond the routine actions. The aim should be to suit the needs of the individual students and the facilitators of learning must be able to justify their own practices.

Maynardt and Furlong (1994:75-76) underline the value of reflection on facilitating learning as part of educator development but they rightfully say that newly appointed facilitators of learning do not necessarily know what to reflect on and what reflective practice is. It becomes the responsibility of the mentor to assist the facilitators of learning in determining the focus areas to be reflected upon.

The role of the mentor in this model differs from the other models as the mentor is not the instructor in the model anymore, but the mentor becomes the co-enquirer. The mentor must be an open-minded critical thinker and must be open to beliefs and values that might be in conflict with his or her own belief and value systems.

The reflective mentoring model can be regarded as the main focus of the study. The participants of the PDP that was initially offered in 2009 are doing continuous action research on their own practices as facilitators and assessors of learning and I am doing living theory action research on my own practice as mentor for the participants in the PDP.

As explained in the foregoing paragraphs, all three the mentoring models discussed by Maynardt and Furlong (1994:78-82) are in use at PMI. The way in which these models fit into the complete induction and professional development process of the facilitators of learning employed at PMI confirms Maynardt and Furlong's (*id*) view that the different models cannot be used separately. All three should be used during the different stages of the professional development of facilitators of learning.

In the past only the apprentice and competency mentoring models were used in PMI. Currently the reflective mentoring model is also used on a continuous basis as contact sessions similar to the ones that were offered in 2009 are continuously offered by PMI, although the services of an external facilitator of learning are not used anymore. I currently facilitate the contact sessions of the PDPs that are offered at PMI as I obtained certification as a HBDI[®] practitioner in 2011.

2.7   SUMMARY OF THE CHAPTER

Chapter 2 comprises discussions on the different theories that underpin the study. The difference between the asset-based and the needs-based theories and the applicability of the asset-based theory to my first actions after being employed at PMI are discussed. The idea of AR being a theoretical framework for research is explained. Overviews of Bloom's taxonomy, the Ned Herrmann Whole Brain® theory and Gardner's multiple intelligence theory are provided. The concepts *lifelong learning, change* and *mentorship* are also explained.

The next chapter informs the reader about the research design of the study.

CHAPTER 3

RESEARCH DESIGN

3.1   INTRODUCTION

Chapter 3 provides an outline of the research design of the project. This can be seen as the roadmap that will be used during our journey to ensure that we stay on track. The discussions comprise AR as methodological framework, a graphical representation of the AR model used in the study and case and participant selection. The data collection methods and tools, data analysis and representation are also discussed. The discussions are concluded by indicating ways in which the validity and reliability (trustworthiness) of the findings were ensured.

3.2   ACTION RESEARCH AS METHODOLOGICAL FRAMEWORK

In order to prevent the view that the decision to introduce AR as part of the PDP offered at PMI was purely subjective, various literature sources were studied to provide objective reasons for the implementation of AR as the methodological framework of a PDP for the professional development of academic staff.

Dick (2000) states that AR is used "when you wish to achieve understanding and change at the same time". Nearly a decade before Dick indicated that AR can be used as a change process, Kemmis and McTaggart (1992:16) expressed the same view by saying "action research is concerned equally with changing individuals, on the one hand, on the other, the culture of the groups, institutions and societies to which they belong".

Kemmis and McTaggart's (*id*) viewpoint fits in with the aim of the study, namely to reflect critically on my own professional practice in a scholarly manner in order to determine areas in which I need to develop, or in which I possibly have to be transformed in my relationship with the participants of the PDP offered by PMI. My previous experiences of being a mentor for participants in a PDP entailed working

mostly with academic staff in public institutions. The participants of the public institutions had attended some educator related education or developmental workshops and they had the basic understanding of, inter alia, Bloom's taxonomy and Gardner's multiple intelligence theory. In my current role as mentor I mentor academic staff members who have never been exposed to any formal educator-related education or developmental workshops. Therefore I have to, in some instances, fulfil the role of facilitator of learning when introducing the participants to the different theories. I had to adapt the way in which I act as mentor in order to allow for my dual role of being mentor and facilitator of learning at the same time.

The PDP aims to bring about change in the activities and practices of the academic staff members who, at the beginning of the PDP, still mainly used a lecturing style based on one-way communication. An environment is provided in which all the participants of the PDP can investigate their own practices in a scholarly way and to learn through their involvement with others. Once they have experienced the value of learning through interaction with others they can use the principles thereof in their own practices as facilitators of learning (Woolfolk 2007:39-45; Jacobsen et al. 2002:6 and 144; McMahon 1997)

The PDP attempts to provide opportunities for the participants to construct a culture (Woolfolk 2007:164) of lifelong learning socially through their involvement with others. The participants' involvement with others starts with the interaction with the facilitator of learning who facilitates the contact sessions that are offered as the introduction to the theories and principles used during the PDP. The continuous involvement with others is grounded in the support that the participants receive from me as their mentor and their involvement with the students who constantly provide feedback on how they have experienced the learning that takes place during contact sessions. The contextual situation of being only part-time facilitators of learning has resulted in limited involvement with their peer participants.

Cohen et al. (2002:227) state that according to Kemmis and McTaggart the main aim of AR is to change the world in order to understand and improve it by studying the results of the changes made. For this reason AR is not research done on other people, but it is done by the participants on their own work in order to improve their

own practices, including how they work with and for others. The reference to working with and for others suits the notion of creating a culture in an institution by participating in "activities and practices, and social relationships and organisation which constitute the interactions of the group" (Kemmis & McTaggart 1992:16). Working with and for others leaves me no option other than to reflect continuously on and develop or transform the way in which I fulfil my role as mentor for the participants of the PDP. My own continuous professional development or transformation is necessary to ensure that the participants of the PDP do not outgrow me as I will then not be effective in my role of a support system for the participants anymore. If my own professional development is not observable it will be viewed as an indication that I do not practise what I preach. It will be perceived that I expect that the participants experience professional development or transformation but I am not willing to work with them towards my own development or transformation process.

When trying to create a graphical representation of the AR model that was used in the study, I realised that the continuous interaction between the participants and me, which resulted in social constructivist learning, must also be visible in the model.

3.3   ACTION RESEARCH MODEL

The AR conducted in the study did not follow the continuous spiral AR model that is commonly used. After considering the difference between continuous and continual improvement as explained by Govender (2011:7) and the graphical representations thereof in Figure 7 and Figure 8, I realised that the action research in this project was more a continual gradual process of improvement through a staggered but upward movement (Govender *id*). Although the professional development took place as a staggered process, it was still cyclic. In some instances the Whole Brain® cycles appeared at each planning (diagonal upward movement) and implementation (horizontal movement) phase as displayed by Govender (Figure 8). In some instances the planning, implementation, reflection, evaluation and re-implementation happened as part of the same cycle (Cycle 3). Figure 9 was constructed in an attempt to show the continual Whole Brain® AR process that was followed during the professional development and/or transformation process of all participants.
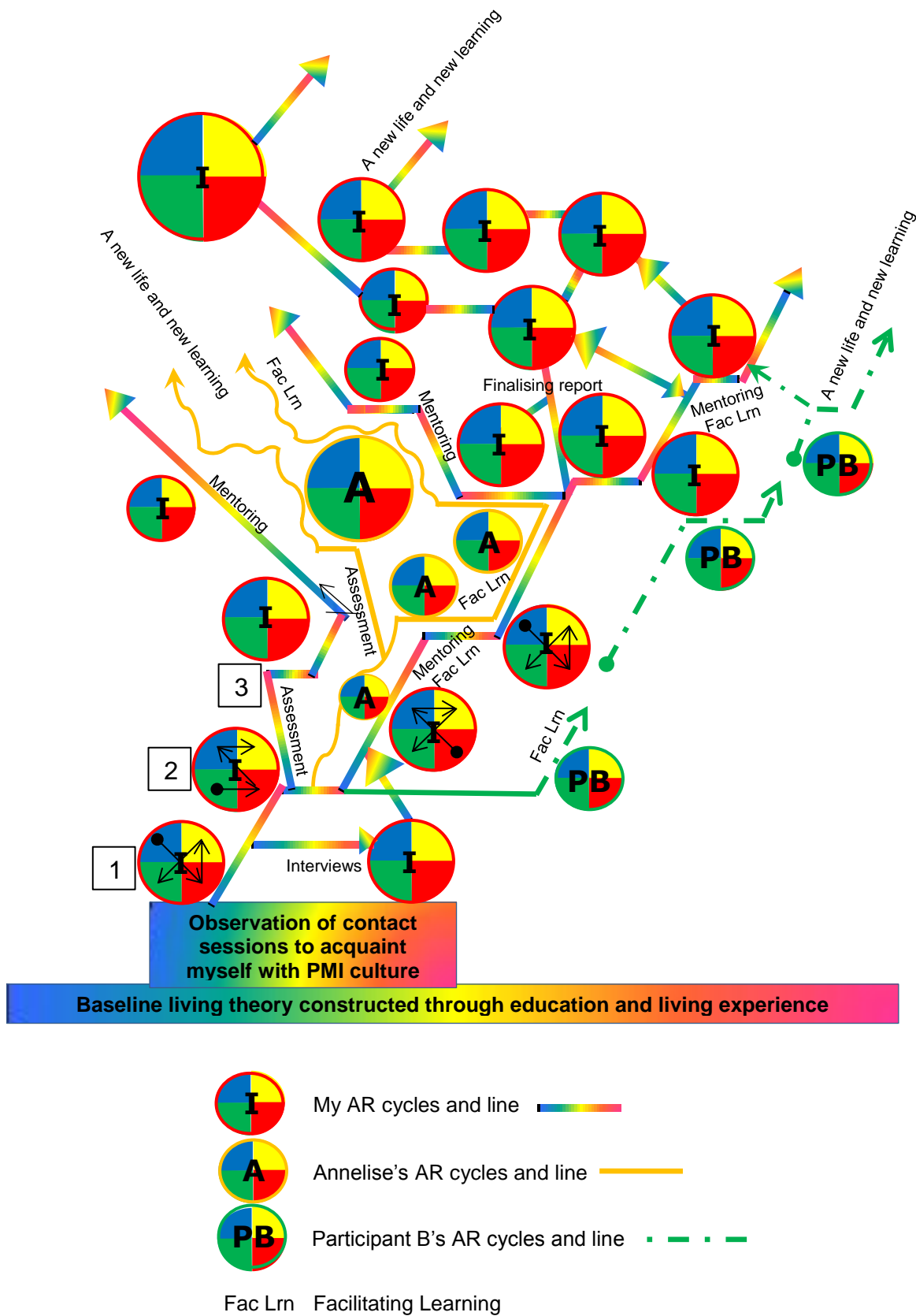
Figure 9: Continual Whole Brain® action research model

One of the reasons for the staggered process is the situation where the participants are only contracted on a part-time basis and are therefore not continuously involved in their practices as facilitators of learning, as would have been the case with full-time employed facilitators of learning.

During peer reviews of the model, to ensure that it is understandable for others, the interview respondent who was my mentor during my studies towards the DHETP immediately reacted by saying: "It is beautiful … it looks like a tree in full bloom". She stated that the model does not only show the flow of the research but also represents growth; it follows the process of natural evolution, starting from a single cell that divides and the cells keep on growing to become something fruitful. She mentioned that a tree develops new branches at different stages of growth. When rethinking my peer's reference to the branches of a tree, I realised that the branches do not always grow straight from the roots; there are also curves in the branches and in some cases the branches start growing sideways. At a later stage such a branch starts growing upwards again. The change of direction during growth can be related to the continual flow of the professional development process, rather than just a continuous process. The most obvious dividing of the branches was when I started investigating the assessment practices in PMI during the implementation of the PDP (Cycle 2) and when I had to divide my attention between Annelise and PB when he developed and implemented his first learning-focused activity.

The base of the model represents my living theory that was constructed through a combination of knowledge that I have obtained through formal studies towards my educational qualifications and through practical living experience. My experience derives from my life experience as student from as far back as I can remember and through my fifteen years of being a facilitator of learning in the FET and HE environment.

I have to ensure that my foundational knowledge and experience is extensive enough to be able to support the participants by being a mentor during the PDP. I must be able to refer to it regularly to be able to keep the process going to prevent that the participants outgrow me and that I will not be able to provide the support that they need to continue their professional development process. The foundation

can be seen as the roots of a tree that keep on growing to support the growth of the branches. I continuously ensure the widening of my foundational knowledge by attending education related conferences, presenting papers at these conferences to ensure that my views are acceptable and current and by continuously (not only continually) engage in literature reviews. In order to ensure deeper understanding of the Herrmann Whole Brain® theory, I attended a certification workshop in 2011 and was certified as a Herrmann Whole Brain® practitioner.

The first step in the model (Figure 9) is still part of the foundation as it represents my visits to the contact sessions right after I was employed at PMI in order to determine the prevailing culture in the Institute. During the contact session visits data was obtained that later became the main reason for starting the PDP. For this reason my first AR line starts from the first step after the baseline in the model. The AR line starts from the blue part of the step as the AR started after the data that was obtained during the contact session visits had been analysed. Analysis fits in the A-quadrant of the Herrmann Whole Brain® theory and it is represented as the blue quadrant in Herrmann's metaphoric representation of his theory.

My AR line is indicated in the colours of the metaphoric representation of Herrmann's Whole Brain® theory as I had a well-grounded knowledge base and experience of using the theory since prior to the onset of the study. My AR line is weighted more heavily than that of the participants as the model represent mainly my own AR process and I was a support structure for the participants. Although the research aimed at answering two questions, my AR line is indicated as a single line as the information to answer both questions was obtained at the same time.

Annelise's (Participant A who prefers that I use her real name) line is yellow as her most dominant quadrant is the C-quadrant, represented as the yellow quadrant of the Herrmann Whole Brain® theory. The curved line indicates periods when I did not work closely with Annelise and where she sometimes came closer to me for support as her mentor, when she moved away from me as her support structure by working more independently. Participant B's (PB) line is green as his dominant quadrant is the B-quadrant represented as the green quadrant of the Herrmann Whole Brain® theory. PB's AR line is dotted as he did not complete a formal AR project but he still

used the information obtained during the contact sessions that was offered at the onset of the programme. The line is also interrupted at some places as PB was not contracted on a continuous basis and the interruptions in the line indicate the times that he was not facilitating learning. The distance between my AR line and that of Annelise and PB in the model indicates the closeness that existed between us at different times of the study. The vast distance between the AR lines of PB and I is a true indication of his preference to work autonomously and I was involved in his professional development only at certain times.

The size of the cycles indicates the involvement of all participants at the different stages of the study. As per exemplar, my cycles are larger than those of Annelise at the beginning of the study but her cycle became bigger once she started working more independently at the end of the data collection process, where her lines are curved ones. My cycle then became smaller as my role as mentor became less important as she could work on her own with only some interaction between us.

At certain places in the model the AR lines between the cycles are indicated by arrowheads. These indicate that the information obtained in one cycle had a significant influence on the other cycle. The size of the arrowhead indicates the level of significance. As per exemplar, the information that was obtained during the cycle after the contact session visits (Cycle 1) was used in the compiling of the interview questions relating to the curriculum content of and mentoring during a PDP for academic staff. The information that was obtained during the interviews and the reflection sessions while analysing the interviews had a significant influence on my way of mentoring the participants. Therefore the arrowhead going into my mentoring AR line is larger than the arrowhead entering the interview cycle.

Although the interviews were conducted after the implementation of the PDP (Cycle 2) the interview cycle is placed on the other side of the contact session step. The reason is that I had already decided to have interviews with others in the HE environment when planning an intervention to improve the facilitating of learning practices in PMI. The information that was obtained during the interviews also carried the same significance as my own observations and reflections throughout

the AR process. Cycles 1 and 2 can be viewed as the pillars on which the rest of the processes are grounded.

In the finalising of the report stage it is indicated that the cyclic process in one cycle can end in one quadrant of the Whole Brain$^®$ and the next cycle can start in another quadrant. It also shows that more than one new cycle can derive from a single cycle. Significant large cycles can also derive from cycles that were originally viewed as being small and insignificant.

The Whole Brain$^®$ cycles do not follow a set pattern. Each cycle can start or end in another quadrant and the sequence of movement between the quadrants can also differ in the different cycles. As per exemplar, a few of the activities that fit into the different Whole Brain$^®$ quadrants are mentioned. Cycle 1 started off in the A-quadrant (blue) when I analysed the observations that I had done in the contact sessions to determine the culture that prevails in PMI. I then moved to the C-quadrant (red) by reflecting on what I had learned as part of my formal studies as an educator and through life and working experience. I also reflected on the effect that theory-based lecturing had on my motivation levels as a student. I then moved to the D-quadrant (yellow) where I had to find an innovative way of improving the facilitating of learning in PMI to become more learning orientated. I then moved to the B-quadrant (green) by starting to organise the rollout of the PDP. The sequence in Whole Brain$^®$ cycle 1 was therefore A-C-D-B.

The sequence in Cycle 2 was B-C-A-D. Cycle 2 started in the first implementation (horizontal line) phase of the PDP. The cycle started in the B-quadrant when the first contact session of the PDP was facilitated by the contracted facilitator of learning. I had to organise that the venue and all resources needed were available and that the participants ended the contact sessions that they facilitated in time for them to attend the contact session of the PDP at the stipulated time. By using the C-quadrant I observed the participants' behaviour, facial expressions, body language and noted comments that were made. I also reflected on my own experience and feelings when attending the contact sessions that were offered during my studies towards the DHETP in 2000. I remembered the enjoyment, uncertainty and the pressure that time had on my studies as I was also a full-time employee while

studying. When analysing (A-quadrant) the questions and concerns that were raised by the participants about the first learning activity that they had to develop and by analysing the observations and comments made during the contact session, I realised that the participants needed some form of support during the PDP to prevent unnecessary stress caused by uncertainty. During the same period I analysed examination papers used at PMI and decided that something had to be developed to assist the facilitators of learning to construct a better understanding of the use of the principles of Bloom's taxonomy. I developed (D-quadrant) a guideline document for compiling examination papers (which is currently part of the assessment policy of PMI) and decided that a proved way for successful support of the participants of a PDP is to become a mentor for the participants.

It will be close to impossible to place all the cycles that appeared during the AR on a model and therefore Figure 9 (p. 115) can be regarded as a scaled down version that acts only as exemplar of the actual thinking processes that took place during my professional development process.

3.4   SELECTION OF CASES TO BE STUDIED

When relating the selection of cases to be studied to sampling principles it should be remembered that in qualitative research the sample is not selected in ways that satisfy statistical requirements of randomness. Information-rich cases that can be studied in depth are selected. Cases are selected to serve a specific purpose and therefore the selection can be called purposive or purposeful (Smit 2001:78). In this project the choice of cases to be studied can be related to convenience sampling (Cohen et al. 2002:102-103) and concept-based sampling, also referred to as theory-based sampling (McMillan & Schumacher 2001:402).

3.4.1   Convenience-based case selection

The principles of convenience sampling were used as the nearest HEI was selected to act as exemplar institute and the nearest individuals available were selected to be participants in the project (Cohen et al. 2002:102-103).

The Production Management Institute of Southern Africa (Pty) Ltd (trading as PMI) was selected as case study as I am employed at PMI. This case selection created the following advantages:

- The actions that were planned to take place in the research project form part of the task description of my position as Academic Manager. Therefore the data that was collected while completing my normal daily tasks was used as part of the data that was analysed during the project.

- A substantive amount of baseline data and information was available which had been collected since the date of my employment at PMI.

- I had easy access to information such as student records, student feedback surveys, facilitator feedback surveys and examination papers and memorandums. I did not have to apply for special access as this information forms part of my normal data access allowances. This also ensured that I did not have to rely on others to provide the information, I could access it as and when I needed it.

- My normal 24/7 access allowances to the campus and all information systems ensured that I could easily work after hours and therefore my daily productivity rate was not negatively influenced by the study. This ensured that I could enjoy all the allowances that I was awarded by management at the start of the project, without transgressing the condition that my daily productivity levels should not by interrupted by the tasks included in the study.

3.4.2   Concept- or theory-based case selection

Concept- or theory-based case selection refers to the selection process where the researcher selects persons known to have experienced the concept, theory or phenomenon to be studied. Persons who are attempting to implement the concept, theory or phenomenon under study can also be selected (McMillan & Schumacher 2001:402). The phenomenon under study is the situation that very few of the facilitators of learning that are contracted by PMI hold an education-related qualification and only a few of them have experience of facilitation of learning other than the work done at PMI. The facilitators who were part of the PDP were selected in the following manner:

- During feedback sessions in which areas of improvement were discussed with some of the facilitators of learning after quality assurance visits to their contact sessions, some of them had already indicated their willingness to take part in the project in order to improve their knowledge about the processes and theories of learning (Bloom's taxonomy and Gardner's Multiple Intelligence theory) and the Herrmann Whole Brain® theory as a learning style theory. The interest shown by the facilitators of learning to take part in the PDP also enhanced the convenience levels of the case selection process, as from the onset of the project I was sure that there were facilitators of learning who would be willing to take part in the PDP.

- An invitation to participate was forwarded to all the facilitators of learning who are normally contracted by the Gauteng branch of PMI.

- The historic Diploma in Tertiary Education (DTE) and Diploma in Higher Education and Training Practice (DHETP) as well as the current Post-graduate Certificate in Higher Education (PGCHE) learning programmes offered at the University of Pretoria were used for benchmarking. I selected these learning programmes as benchmarks as I:
    - have completed the DHETP and therefore I am aware of the curriculum content, the ways in which it is facilitated and the way in which it was organised and managed.
    - was a mentor for an attendee of the PGCHE which is the current version of the DHETP.
    - was a peer mentor for two of my colleagues who have studied with me to obtain the DHETP.

- The interview respondents had to comply with at least one of the following criteria:
    - Must have completed one of the following learning programmes offered at the University of Pretoria: Diploma in Tertiary Education (DTE), Diploma in Higher Education and Training Practice (DHETP) or the Post-graduate Certificate in Higher Education (PGCHE). The reason for this criterion is the fact that the PDP is benchmarked against the outcomes of the mentioned learning programmes and the HBDI® assessment is part of the curriculum of the benchmarked learning programmes.

- Must be in a management position with a subordinate who is/was enrolled on one of the above-mentioned learning programmes.
- Must have acted as a mentor for someone who is/was enrolled on one of the abovementioned learning programmes.
- Must have been one of my mentees while completing a formal research project.
- Must have practical experience in using alternative facilitating and assessment of learning methods.

3.4.3   Number and attributes of participants of the PDP

The number of participants of the PDP can be related to sample size in a research project. McMillan and Schumacher (2001:404) indicate that qualitative researchers usually start off with a small sample and then add on as the research process progresses. However, the contrary was experienced during the PDP offered at PMI. Table 6 shows the attributes of the population of academic members of staff who were invited to take part in the PDP and the sample that started on the programme.

At the onset of the PDP 25 facilitators of learning were contracted by PMI of whom 11 started to participate in the PDP (Table 6).

Table 6: Attributes of the population and the sample participating in the staff development programme

Race	Gender	Education experience		Education qualification		Registered Assessor		N	n
		Yes	No	Yes	No	Yes	No		
Black	Male	1	3	0	4	0	4	4	1
	Female	2	3	2	3	1	4	5	0
Indian	Male	3	1	0	4	1	3	4	1
	Female	0	0	0	0	0	0	0	0
White	Male	1	6	1	6	3	4	7	4
	Female	4	1	3	2	1	4	5	5
						TOTAL POPULATION		25	
						SAMPLE			11

At the end of the data collection process only two of the participants were still involved (Table 7). This phenomenon is discussed as part of the conclusions and findings of the study.

Table 7: Attributes of the participants at the end of the data collection period

Race	Gender	Highest qualification	HE experience other than in PMI		Education qualification		Registered assessor	
			Yes	No	Yes	No	Yes	No
White	Female	BSc Honours: Industrial Technology and Management	✓		✓			✓
White	Male	MSc Operations Management	✓		✓			✓

3.4.4 Number of interviews and criteria for selection of respondents

The criteria for selection of the interview respondents were any of the following:

- Must have completed the PGCHE, DHETP, DTE learning programmes offered at UP or a PDP based on the same curriculum as that of the PGCHE and completed the HBDI® assessment.
- Must be in a management position of a PHEI with a staff member who completed the above-mentioned learning programmes.
- Must be known for using learning-based facilitating and assessing of learning methods in his or her practice.
- Must have been a mentee of mine in an educational context.

Seven interviews were conducted at the onset of the study. The attributes of the respondents are stated in Table 8.

Table 8: Criteria for selection of the interview respondents

Criteria for selection
▪ Top level management at a PHEI of which some of the staff members are enrolled on the PGCHE programme offered at UP ▪ Completed the PGCHE offered at UP ▪ Completed the HBDI® assessment
▪ Top level management at a PHEI of which some of the staff members completed the PGCHE programme offered at UP

Criteria for selection
▪ Subject Head at a PHEI ▪ Completed the PGCHE offered at UP ▪ Completed the HBDI® assessment
▪ PMI facilitator ▪ Completed the DTE offered at UP in 1999 ▪ Completed the HBDI® assessment ▪ Was my mentor while I was enrolled for the DHETP offered at UP in 2000
▪ PMI facilitator ▪ Completed the DHETP offered at UP in 2000 ▪ Completed the HBDI® assessment ▪ My peer student when I was enrolled on the DHETP in 2000
▪ Completed the PGCHE offered at UP in 2007 ▪ Completed the HBDI® assessment ▪ I was her mentor while she was enrolled on the PGCHE
▪ PMI facilitator ▪ I was her mentor while doing her BSc Honours as a PMI student

3.5   DATA COLLECTION

The study is based mainly on case study research. The different professional development cases can be identified as:

- my own practice as mentor for the participants of the PDP;

- the practices of the different participating facilitators of learning of the PDP.

Table 9 and Table 10 provide an overview of the data that was collected and the data collection methods and tools that were used.

- The participants who were involved in the different activities are identified in the "by whom" column.

- Information relating to the data collection to answer the question relating to my professional development as mentor for the participants of the PDP is displayed in Table 9.

- The data collection related to the aspects to be included in the curriculum of a PDP for academic staff in PHE is displayed in Table 10.

- In order to fulfil my role as mentor efficiently I had to use all the information obtained as stipulated in both Table 11 and Table 12. I had to consider the

information relating to curriculum aspects as point of departure in my mentoring conversations with the participants.

It should be noted that there is no reference to the analysis of the PoEs of the participants. None of the participants completed a formal PoE. The reason for this will be discussed in Chapter 5.

Table 9: Data collection methods used to answer the question relating to my professional development as mentor for the participants of the PDP

RESEARCH QUESTION	METHOD	DATA CAPTURING	WHO/WHAT
How can I improve my own living educational theory by being a mentor for academic members of staff who participate in a professional development programme that aims at establishing a culture of lifelong learning?	Document and/or text analysis	Notes in notebook	▪ Participant PoEs
		Online-generated graphs and reports	▪ Herrmann Brain Dominance Instrument® results (my own and those of the participants)
	Observation	Field notes	All participant reactions, facial expressions, tone of voice and body language during: ▪ feedback sessions after quality assurance visits to contact sessions that participants facilitate ▪ mentoring sessions
	Conversation analysis	Field notes	Conversations with the participants during: ▪ feedback and/or reflection sessions ▪ spontaneous conversations or remarks in day-to-day activities
	Semi-structured interviews	▪ Interview schedules with space for notes ▪ Audio recordings ▪ Transcriptions of interviews	Respondents who: ▪ completed the benchmarked learning programmes or PDPs based on the benchmarked learning programmes ▪ are managers who are acquainted with the content of similar PDPs ▪ have previously been mentees of mine (Section 4.4.4.1)
	Reflection sessions on my own practice as facilitator of learning and as mentor	Notes in notebook	▪ Any relevant theme or idea that was identified during the research project ▪ Student/participant/peer feedback given during the research project and during my own studies (baseline information)
	Literature review	MS Word document that became part of the second chapter of the thesis	▪ Printed resources such as books and journals or electronic resources, inter alia, the Internet, e-theses and e-journals on university webpages
	Reflections on my own learning and life experiences	▪ Tables ▪ Narratives in report	▪ Any relevant theme or idea that was identified during the research project

Table 10: Data collection methods used to answer the question relating to the curriculum content of a PDP for academic staff in PHE

RESEARCH QUESTION	METHOD	MY DATA CAPTURING	WHO/WHAT	BY WHOM
Which aspects should be included in the curriculum of PDPs for academic staff in PHE in order to improve the facilitating and assessment of learning standards?	Reflection sessions	Notes in notebook	▪ Any relevant theme or idea that was identified during the research project ▪ Student/participant/peer feedback given during the research project and during my own studies (baseline information)	▪ "I" as mentor ▪ Participants
	Peer participant reviews	▪ Field notes ▪ Moderator reports	▪ Participant actions ▪ Examination papers compiled by participants prior to, during and after the data collection period	▪ "I" as mentor ▪ Participants
	Conversation analysis	Notes in notebook	Conversations with the participants during: ▪ feedback and/or reflection sessions ▪ spontaneous conversations or remarks in day-to-day activities ▪ student comments in conversation with me in my role as Academic Manager	▪ "I" as mentor ▪ Participants
	Literature review	Table displaying predetermined criteria with space to add criteria that crystallised	▪ Printed resources such as books and journals or electronic resources, inter alia, the Internet, e-theses and e-journals on university webpages	▪ "I" as mentor ▪ Participants
	Document and/or text analysis	▪ Minutes of PMI Quality Assurance Committee (QAC) meeting (Data capturing in this manner served a dual purpose, therefore it saved time and enhanced the authenticity of the data)	▪ Examination papers compiled by participants prior to, during and after the data collection period ▪ Completed moderator reports on assessment instruments ▪ Completed assessor and moderator reports on student results after marking of examination scripts ▪ PMI Quality Management System standardised documents	▪ "I" as mentor ▪ Participants
		▪ Minutes of PMI Teaching and Learning Committee (TLC) meetings	▪ PMI Student feedback survey forms ▪ PMI Facilitator of learning feedback forms	▪ "I" as mentor ▪ Participants

RESEARCH QUESTION	METHOD	MY DATA CAPTURING	WHO/WHAT	BY WHOM
		Online-generated graphs and reports	▪ Herrmann Brain Dominance Instrument[®] results (my own and those of the participants)	▪ "I" as mentor ▪ Participants
	Observation	▪ Field notes ▪ Visual material: photographic evidence, videos	All participant actions during: ▪ contact sessions that participants facilitated ▪ during the PDP contact sessions	▪ "I" as mentor ▪ Participants ▪ Peer participants
	Semi-structured interviews	▪ Interview schedules with space for notes ▪ Audio recordings ▪ Transcriptions of interviews	Respondents who: ▪ completed the benchmarked learning programmes or PDPs based on the benchmarked learning programmes ▪ are managers acquainted with the content of similar PDPs ▪ have previously been mentees of mine (Section 4.4.4.1)	▪ "I" as mentor

3.6   DATA ANALYSIS AND REPRESENTATION

The study is a multi-method research project and therefore various approaches were followed during the data analysis processes. The different approaches that were used in the study are discussed in the sections that follow.

3.6.1   Theoretical grounding of the qualitative data analysis

The main theories or approaches that were used during the analysis of the qualitative data that was collected are grounded theory and deconstruction, crystallisation.

Gibbs (2010) states that grounded theory comprises the systematic discovery of theory from the data. The theories that are generated or constructed by the participants during the research process remain grounded in the observations and findings made during the research process. The theories are not generated outside the context of a research study prior to the commencement of a study. It can therefore be said that grounded theory is a form of constructivism as the researcher constructs new meaning of a phenomenon while observing or experiencing a phenomenon and then creates new theories based on the observations and/or experiences.

Cohen and Crabtree (2006) refer to the discovery of theory from the data when explaining that researchers immerse themselves in the data they have collected by analysing a portion of the data in detail. The researcher then temporarily suspends the process of further analysis of another portion of the data to reflect on the analysis experience. During this reflection process the researcher attempts to identify and articulate patterns or themes that emerged during the immersion process.

Cohen and Crabtree's (2006) description of the data analysis process fits the process that was followed during the analysis of the interviews that were conducted. The interviews were analysed one by one. I first listened to the audio recording of the interview while reading the transcript. I then reflected on what was said and related that what was said to my own experiences and viewpoints to determine

correlations and differences. I then started to read the transcript of the interview and used coding to identify certain aspects that could be regarded as significant information to be used in my study. The codes were then grouped together in themes that emerged during the analysis process. The same process was followed with the analysis of each interview. As a last step the themes that emerged (crystallised) form the individual interviews were grouped together to form the final theme structure (Section 4.4.4.1).

Gibbs (2010) states that explanations of phenomena are developed by constantly grounding the theories that are developed in the data being analysed and therefore the sampling of cases, settings or respondents is guided by the need to test the limits of developing explanations. I believe that it should rather be said that the sampling of cases, settings or respondents should be guided by the need to challenge the limits of developing explanations for phenomena.

The challenging of the limits of developing explanations for phenomena reminded me of the principles of deconstruction. During a previous study (Boshoff 2007) I developed a deep understanding of how one can use deconstruction to make sense of the world in which one lives. The theories that emerge during the process of rethinking the cognitive and pragmatic value of the deconstructed parts of a phenomenon can be used to transform one's world. Morgan (2000) explains the principles of narrative therapy when stating that one can change one's life by focusing on a different, more positive part of one's life story. This reminder of the deconstructive principles and the success that stemmed from using the principles in a previous research project (Boshoff 2007) urged me to reread some of the sources that were studied in 2007 and to refer to the previous study (*id*) in various parts of the report of the current study.

Royle (2000:7) states that deconstruction is "a questioning of the 'is', a concern with what remains to be thought of [and] with what cannot be thought of within the present". This view fits closely with what Ellingson (2008:10) says about crystallisation. She states that crystallisation seeks to produce knowledge about a particular phenomenon through generating a deepened, complex interpretation. This deepened understanding is achieved through the compilation of many details and

also of different forms of analysing, organising and representing those details. Strong themes or patterns supported by examples provide a wider perspective on the setting (context) or phenomenon under study.

Ellingson (2008:11) states that one must use more than one way to make sense of one's data in order to ensure that new understanding crystallises from it. This will make one aware of the different facets of the phenomenon under study. For this reason it is appropriate to use a multi-method approach to research. She relates the idea of crystallisation to the fact that crystals "are prisms that reflect externalities and refract within themselves, creating different colors (sic), patterns, and arrays, casting off in different directions".

The prism idea can also be related to the deconstruction process. A researcher investigates and considers the different attributes (facets) of a phenomenon separately. A process of reflection then follows during which the researcher interprets all the data in order to be able to create a deeper understanding of the different parts. The theories that emerge (crystallise) during this creation of better understanding are then used as the basis for the reconstruction of the phenomenon in a different or better way.

While reading about grounded theory, deconstruction and crystallisation, I realised that it is not possible to draw clear distinctions between the different concepts. They should rather be regarded as integrated processes in the act of interpreting the data and constructing new meaning of a phenomenon.

3.6.2 Quantitative data analysis in a qualitative study

One of the first questions asked when presenting the results of a study is: What is the significance of the finding? In qualitative data analysis significance is not dependent on the size of the sample, but more on the strength of a relation between the different variances (Schneider 2005).

The use of quantification in a qualitative study provides the means to separate out the large number of confounding factors that often obscure the main qualitative

findings. Quantitative analytical approaches allow reporting in numerical terms that enhances the confidence level in which qualitative summary results are reported (Abeyasekera n.d.).

The quantitative data analysis method mostly used in this study is score frequencies. This was done mainly to determine the frequency of the appearance of a specific response or situation in order to determine the significance of a specific aspect linked to it in the study. An example from the study is the number of times that the influence that ergonomic aspects have on the learning process appeared in the interview responses.

The measures of frequency that were used in the analysis of the examination papers compiled by the participants of the PDP are the mean and median of the results scored by the students who completed the examinations in which the different examination papers that were analysed were used.

3.6.3 Data analysis and representation

Table 11 indicates the different approaches that were followed for the analysis and representation of the data.

Table 11: Summary of the data analysis and representation methods used in the study

METHOD	ANALYSIS	REPRESENTATION
Qualitative analysis		
Interviews	▪ Coding and the identification of themes that crystallised (Section 4.4.4.1); ▪ Triangulation with my own reflective notes	Written report in rich narrative style supported by:
Observation: ▪ Field notes ▪ Photographic and video evidence	▪ Coding and the identification of themes that crystallised ▪ Deconstruction and critical analysis of appearances ▪ Triangulation with my own and the participants' reflective notes and literature	▪ Tables ▪ Charts ▪ Photos

METHOD	ANALYSIS	REPRESENTATION
Reflection on: ▪ my own living experience as facilitator of learning ▪ my own living experience as mentor ▪ observation feedback and mentoring sessions ▪ my own life experiences as student	▪ Coding and the identification of themes that crystallised ▪ Deconstruction and critical analysis of appearances ▪ Triangulation with my own and the participants' reflective notes, interviews and literature	Written report in rich narrative style supported by: ▪ Tables ▪ Charts ▪ Photographs
Literature review	▪ Deconstruction and critical analysis of what is said ▪ Triangulation between different sources and my own living experience	
Quantitative analysis		
HBDI® assessment: ▪ my own and ▪ those of the participants ▪ my own Whole Brain® life experiences	▪ Score frequencies ▪ Correlations and differences between my own profile and those of the participants ▪ Correlations between my online created profile and plotting of my life experiences	Written report supported by: ▪ HBDI® score charts ▪ Tables

Scores achieved by students in formative assessments and examinations	▪ Measures of frequency:
	  ▪ Mean ranges
	  ▪ Median ranges
	  ▪ Percentiles
		Written report supported by:
		▪ Tables
		▪ Scatter graphs
		▪ Histograms
		▪ Radar graphs

Mark allocation in examination papers	Measures of frequency: Percentiles of marks allocated in relation to Bloom's taxonomy and the Hermann Whole Brain® theory	Written report supported by: ▪ Tables ▪ Histograms ▪ Pie charts

3.7   VALIDITY AND RELIABILITY OF THE PROJECT (TRUSTWORTHINESS)

According to Lincoln and Guba (1985:290) the basic question to address trustworthiness is:

> How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of?

Kemmis and McTaggart (2005:576) provide four criteria against which validity claims can be measured in an AR project. The participants in a research project should ask the following questions:

- Do my understandings of what I am doing make sense to me and to others (comprehensibility)?

- Are my understandings true in the sense of being accurate in accordance with what else is known?

- Are my understandings sincerely held and stated (authentic)?

- Are my understandings morally right and appropriate in the circumstances in which the participants find themselves?

In order to answer the questions posed above, the following methods were used:

3.7.1   Low interference descriptors

In many instances the reporting style that was followed includes verbatim accounts of the responses or actions that were experienced and observed during the project. This allows the reader to be able to create his or her own sense of the situation at hand.

3.7.2   Data triangulation

Cohen et al. (2002:112) define triangulation as "the use of two or more methods of data collection in the study of some aspect of human behaviour". Two of the triangulation methods that were used in the study are identified by Cohen et al. (*id* 114) as "within methods" and "between methods" triangulation. Multiple methods were used to collect and interpret the data to ensure that the same information was obtained by the use of the different methods. These included interviews, observation sessions, photograph and video recordings, and document analysis.

3.7.2.1   Within method triangulation

Within method triangulation was used in the analysis of the following:

- **Interviews** – Aspects that were mentioned in the different themes that crystallised were considered to determine the level of importance put to it and the frequency of reference within each interview and between the different interviews. The following aspects were considered:

- The value of the HBDI[®] assessments

- The influence of ergonomics on the learning process

- Ways of facilitating and assessing of learning that were used by the facilitators of learning of the benchmarked qualifications and PDPs

- Aspects to be included or excluded from the curriculum of a PDP for academic staff

- The way in which the benchmarked learning programmes and PDPs were organised

- The importance of mentors as support system during formal studies towards or participation in the benchmarked qualifications or PDPs.

- **Observations** – The following aspects were considered during all the observation sessions:

  - The facilitating of learning skills of the participants, for example the application of theory relating to learning theories and learning style theories, questioning skills and innovation used by the participants

  - The level of student participation in the different activities

  - Aspects to be included or excluded from the curriculum of a PDP for academic staff

  - The influence of ergonomics on the learning process

  - Aspects to be mentioned during the mentoring sessions.

- **Reflection sessions** – All aspects that were considered during the observation analyses were considered during the after-observation self-reflection sessions done by the participants and myself and the findings were then shared during mentoring reflection sessions.

3.7.2.2   Between methods triangulation

Between methods triangulation was used as correlations were found (Table 12) during the data analysis of the data that was collected by using different data collection methods. Nearly all the findings were verified by the use of literature references.

Table 12: Aspects identified during "between method" triangulation

DATA COLLECTION METHODS	ASPECTS IDENTIFIED
Interviews, observation and reflection sessions	The influence on the learning process of: • ergonomics • the organisation of contact sessions • innovative ways of facilitating learning • aspects to be included in the curriculum of a PDP for academic staff
Interviews and reflection sessions	• The value of the HBDI® assessments • Mentoring during the PDP • The influences that my mentoring practice had on others

3.7.3 Member checking

The participants of the study were provided with copies of the report before publication for their comments. Comments are included in the final report. Regular discussions took place with the participants regarding the findings and interpretations of the data.

3.7.4 Peer review

In order to determine how others who were not part of the project would accept the findings, parts of the work in progress were presented at the HELTASA 2010 national conference and the Knowledge 2011 international conference. The feedback that was received after these sessions was reflected upon.

The different activities of the development programme were included in a development programme that was offered at a public university. The facilitators of the programme at PMI also facilitated the programme at the public institution. PMI was invited to offer the programme at the public institution based on the successes that were achieved through the implementation of it in PMI.

The literature review was not completed prior to the commencement of the data collection period. Literature was consulted throughout the entire project in order to find confirmation of the findings and to see whether others hold the same views.

3.7.5   Data saturation

Data collection was continued until no additional information could be derived from the different activities of the project.

3.8   SUMMARY OF THE CHAPTER

Chapter 3 allows the reader to share my thoughts when designing the project. The discussions comprise AR as methodological framework and the selection of the cases that were studied. The data collection methods and tools, analysis and representation of the data are discussed. The discussions are concluded by identifying ways in which the trustworthiness of the findings was ensured.

You are now invited to continue to the next destination on the journey of professional development and/or transformation. In Chapter 4 all the participants of the study share our living experiences and thoughts, while pursuing our journey of lifelong learning.

CHAPTER 4

RESEARCH IN ACTION

4.1   INTRODUCTION

By joining the researcher when taking the next step of our lifelong journey you may learn about the value that PDPs such as the one that is part of the study can add to the lives of the participants of such a PDP. The intention with the professional development of the participants and my professional development was to add value to our own lives as well as to the lives of the students who are enrolled at PMI. If the participants and I could touch the lives of others in a positive manner through learning, with a view to improving the world that we live in, a culture of touching lives through learning could be created and sustained. Our successes most probably contributed to the professional development or transformation of professionals in the education environment who have not yet adopted innovative ways of facilitating and assessing learning. Any change or transformation contributed to the notion of lifelong learning.

This chapter allows you to share the experiences, thoughts and feelings of all the participants. The discussions comprise the results of an initial process of identifying the best assets within the participants and the exemplar institution that can be developed in order to create a better future (Way et al. 2007:6, Section 2.2.1), my looking back at the past to learn from my previous experience as a mentor and learning from others through interviews. We also share what we have learned through living our lives as facilitators of learning, a mentor and lifelong learners.

4.2   MEET THE "I" OF THE PROJECT

Lou Goldstein (1921-2012) once said: "Understand yourself first before trying to understand others". As a point of departure that might make more sense after embarking on the various sections in this chapter I need to sketch the background to my life since birth. What I report here is based on what I can recall.

Today, exactly fifty-seven years ago, I entered the world that I live in and my journey as human "becoming" started. When reflecting on my life journey and on my own learning I sometimes wish that I could remember all that has happened in my life from my first second in the living world as we know it.

Since birth I had apparently been quite content with the world and was hardly upset by anything. I was adaptable in most situations and did not have fixed preferences, such as having any objects such as a dummy, soft toy or blanket to comfort me or to provide a sense of security when being put to sleep. I was happy in most people's presence and would smile to mostly anyone. I was also quite happy on my own and did not need the constant attention of others.

The time of the recollection of my life can be confirmed by my parents and my brother who is six years older than I. Without being reminded by photographs or narrations by my parents or others, I can recall the way in which I played since the age of three, going on to four years of age.

I hardly ever played inside the house. I was mostly outside, playing under a huge mulberry tree in our back yard. I played inside my doll's house only during the winter until the day started to become warmer, then I would move outside again. My mother constantly had to warn me to be careful when "flying" high in the sky on my swing while singing my self-composed songs aloud. I would continue visualising myself as being a teacher for my dolls and on some days my dolls were the audience coming to view my music and dance show that I produced. Our fox terrier was my child that lovingly endured the treatment of a baby in the doll's pram.

I can recall only three specific events that occurred in my life at the age of around four years of age about which I can provide detailed information. The first event was a visit to the Union Buildings in Pretoria, the administrative seat of the Government of South Africa since 1913. I recall my grandparents going with us and how I imagined this huge building to be a palace with beautiful gardens. The next specific event that I can recall was being in a motorcar accident. I can still see the drunken cyclist falling halfway through the windscreen and I remember the pain that I felt when hearing that the cyclist had been killed on impact. The last event that I can

recall was just before I turned five when I had to receive stiches in my chin after being injured on a playground just before dark while we were on holiday. I still recall the heavy pouring rain and the lightning in the night while driving to the nearest town where the doctor was and the fear of being hurt when he had to inject me. Apart from remembering the way in which I played daily, I cannot recall any specific events, not even when seeing photographs of events that I was a part of.

The time when I started remembering close to everything in my life was my first day at school at five and a half-years of age. My mother explains that I started school at that early age as I became miserable every morning when my brother left for school and I changed from being a happy child into a grumpy one. In those days pre-schools were almost non-existent as mothers stayed at home raising their children. Ironically, in my Grade 4 year, my mother started a day-care centre after a request from a person working with my father and she helped raising four children between the ages of three months and four years.

One interesting phenomenon that occurred after starting school was that I adapted the way in which I played. Being Afrikaans-speaking, in an environment in which I had hardly ever been exposed to English, I sometimes spoke in a "language" that I believed to be English as I wanted all in the audience of my shows that my dolls attended to understand what I was saying. Now more than fifty years later, I can still see everything as clearly as the day that it happened and I can feel what I felt during every event that I recall.

Up to now I still have all my toys on a shelf in my garage. My toys are still such a precious part of my life that I cannot part with them due to their sentimental value. I still have all my Grade 7 books in my bookcase of that time, as that was the year in my school career that I will never forget. I share more about this school year in another section.

Once I had developed a deeper understanding of the principles of the Herrmann Whole Brain[®] theory, which is discussed in Section 2.3.5.1, I realised that everything that I can recall about my life since childhood correlates with what can be viewed as

being a part of my preferred way of thinking as identified through the HBDI[®] assessment.

4.2.1   My Whole Brain[®] profile

Figure 10 is the graphical representation of my Whole Brain[®] profile. The different quadrants of the brain displayed in the metaphoric Herrmann Whole Brain[®] model are represented by different colours. The closer the score is plotted to the centre of the circle, the lesser one's preference for using thinking styles associated with that quadrant of the brain.
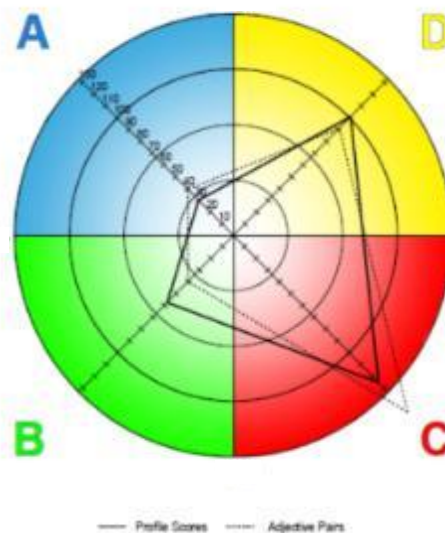
Figure 10: Graphical representation of my Whole Brain[®] profile

The adjective pair scores indicate the most preferred thinking style of the individual when placed under stress. The respondent's thinking preferences under everyday circumstances is indicated by a fixed line that represents the individual's thinking preference profile under normal everyday circumstances and the stress profile is represented by a dotted line on the graph.

Figure 11 is the data summary sheet that shows my profile score for each quadrant. It is a representation of my profile using a sequential, linear, detailed and quantified mode format (Herrmann International (HI) 2009:2). My key descriptors in each quadrant are indicated by an x. My most preferred descriptor is indicated by the asterisk.

The higher the score for the different work elements, the higher one's preference for the different elements. The preference code for the different quadrants is scored as 1 to 3 with 1 being the highest preference and 3 being the lowest preference.

	Column A UPPER LEFT	Column B LOWER LEFT	Column C LOWER RIGHT	Column D UPPER RIGHT
PROFILE SCORES	30	57	125	101
PREFERENCE CODE	3	2	1	1
ADJECTIVE PAIRS	3	3	11	7
KEY DESCRIPTORS (* MOST DESCRIPTIVE)	factual quantitative critical rational mathematical logical analytical	conservative controlled sequential detailed dominant speaker x reader x	emotional x musical spiritual symbolic x intuitive x talker x reader x	imaginative artistic intuitive x holistic * synthesizer x simultaneous spatial x
WORK ELEMENTS	analytical 2 technical 3 problem solving 3 financial 2	organisation 2 planning 2 administrative 4 implementation 4	teaching 5 writing 5 expression 5 interpersonal 4	integration 5 conceptualising 3 creative 3 innovating 4
ADOLESCENT EDUCATION				
EDUCATIONAL FOCUS				
OCCUPATION				
HOBBIES				

INTROVERTED   EXTROVERTED

INTROVERTED/ EXTROVERTED									x	

Figure 11: The detailed scores that I obtained during the HBDI® assessment

4.2.2 My brain profile and the way in which I do things

While reflecting on my actions and preferences at an early stage in life already, I realised that my preferences and actions can be related to the different quadrants of the brain as identified by Herrmann. Table 13 shows a summary of the findings of the analysis of my behaviour and preferences since early childhood in relation to my Whole Brain® profile as determined through the HBDI® assessment. I could also quantify the qualitative findings by counting the number of actions or preferences that I could relate to the different quadrants of the brain.

Table 13: Summary of how my actions and preferences since birth have fitted into the four quadrants of the brain as explained in the Herrmann Whole Brain® theory

QUADRANT	PERSONALITY TRAIT	TOTAL
A	• **Factual information** that can be **verified** is remembered.	1
B	• Remember **experiences** in much **detail**. • The **times** that what is recalled really happened could be verified by the **detailed** facts that I could remember.	2
C	• Liked almost **any person** and was happy in almost **anyone's company (interpersonal)** • Was happy to **communicate** with the toys and did not always need a live audience **(intrapersonal).** • Displayed a **friendly** nature by **smiling** at **strangers (interpersonal)**. • The **aesthetical** value of nature intrigued me (remembering the mulberry tree) **(naturalistic).** • Remember the few first incidents that had a huge impact on my **emotions** such as **joy**, **hurt** and physical **pain**. **(intrapersonal).** • My childhood possessions still hold **sentimental value** for me **(intrapersonal).** • Remember the **feelings experienced** during events **(intrapersonal).** • Felt the **hurt** of the accident **victim (interpersonal)** • **Nurtured the dog as a child**. • **Talked** in a **different "language"** so that everyone could **understand** me **(linguistic).** • I was a **teacher** for the dolls **sharing** my knowledge with them **(interpersonal)**. • **Sang** while swinging and had **sing and dance** shows for the dolls **(music)**. • Remember all the learning activities that I really **enjoyed** or that **pushed** me too far **outside** my **comfort zone**.	13
D	• Was content with the world and **adaptable** and therefore **hardly anything upset** me. • **Did not need** any token of **security** to hang onto (risk-taking). • Liked to play **outside the constraints of the walls** of the house. • **Not scared of heights and the risk** of falling off the swing. • Used **creativity** in my playing by **producing shows** for my doll audience. • All my memories are strongly grounded in **visual** recollection. • **Excitement** lifted my spirit and factual knowledge to be remembered bored me. • **Imagined** a building to be a palace.	8

When counting the number of actions or preferences in each section it can be observed the preference order is the same as the order determined through the HBDI® assessment. The order of the preferences is:

C – 13; D – 8; B – 2 and A – 1. My HBDI® scores are: C – 125; D – 101; B – 57 and A – 30.

When considering the key descriptors in each of the quadrants of the brain as determined by the HBDI® online assessment, my most dominant descriptors according to the number of times scored are **speaking** and **talking** (2 scores) which indicate a preference for verbal communication. I also like to "hear" what others (interpersonal – C-quadrant) say through **reading** (2 scores). This fits in with my habit of explaining that which I need to learn and I sometimes tell it as if I am telling a story to someone else or my dolls when I was a child. When telling my story to myself (intrapersonal), I act it all out by showing **emotion** (C-quadrant) through facial expressions and change of tone and voice. I even add sounds like laughing and crying or imitating attitudes that fit the context, such as being very authoritative and strict when studying labour law. If I cannot understand what I read silently, I read it out aloud and once I can hear what is said I can more easily interpret and understand what is written.

The most dominant descriptor of being **holistic** (D-quadrant) is also supported by the descriptor of being a **synthesiser** (D-quadrant). While learning something I always try and find the links between that which I already know to which I can just add new information that I do not know (constructivism). In this way I limit the amount of new information that I need to remember. I also try and find examples from my experience that suit that which I must remember. When studying the organisational structure in Personnel Management I linked the names of the management team of the organisation where I used to work to the different roles in the organisational structure. In this way I see (Visual - D-quadrant) the faces of the people and just reminded myself of what their responsibilities in the organisation were like.

The descriptor **spatial** (D-quadrant) fits in with the way in which I use the principles of behaviourism when I find it hard to remember (A-quadrant) something. I

experienced the success of this way of remembering while memorising the words of the characters in stage productions in which I acted (D-quadrant) a few times. I moved the furniture in my living room to be in the same position as the layout on the stage. I then acted the part while reading from the script about three times. I then put the script down and when I acted the part I could easily recall the words accompanying a certain action. When I add **emotion** to the words I recall the words even more easily. Repetition (B-quadrant) also helped as by the third time that I acted the part, I did not have to refer to the text anymore. When acting on stage I even remembered the words of the other players after the fourth of fifth rehearsal. I was so sure of their words that I was able to prompt them if they forgot their words during the play. I was able to ask them a question to which the answer was the words that they had to say (D-quadrant). When I have to remember lists or steps of processes (B-quadrant) I act in a strange way, such as walking like a duck up and down the passage while saying the words. When I have to recall the words I close my eyes and imagine (D-quadrant) myself walking like a duck and I can recall the lists or steps in the process.

Now, for the first time ever while explaining my actions and by seeing the word while it is being typed, I realise that the word rehearsal explains why this is working well for me. As mentioned before, I like to hear what is said and the repetitive (B-quadrant) re**hear**sals help me to remember.

Another aspect of **spatial** (D-quadrant) as descriptor that has a definite influence on my thinking behaviour was discovered by pure chance. When I was still a facilitator of learning at a FET college, a student once asked me why I always looked out of the door when they asked me a question that I needed to think about or when I tried to remember something. I could not answer them immediately as I was not aware of my habit. The next time that I looked through the door when I had to think, I realised that I cannot think if I cannot see far. I then tested my theory by turning my workstation so that I faced the wall. I got tired and frustrated more easily than usual. I experienced a slower flow of thought and I really had to put effort into it when I wanted to create or formulate something. I then turned my workstation to see the length of the room and when I looked to the side I could see outside through the window.

Once I acknowledged this phenomenon in my way of thinking it started to make sense to me why I never played inside the house or my doll's house when I was small. I need to have open space around me. Wherever I go I tend to choose a chair in a room where I can see outside. I also arranged my office in such a way that I can see through the window. When visitors enter my office for the first time and I look through the window while thinking, most people tend to look through the window to see what I see. I have now developed the habit of telling the visitor that I do not look at anything but that I need to see far to be able to think. They find it strange at first but the next time when they come to my office they know that I am thinking and they patiently await my answer. One of the students whom I mentioned it to returned to me after a week and said to me that it also works for him. During the discussion I could identify that he has many characteristics fitting in the D-quadrant of the Whole Brain®.

One aspect of my Whole Brain® profile that is regularly misinterpreted is linked to the descriptor of being **interpersonal** (C-quadrant). The immediate reaction is to believe that I like working in groups during learning activities. This is as far from the truth as can be. I do not like to be involved in class activities in a group at all − especially when the group has members with brain dominances from all the quadrants and when there is a time limit (B-quadrant) to the activity. I immediately feel intimidated as I cannot think fast while everyone is talking and putting ideas on the table. I would rather remove myself from the group (intrapersonal) for a short while and in a quiet place rethink the task. When I then return to the group I can make a worthwhile contribution.

I believe the descriptor of being **holistic** (D-quadrant) is partially to blame for this conduct. I need to rethink each option to see how it will fit into the big picture of the problem under discussion. I also need to see how the different options can affect other options or situations. This is supported by the work element **integration** for which I have achieved the highest score possible. I cannot plan something ahead and start running with it from a plan (B-quadrant). I develop the actions as I go along (D-quadrant) as better options always come to mind while I am part of the process and I can experience the flow of the process. This is one of the reasons why I always

pilot (B-quadrant) everything that I develop before the final product is distributed for use elsewhere.

I do, however, like to share ideas with others (interpersonal) once I can create something (D-quadrant) on my own (intrapersonal) that I can then present to others. This allows me time to think it through on my own and I am able to substantiate and defend my idea. I can then incorporate (D-quadrant) the ideas of others into my pre-constructed framework (social constructivism). I use the same principle when developing or writing something on my own. I start by creating the document or product according to what I believe is correct and the expected standard (B-quadrant). I then search for similar work by others and then assess my own work against that of others, which I know was previously accepted or successful.

Another reason why I do not like to work in groups when the final product is assessed in the form of a group assignment is that I am never happy with the final product. I always want to work to achieve above the expected standard and others in the group are happy only to produce what is expected. This creates a situation where I always take on too many of the responsibilities of the task and others then benefit from the higher mark that I have worked for on my own. If I do not put in the extra effort and a poor mark is received for the task I always blame myself (C-quadrant – intrapersonal) for not taking the effort to improve the end product. I always experience a feeling that group assignments create unfairness.

The descriptor scored twice which I prefer not to use is **intuition** (C- and D-quadrants). Since a very young age I have never had positive experiences through intuition. It always foretells negative things to be happening. Because of the many remarks made by others that I bring negative things and experiences onto myself and others as a prophet of doom by mentioning what I sense, I have tried to ignore the messages that I receive through intuition. Many references to the power of positive thinking always come to my mind when I sense that something is going to happen. I then try to change the negative into a positive by trying to change it in my mind, but I have never been successful. Someone once said to me that I must be careful in what I say as my words carry extreme power. This comment made me feel that I am the reason for the negative things that happen, whereas it could rather

have been experienced that I have the ability to warn others to take precaution. Whether I say something or not, it is going to happen but by expecting it the negative effect of it can be lessened.

I believe that my ability to sense the coming of negative experiences is a natural method of protection against the reaction that I may experience as a result of my strong **emotional** (C-quadrant) descriptor. When I sense the possible occurrence of negative experiences, I unconsciously prepare myself for what might be coming and once it happens it is less of a shock to me. I have to learn to distance myself from the influences of others' remarks and to take cognisance of my intuitive senses as I sometimes miss opportunities to say or do something before it is too late.

The descriptor of being **innovative** (D-quadrant) is the reason for my personality trait of getting bored very easily. I need variety in my life and cannot survive productively in a monotonous environment of repetition, rules and regulations, every day the same procedures, experiences and with the same people, especially when it is in an enclosed environment (B-quadrant). I am constantly on the lookout for ways in which things can be done differently, more and better in different environments with different people that will create a feeling of not being enclosed.

Since I learned about my thinking style preferences in 2000, I have been able to understand many of the comments that were made by teachers throughout my school years. It started to make sense to me why I always had the problem that no matter how hard I studied, I could never achieve high marks. Going to school during a time when academic prowess was measured by one's ability to memorise (A-quadrant), which is a left brain activity, my right brain preference may have been the cause of the impression that I do not study.

4.2.3   A living experience of success through the allowance of learning style flexibility

Throughout my school years I had been accused of being lazy. I could never understand why, as my homework had always been done and I spent hours studying for tests and examinations and working on assignments. I enjoyed doing

assignments as I could present my knowledge in a way that I wanted to. In high school I started asking the teachers why they believed that I was lazy and the answer was "because you **can** do much better".

At the end of Section 4.2 indicate that my Grade 7 school year was the best year of my life and that I will never forget it. What I learned through experience in that year has shaped my whole being as a lifelong learner and thirty years later it serves as the foundation for being as a facilitator of learning. When reflecting I now realise I was constantly trying to be accepted in a world where academic achievement was regarded as the only sign of success, in a schooling system in which academic success was determined by one's ability to memorise and to reproduce the facts in exact format (A-quadrant). No matter how hard I tried, I never succeeded in memorising and reproducing facts. The principle that human success should not be judged based only on cognitive abilities, but that "the complexity and uniqueness of [their] beliefs, experiences, values and virtues" (Hugo, Slabbert, Louw, Marcus, Bac, Du Toit & Sandars 2012:131) should also be accepted and appreciated, was not practised in the era that I went to school.

The only school year in which the teacher allowed for learning style flexibility, was in my Grade 7 year. When reflecting on my experiences in that year I realised that Mr Hero (pseudonym based on the fact that until today, I view him as being my hero) facilitated learning in a Whole Brain® manner which allowed us to become lifelong learners. The learning-centred activities that he created in 1968 are currently viewed as innovative learning activities.

Mr Hero followed a Whole Brain® approach as we had to memorise facts and reproduce them in tests (A-quadrant) and we had to be able to apply (B-quadrant) the knowledge in case study-based assessment tasks. We had to memorise (A-quadrant) the multiplication tables (3 x 4 = 12, 4 x 4 = 16, and so forth) by starting every day with repeating the tables a few times (B-quadrant).

Mr Hero composed songs for us to remember definitions. He played on his guitar and we sang along (C-quadrant). He wrote, for example, lyrics such as: "An adjective, an adjective is a word that tells you more about the noun. Rosy cheeks,

pretty boy, rainy weather." We regularly worked in groups (C-quadrant) to produce puppet shows (D-quadrant) as the verbal assessment in language education. He is very artistic and produced whichever puppet we requested if it was not already "living" (C-quadrant) in the box in the puppet theatre. When we had to write creative writing essays, Mr Hero started telling an amazing story and just as we would find the answer to the mystery he left it to us to complete the story. Mr Hero truly knows how to change education into edutainment (White 2003; Copley 2010).

Mr Hero allowed us to become holistic citizens of the world in which we live. He ensured that we learn in such a way that we can reach our full potential by allowing for learning style flexibility (C-quadrant – intrapersonal). Through extra-curricular activities he allowed us to, at a young age already, do good to others in the community (C-quadrant – interpersonal, D-quadrant- community as a whole). Mr Hero owned the school bus and on his own cost, every Friday evening, we visited hospitals, prisons and retirement homes. We serenaded the ill, the aged and prisoners to add value to their lives by providing a few moments of enjoyment in their troubled lives (C-quadrant).

The value that Mr Hero added to my life by accepting me for who I was and allowing me to learn in my own preferred way can never be expressed in words. Until today I still use the knowledge, skills, values, attitudes and virtues that I learned in 1968. This was the only year in my entire school career that I never experienced a feeling of worthlessness as a result of my inability to memorise large amounts of factual information.

I did not immediately enrol for any after-school studies as I believed that I would not be able to pass the examinations. My study career started when I was thirty nine years of age when one of my colleagues challenged (D-quadrant) me to enrol with her for studies at a FET College. My first reaction was that I could not study as I was not a good student. I will always remember her reaction. She looked at me in surprise and said that she knew me well enough to know that I was definitely not "stupid" and very dedicated in all that I did. She also knew that I cannot resist a challenge, so she dared me to enrol with her. So, a challenge resulted in the start of my studies. I was very successful in my studies towards the National N-Diploma in

Human Resources Management as it was expected from us to explain concepts in our own words and the assignments in all the courses/modules had to have a practical orientation that displayed higher order thinking. The theoretical facts that I had to memorise were also more difficult than the rest, but my experience when memorising the scripts of the stage productions in which I acted allowed me to use the principles that I had discovered to be working for me. After finishing school with the label of being "not so clever" as I did not have the ability to memorise large amounts of theoretical facts, twenty-six years later I completed the N-Diploma in Human Resource Management with ten distinctions from fourteen courses/modules.

I came to understand the true value of Mr Hero as an educator and facilitator of learning when studying towards the DHETP in 2000. We constantly had to reflect on our own practices as facilitators of learning and we had to transform them based on the different learning theories and learning style theories that we were introduced to. I realised that in the two years that I had been a facilitator of learning at the FET College, I did everything in the exact way that Mr Hero had done. Whether it happened consciously or unconsciously, Mr Hero became the role model on whom I based my practice.

Throughout my year of studying I had the feeling that the transformation that was supposed to happen in my practice did not happen as what was presented as the envisioned outcome of the qualification was my natural way of facilitating learning. Although I did not transform my practice I experienced a significant development in my ability to provide a theoretical grounding for my practice. Through my action research project I could in a scholarly way confirm the correctness and appropriateness of that what I naturally do. For the first time in my life I could prove that I am not a "not so clever" student but that I was a victim of an education system that did not allow for learning style flexibility.

When studying for a master's degree, I again had the opportunity to prove the validity of the way in which Mr Hero and I facilitate learning. The activities that produced the most fruitful results in my master's research (Boshoff 2007) were those that I had learned from Mr Hero. I used, inter alia, puppets, songs, role-play, storytelling and drama to remove many obstacles in the learning process of the

students for whom I was a facilitator of learning. When I obtained my master's degree with distinction, my first thought was that I needed to thank Mr Hero for the foundation that he had laid without knowing how it would impact on my future and ultimately the lives of the students for whom I am a facilitator of learning.

Mr Hero allowed me to experience the foundations of being a successful facilitator of learning who fulfils a purpose in life and ensures that lifelong learning takes place by acknowledging, accepting and appreciating the "complexity and uniqueness of [every student's] beliefs, experiences, values and virtues" (Hugo, Slabbert, Louw, Marcus, Bac, Du Toit & Sandars 2012:131). We had the opportunity to be guided through the transformation process from being a child to being a whole-brained human being.

When analysing the theoretical grounding of Mr Hero's practice I could identify the elements of the theories that were used as the theoretical grounding of my study and the PDP. I then realised that Mr Hero had applied all the principles of all these theories even before they were developed. Gardner's Multiple Intelligence theory was introduced in 1983 and Herrmann started the research which resulted in the development of his Whole Brain[®] theory only in 1976. Bloom's taxonomy was published only after Mr Hero had completed his studies to become an educator. I then realised the true value of what I had experienced. Mr Hero is a theorist himself and I find it sad that what he had lived later provided fame for others when they published it as newly created theories.

4.3 EVALUATING THE EXISTING ASSETS AT THE ONSET OF THE STUDY

The outcomes of the process of determining the value of the existing assets in the exemplar institution at the onset of the study assisted in the process of deciding which actions should be taken to increase the value of the existing assets.

4.3.1 Positive aspects identified at the onset of the study

The Institute has modern physical assets such as training venues, learning media and electronic equipment that can be used by the facilitators of learning and

students and it experiences a secure financial situation. It has a reputation for offering education and training of a high standard for more than three decades and it has an existing client base with which the relationships are, in some instances, long-standing. The relationships are regularly renewed with the enrolment of new students that are employed by the Institute's current clients.

Some of the assets provided by the participating facilitators of learning who are employed on a part-time base at PMI can be listed as:

- specialised knowledge and experience in their respective fields of expertise;
- personal experience of the value of having the ability to, in one's working environment, practically apply theoretical knowledge that has been obtained during formal educational interventions;
- the passion for being involved in the personal and educational development of the students;
- an understanding of the need for continuous improvement that can result in the development of a competitive edge for a business as this is a principle that is practised in all manufacturing industries in which the facilitators of learning are employed on a full-time basis.

As a permanently employed human resource of PMI who fulfils the role of being the mentor for the participants of the PDP, some of the intangible assets that I have provided from the onset of the study are:

- current theoretical knowledge regarding the principles of education, that was obtained during formal educational studies as a student in the faculties of education of the University of Pretoria (UP) and the University of South Africa (Unisa) up to Master of Education level. The currency of my knowledge was enhanced by the fact that I was an enrolled student in the faculties of education after the change towards outcomes-based education (OBE) in South Africa and therefore the theories that form the basis for OBE were included in the curricula of all my studies;
- curriculum and instructional design and development is the field of expertise on which all my formal studies for being an educator are based;

- a deep understanding of the philosophical foundations of the different meta-theories that underpin the ontological and epistemological foundations of the study (Section 2.3.1) was obtained during my five years of experience as part-time facilitator and assessor of learning, and moderator for the course/module Educational Studies on post-graduate level at UP;

- twelve years of experience as a facilitator of learning for adults in a combination of the FET and HE (See Table 1) environments;

- nine years of experience as an action researcher during my formal educational studies;

- experience of being a mentor for peer academic members of staff who were either studying towards the Postgraduate Certificate in Higher Education (PGCHE) at UP or who were involved in AR based PDPs similar to the one that was offered as part of the study under discussion;

- personal experience of the value of the allowance for learning style flexibility during formal education;

- personal experience of the value of knowing of, understanding and being able to use one's own preferred thinking and learning preferences as determined through the Herrmann Brain Dominance Instrument (HBDI®) (Section 2.3.5.1);

- my viewing my practice as educator and mentor as a calling and not just as a career opportunity. For this reason I am always willing to walk the extra mile if it can be to the benefit of my own and others' learning during a process of personal and professional development and/or transformation.

In order to determine areas for development the deficiencies experienced in the Institute should also be identified (Way et al. 2007:6).

- **Deficiencies experienced in the Institute**

The deficiency or area for improvement that was identified as the area that needed immediate attention (Section 1.3) was the situation that, although the lecturers (traditional term used on purpose) who are employed at PMI on a part-time basis are highly qualified in their fields of expertise, the majority have never received any professional development as educators. Therefore they did not have an in-depth knowledge of how learning takes place, and how to facilitate learning in a way that

will contribute to creating and sustaining a culture of lifelong learning. They were also not aware of the different alternative assessment approaches that can be implemented to, inter alia, ensure that the cognitive abilities that are assessed suit the level of studies the students are enrolled on.

Being aware of the existence of a PDP that would address the deficiencies experienced in PMI allowed me to start planning immediately for the appropriate corrective action to be taken. The experience of being a mentor for my colleague while she was a participant of the PDP that was offered at the FET College where I was previously employed, allowed me the opportunity to witness the level of professional development experienced by my mentee. This was my first opportunity to learn how to be a formal mentor for a peer employee who is part of an education-related PDP. The value that was added to the practices of both my peer and me, through the reciprocal mentor-mentee relationship, provided the assurance that a PDP that is based on the same principles as the one that was offered at my previous place of employment, will most probability be successful if offered in PMI.

The first step that I had to take towards implementing the PDP was to ensure the appropriateness of the PDP in the PMI context. Knowing that I might most probably become the mentor for the participants, I had to determine the areas in which I have to develop or transform in my role as mentor in order to support the participants on their journey towards professional development successfully.

4.4   LEARNING FROM INTERVIEW RESPONSES AND PERSONAL REFLECTIVE NOTES

Through life experiences I have learned the truth in the words of Möller et al. (2003:110) who say that "understanding the past brings new insights which might have value in the present and future". I also know that we can learn from both the positive and negative experiences of others. Therefore it made sense to me that the first action to be taken was to conduct interviews with others who were willing to share their experiences with me. The selection of the interview respondents is discussed in Section 3.4.4.

4.4.1 Introducing the curriculum that was used as benchmark

The Postgraduate Certificate in Higher Education (PGCHE) which was previously known as the Diploma in Higher Education and Training Practice (DHETP) offered by the University of Pretoria (UP) was used as benchmark during the interviews.

The current curriculum of the benchmarked PGCHE is displayed in Table 14.

Table 14: Curriculum of the PGCHE that was used as benchmark during the interviews (UP 2012:40)

Modules	Module name
Fundamental modules	Professional development Mediating learning
Core modules	Curriculum development Community-based learning Assessment practice Leadership and management Education technology
Elective modules	**Choose two from the following:** Research supervision Mentorship Electronic learning Entrepreneurship practice

The following are the reasons for using the mentioned PGCHE as benchmark:

- I studied towards the DHETP in 2000 and was the mentor for several of my colleagues who studied towards either one of the benchmarked qualifications. The prior knowledge that I had of both the qualifications assisted me in getting the most possible information from the interview respondents as it allowed me

to prompt the respondents regarding aspects that they omitted to mention during the semi-structured interviews.

- The PDP that was offered at my previous place of employment was based on the curriculum of the PGCHE offered by UP.

- It was easy to find respondents who would fulfil the criteria for being interview respondents. All the respondents could provide information on their experiences while studying towards one of the benchmarked qualifications and they had knowledge about the curriculum content of either one of the qualifications. None of the respondents had received any formal educator training prior to studying towards the mentioned qualifications.

Interviews were conducted with five respondents, referred to as interview respondent 1, 2, and so forth, that at various times studied towards either the DHETP or the PGCHE offered by the University of Pretoria during the period 1999 to 2008.

The content of the questions that were posed during the interviews was based on the following aspects of the DHETP or PGCHE qualifications that the respondents completed:

- Curriculum content

- Presentation of the contact sessions

- Ways in which students were assessed

- Lifelong learning that took place

- Aspects to be added to curriculum

- Aspects to be omitted from the curriculum

- Most enjoyable learning experiences

- Frustrating learning experiences

- Mentoring received during their studies.

4.4.2   Organising the data

The data that was collected was analysed through a coding process and was categorised in the following manner:

Theme 1: Curriculum content

      Code: Value – valuable to be included

              Omit – aspects that can be omitted from the curriculum

              Add – should be added to the curriculum

Theme 2: Assessment

      Code: Curriculum – included in the curriculum of the qualification

              Value – valuable to be included

              Omit – it can be omitted from the curriculum

              Add – should be added to the curriculum

Theme 3: Presentation

      Code: Style

              Learning activities

              Facilitators of learning

When analysing the data related to the curriculum content, assessment and presentation of the contact sessions of the PGCHE and DHETP a new theme emerged. All the respondents commented on the organisational aspects that created frustrations during their studies. For this reason organisation was added as an emerging theme. The organisation of the PGCHE and DHETP was then coded as follows:

Emerging theme: Organisation

      Code: Scheduling

              Communication

              Ergonomics

The analysis of the interviews regarding the use of mentorship while studying towards the PGCHE or the DHETP were coded as follows:

Theme 1: Expectations at the start of the relationship

Theme 2: Experiences during the relationship

Theme 3: Areas of success in the relationship

Theme 4: Areas for improvement by the mentor

Theme 5: Lifelong learning that took place

Theme 6: The need for a mentor during the learning process

4.4.3   Discussion of the findings relating to the PGCHE and DHETP qualifications

The discussions that follow present a combination of the information that was obtained through analysing all the interviews. Many correlations exist between the responses of the different respondents. No significant differences that would necessitate separate discussions of the different interviews were found.

In some instances the feedback given by the respondents is presented verbatim. This was done as it provides rich substantiation for the original statement that is made at the beginning of the specific section or paragraph.

My own reflective notes were included when my personal experience or view differed substantially from what was said by the interview respondents (IRs) and where my own experiences could be used to support the view of the respondents. Reflective notes were included where responses from only one respondent did not provide enough information to allow consideration of a wider point of view.

Interview respondent 3 (IR3) provided written consent that allowed me to use her real name while reporting on the study under discussion. The absolute passion with which Estelle took part in her own professional development process and the impact that my involvement with her had on my professional development process as mentor, urged me to request her permission to use her real name.

By using Estelle's real name she is acknowledged for the absolute dedication and passion with which she facilitates learning that aims to change the lives of the students that cross her road positively. Her quest for continuous lifelong personal development becomes evident every time that we have a conversation.

4.4.3.1   Curriculum content

An interesting finding during the interviews was that only two of the respondents mentioned the curriculum content of the different modules included in the curricula of the benchmarked qualifications without being prompted. The only time that reference was made to the curriculum content without being prompted was when the respondents identified good experiences and/or frustrations experienced during their studies. Respondents had to be prompted by either naming the different modules when posing the interview questions or by continuously asking which other modules were included in the curriculum.

The only two components that were mentioned by all respondents without being prompted were the Herrmann Brain Dominance Instrument® (HBDI®) assessment and the action research project. Both were mentioned as value-adding aspects. For this reason it can be concluded that both these components should always be part of the curriculum of the PGCHE and a PDP for academic staff, whether they have never received any formal educator education or whether they are aiming at improving their practice through a PDP.

Components included in the curricula of the DHETP and the PGCHE that were experienced as being value adding and those which were experienced as non-value adding are discussed in the paragraphs that follow.

a)   Herrmann Brain Dominance Instrument® (HBDI®) assessment

All the interview respondents experienced the inclusion of the HBDI® assessment and the introduction to the Herrmann Whole Brain® theory as being the most valuable component of the qualifications.

The comments displayed in Table 15 provide evidence that the HBDI® information was positively experienced by participants with preferred thinking styles that are based in all four quadrants of the brain.

Table 15: Feedback on the value of the HBDI® assessment

Quadrant	Comment
A	The fact that the validity of the HBDI® is continuously tested through research and that it is globally accepted as a valid tool was experienced as an aspect that adds huge value to the outcomes of the assessment.
B	Respondents experienced that it was easy to use the information and apply it in their practices. "The practical orientation used in the feedback session in which the meaning of the different quadrants of the Herrmann model (sic) and the value of using its principles are clearly explained in detail, makes it an easy to use tool."
C	"I felt appreciated in the sense that the facilitators were spending time in supporting me in my preferred way of doing things by taking effort to understand my way of thinking through the Herrmann assessment. It assisted in improving my motivation levels and dedication and the development of the sense of being responsible for my own learning and to excel."
D	"Knowing about the Whole Brain® theory of Herrmann forces one to move around between the quadrants and therefore one is constantly challenged and stimulated […] to find new ways of doing things. This prevents boredom."

b) Action research

None of the respondents had prior experience of conducting action research. The studies that they had completed prior to becoming involved in the educational environment did not include an action research component. The research experience that the majority of respondents had prior to studying towards the DHETP or PGCHE is grounded mainly in logical empiricism or positivist paradigms. Some of the respondents had no previous experience of conducting qualitative

research. The introduction to action research allowed them to experience the value and the challenges of conducting hermeneutic qualitative research.

Action research forced the respondents to do regular reflections on their practices to identify areas for improvement. Two respondents mentioned that their knowledge base widened when searching for ways to improve their practices. They experienced that the search for new information that can be used to improve their practices and the practical implementation of the newly discovered information, contributed to their professional growth.

An aspect of action research that was experienced as adding particular value was that by researching one's own practice the individual is allowed to develop in the specific areas where he or she needs development. A fixed curriculum with a prescribed research focus will teach (traditional term used on purpose) the researcher about the correct rules of research, but "in the end you have not gained anything useful from knowing the rules. Action research allows you to experience the rules in your own way. That is value adding."

One of the main focus areas of the qualification is to create an awareness of the learning style differences of the students. An action research report allows the participants to present the knowledge that they have obtained in a manner that suits their own thinking style preferences. This in itself is value-adding as it is an excellent living example of the positive effect that allowance for learning style flexibility has on a student's level of motivation to take responsibility for his or her own learning and to excel.

One respondent mentioned that many educators conduct action research on their practices without knowing it and they do not formally document the results. Afterwards they find it hard to convince others about their findings. Experiencing action research as part of their studies towards the PGCHE informed the experienced educators who are not experienced researchers of a way to document their findings formally. This will in turn contribute to the validity of their actions if they change something in their practices based on their own experiences.

c)   Specific modules and module outcomes

In most instances the responses relating to the curriculum content of the DHETP and PGCHE correspond, although the emphasis that is placed on the importance of the aspect that was mentioned differs.

- **Learning theories**

The different learning theories were experienced as being interesting to know but nobody found it to be one of the important aspects to be included in the curriculum. When asked which theories were included in the curriculum, only two of the respondents who had recently completed the qualification could remember some of the theories. The only theories that were remembered are the Herrmann Whole Brain® theory, Bloom's taxonomy, behaviourism, constructivism and experiential learning.

The only two theories that were specifically mentioned as being value-adding were Bloom's taxonomy and Hermann's Whole Brain® theory. When asked why these two theories were regarded as the most important ones, all the respondents indicated that Bloom's taxonomy needs to be understood by all educators in South Africa as the SAQA level descriptors (SAQA 2010) are based on Bloom's taxonomy.

Two respondents indicated that the Herrmann theory encompasses all the theories and if one can apply the Herrmann principles one does not need to know about the other learning theories. The remaining respondents indicated that the Herrmann principles are easy to use as they are introduced in a practical, easily understood manner.

One respondent stated that the knowledge of the different learning or thinking styles as described by Herrmann was the most important aspect of the complete qualification that could be implemented in his practice. He explained that the managers in his organisation are all aware of their colleagues' preferred thinking styles and they accommodate one another's differences in their daily interactions.

I found it strange that although the PGCHE focuses on HE and therefore adult education, none of the respondents referred to adult learning principles being included in the curriculum. When prompted the general reaction was a casual "Yes, that too". No specific mention was made that it was important to know the principles of adult learning if one is a facilitator of learning in the HE environment. When asked why knowing about adult learning styles is not important, one respondent repeated the response that if one understands the Herrmann theory and applies its principles correctly, one does not need to focus on different theories as the Herrmann theory comprises principles of all the theories.

- **Facilitating learning and curriculum development**

The development of innovative learning activities that cater for learning style flexibility that would stimulate all four quadrants of the brain, as described by Herrmann, was identified as being the biggest challenge included in the curriculum of the PGCHE. This was the only topic in the interviews that resulted in a wide range of responses. The responses of the different interview respondents (IRs) are summarised in the paragraphs that follow.

IR 1 described the client base that the specific institution caters for as "highly qualified, left-brained professionals" who still hold the perception that "didactic teaching" methods should be used. The challenge that IR 1 experienced was to develop learning activities that would stimulate all four quadrants of the brain while they are still experienced by the students as being highly structured and following a specific agenda.

IR 2: "This was fun and I loved it. I could apply what I have learned while crossing the traditionally set boundaries. However, the preparation of the media to be used in these sessions was extremely time-consuming and created a huge amount of stress when working against deadlines for submission."

IR 2 stated that she believes that the module relating to facilitation of learning can be regarded as the most important aspect to be included in the PDP. Assessment specialists can design and compile the assessment tools. "The facilitator is the

person that spends the most time with the students and who is the subject expert. This is where the construction of the understanding of the learning content takes place."

IR 2 argued that someone who can be regarded as an assessment specialist can compile the assessment tools and it can be shared with many others, despite the number of students and geographical distance.

She indicated that she enjoyed the development of innovative learning activities so much that after completing her studies, she assisted her colleagues in preparing innovative learning activities to be used in their practices.

IR 3 (Estelle): "When developing the first innovative learning activity I was very uncertain of what to do, what would be regarded as being acceptable and where to start. But once I got it right, it became easy and I actually felt guilty if I could not regularly have something exciting for my students to experience. It is worth every minute spent on it although it takes a lot of time to prepare."

Estelle works in a very artistic and creative environment as she facilitates the hair care course offered at a public college for FET. The students who attend her contact sessions are thriving on out of the box, "fun and free-spirited" activities, as described by one of the students attending the course that she facilitates.

IR 4: The response received from IR 4 fits in perfectly with her thinking style preference as identified through the HBDI[®] assessment. Her dominance was identified as being very strong left-brain-orientated with hardly any preference for the D-quadrant which is on the right side of the brain. The D-quadrant is used during creative thinking processes. Her reaction was that she did not enjoy the development of innovative learning activities at all. She stated that it forced her to move too far outside her comfort zone.

When considering the responses received throughout the interview it becomes clear that her opening statement, in which she stated that there was nothing that she enjoyed, was not an exaggeration. She stated that she found the learning activities

to be interesting as she could relate them to what she was doing in her daily practice but she did not find any joy in them.

IR 5: The curriculum development part of the qualification that includes the development of learning activities was identified as one of the activities that IR 5 enjoyed most. The other activity that she found enjoyable and valuable was conducting action research. She stated that these activities were enjoyable as she could implement them immediately in her workplace. The learning activities were developed to be used in the courses/modules that she facilitated during her studies. The action research project provided the opportunity to substantiate the changes that she implemented in her practice.

- **Education Technology (OWT 410) and Electronic Learning (CEL 420)**

During the interviews the impression was created that none of the respondents who studied in 2006 and 2008 can draw a clear distinction between the curricula of the modules Education Technology and Electronic Learning.

When reflecting on the my own experiences in 2000 and considering the responses of the respondents who studied towards the DHETP in 1999 and 2000, it seems that at that time the two modules were offered as one.

In 2000 the curriculum content of the module Education Technology (OWT 410) comprised information regarding the use of posters, photographic slides, overhead projectors, videos, computers and multimedia (Boshoff 2000c). The emphasis of the module was on how the students can use technology during their learning process as technology was not really the tool that should be used only by the facilitator of learning.

In the portfolio that had to be compiled as summative assessment task for the module Education Technology in 2000, we had to develop learning tasks in which the students had to create slideshows, videos and posters to display what they had learned. Overhead projectors were not used for showing only flat, hand-written transparencies. The students could be challenged to, for example, do experiments

using liquids in flat glass bowls that could be magnified by the overhead projector to be seen by all their peers while doing the experiment (Boshoff 2000c:8-10).

Some learning activities that were experienced in 2000 seem to correlate with some of the topics in the current curriculum of the module Electronic Learning (CEL 420) which is summarised as media as sources of learning, developing and utilising media by students, media and Whole Brain® learning, maximising multiple-intelligences, maximising potential, lower and higher level technology, integrating media and multimedia learning packages (UP 2012:130).

In 2000 we had to present our action research proposal during an interactive television broadcast that was broadcast live on the education channel of DSTV. In 1999 students experienced the development of a webpage and in 2000 the development of a web-based portfolio of evidence was facilitated in a once-off session.

In the context of not being sure in which of the current modules the activities that were referred to in the interviews were experienced, the different activities are discussed in random order.

- **Creating a MS PowerPoint educational game**

Three interview respondents experienced this learning activity.

The general feeling was that the curriculum content that entailed the development of a MS PowerPoint educational game can be omitted from the curriculum of the PGCHE.

- All respondents indicated that it was an interesting activity and it was fun to create the MS PowerPoint educational game. However, all the respondents mentioned that they will never create a computer-based game again.
- The design and development of a MS PowerPoint educational game is too time-consuming in relation to the value that it can add to the learning process.
- Estelle still uses the game that she created during her studies. However, she never had the time to create another game. Another respondent mentioned that

one of his staff members occasionally uses an edited version of the game that he created during his studies but that they have no intention of creating another game.

- One respondent indicated that when using a MS PowerPoint educational game, the level of learning that takes place is too low in relation to the cognitive abilities of his target market.

- One respondent mentioned that she improved her general skills in using MS PowerPoint but she will never compile a game again as it is too time consuming in relation to the value added to the learning process.

- One respondent suggested that the development of the MS PowerPoint educational game should not be included in the curriculum of a qualification focusing on higher education. It could, however, be successful in curricula of qualifications focusing on basic and further education level.

- **Web-based learning**

Two interview respondents experienced this learning activity.

The computer-based learning that was mentioned by the respondent who completed the DHETP in 1999 entailed the development of a webpage. In 2000 it entailed creating a web-based portfolio of evidence for the module Professional Development. It could not be established whether the reference to creating a webpage was the same as creating a web-based portfolio. The respondent who attended in 1999 could not recall what the purpose of the development of the webpage was.

- The experience of the respondent who attended in 1999 was that it was an enjoyable experience to develop a webpage. She said that she has never used the knowledge again. She also explained that most of her peers were very frustrated as the session in the computer laboratory was very short.

- In 2000 the development of a web-based portfolio was introduced during a once-off experience in the computer lab and "all the students experienced it as being equal to rocket science and the only things that we gained on that day were confusion and frustration". It was suggested that if webpage design is included in

A E M J Boshoff (04231783)

the curriculum of the PGCHE more time in the computer lab should be allocated to the module.

- In 1999 and 2000 the Internet was not an everyday tool used by all as it is today and therefore none of the students used this option to submit their portfolios.

- Many professional website designers are available at affordable cost as website design is not regarded as a scarce skill anymore. For this reason webpage design can be omitted from the curriculum of the PGCHE.

It can be argued that the huge emphasis that is currently placed on e-learning would necessitate the inclusion of the development of computer-based educational games in the curriculum of the PGCHE. It should, however, be remembered that the curriculum of the PGCHE aims at providing a wide perspective of best practices that can be used in the day to day learning environment. More emphasis can rather be placed on ways in which the students can use computers when compiling assignments as part of their learning experiences.

- **Interactive television broadcasting**

As mentioned before, students who studied towards the DHETP in 2000 had to present their action research proposals during an interactive television broadcast that was broadcast live on the education channel of DSTV. Only one of the interview respondents (IR4) experienced this session. I was also one of the students in that group and reflective notes of my experience of this activity are included in the discussion.

IR 4 experienced the learning event as follows:
- The first comment was that it was not an enjoyable experience at all. She would even label it as the worst experience of the entire year of studies.
- This is the one event that she will always remember, not because it was good but because of the level that she was uncomfortable with it.
- She mentioned that the students were never prepared for this event.
- We were introduced to a medium that was completely unknown to most of the students in the group.
- She had to display confidence in that what she presented although she was not

Professional Development of Academic Staff in Private Higher Education   170

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even completely sure that she was on the right track.

- She did not know whether what she had included in her research proposal was correct and she had to present it on a public channel.

- She did not know whether the distant participants in the interactive session knew and were aware of the fact that she was still busy planning to study the topic under discussion and that she was not a specialist yet.

- During the module that was offered just before the event she learned to have eye contact with the audience and during the interactive session she had eye contact with a camera lens. She found this to be extremely uncomfortable.

- She suggested that if the activity really had to be included in the curriculum, it should take place at a later stage in the research project for her as presenter to know the subject well.

- Lastly, her experience was so negative that she lodged a formal complaint with the facilitator of the action research module.

In order to create a context for the reader the information that follows needs to be mentioned before I share my experiences of the interactive session. This is needed as my prior knowledge and experience definitely had an influence on the way in which I experienced the session.

I was an amateur actress acting in six stage productions between 1989 and 1996 and was therefore used to being in front of live audiences. I also had television experience prior to the interactive session referred to in the foregoing paragraphs. Between 1995 and 1998 I acted as an extra in various episodes of sitcoms that were broadcast on various television channels of the South African Broadcasting Corporation (SABC TV). In 1996 I attended a course on how to use an autocue teleprompter while presenting a television programme. As a result of my experiences I was used to "talking to a camera" and in front of live audiences.

During the contact session preceding the interactive broadcasting experience, we were instructed to compile a keyword-based presentation of our action research proposals on transparencies and on paper as we had to present them during the next contact session. The facilitator mentioned that it would be done by way of an interactive television broadcasting session while one of our peer students would join

us from another university's campus as she resided in another province.

While reflecting on the fears and discomforts that I had experienced when using the autocue teleprompter for the first time, I shared some tips that I had learned through experience with my peers. I also shared information about clothing of certain colours and fabric designs that must be avoided during the broadcast. I suggested that they rehearse their presentations in front of a mirror to identify, for example, possible mannerisms and stress-related hand or eye movements. They could make a video recording to review their presentations and their families could judge their presentation styles.

When viewing a recording of the broadcasting afterwards, we realised that it actually was a good first attempt. We could identify mistakes that we had made and we could concentrate on improving those as part of our development process in the module Education Communication.

While reporting on the interview with IR 4, I had a discussion with her as I was not sure exactly what she was referring to when stating that "we were not even prepared for it". At the time of the event some of our peers claimed that we had not been informed about the event prior to the session in which the broadcasting took place.

IR 4 said that the biggest insecurity was caused by the fact that we did not receive any feedback on the proposals beforehand. Secondly, clear guidelines were not provided on how to do television broadcasting and we could not prepare beforehand and get feedback on our performance. My reply to the last statement was that I had shared some rules to be followed during a broadcasting session and her immediate reaction was: "Now was that preparation?" I mentioned that the event allowed us to experience learning through peer coaching which is part of social constructivism, one of the different theories that were included in the curriculum of the module relating to learning theories. She insisted that the facilitators had to provide more information beforehand. I then suggested that presentation skills for television broadcasting can be included in the curriculum of the module relating to education communication and she agreed. The current trend to move towards e-classrooms can also benefit from the inclusion of presentation skills for television in the

education communication module.

As mentioned in a previous paragraph relating to the development of innovative learning activities, IR 4 is left-brain dominant. She experienced anything that was not strictly rule- and regulation-based as unpleasant and she always wanted to receive all the information from the facilitators of learning. Nothing should be left to own interpretation.

My own experience of the session was that it was fun although it was stressful at the time as we were not sure whether the content of our proposals was acceptable. The difference in our experiences can be related to the difference in our preferred thinking styles and previous experience. I have a strong preference for using the D-quadrant as described by Herrmann, which is situated on the right-hand side of the brain. A strong D-quadrant preference allows for enjoying exciting, out of the box, risky and "I do it my way" experiences. Humans with a strong D-quadrant preference tend to experience the feeling of "no rules are the best rules", as strict rules do not leave space for innovation.

Although I had previous experience of presenting to an unseen audience through a camera lens, being properly prepared by knowing my presentation by heart and rehearsing in front of a mirror several times, it was still a stressful experience. I would agree with IR 4's remarks that the main reason for stress was the fact that we were not sure whether our proposals were acceptable and whether we properly understood the way in which action research should be conducted and reported. We had never received feedback on our proposals prior to the session as the session was presented on the date for the first submission of our action research proposals.

- **Leadership and Management**

The overall feeling of the respondents was that the Education Management module can be omitted from the curriculum.

When the module Education Management was mentioned, the first reaction from all the respondents was that it was highly theoretical, that it was offered through the

traditional lecturing style and that it created boredom. The same reaction was received from all the respondents. The traditional lecturing style that was used in the Education Management module was experienced as being a contradiction to that which is propagated in the rest of the qualification.

The respondents who studied in 1999 and 2000 could not remember what was included in the curriculum of the Education Management module. The focus of the curriculum content that was offered in 2006 and 2008 was managing an institution. It was suggested that it might have been better if the focus was on managing one's own practice as a facilitator of learning. The activities in the other modules of the qualification all focus on classroom practice. If the focus of the Education Management module is shifted to suit the classroom environment, the inclusion of the module in the PGCHE curriculum can "perhaps" have value. The use of the word *perhaps* confirmed the idea that Education Management is studied in the PGCHE just because it is a compulsory module and that it would not be a popular elective should it be changed to be an elective module.

- **Assessment practice**

There was a clear difference between the responses received from the respondents who had studied in 1999 and 2000 and those who studied at a later stage.

Both the respondents who studied in 1999 and 2000 could not remember what was included in the curriculum of the assessment part of the DHETP curriculum. They could refer only to the ways in which the assessment was conducted during their studies towards the qualification.

The single most valuable learning experience relating to assessment practices that I can remember from my studies towards the DHETP in 2000 was the development of case studies. If I were to be asked to create a priority list of the most valuable experiences while studying towards the DHETP, this experience would be listed third. The order of the list would be The HBDI® experience, action research and thirdly the development of case studies.

The main reason for rating the case study experience so highly is that it allowed me to identify a tool that can be used to prevent the biggest frustration in my life as facilitator of learning. Being a pragmatist with a strong preference for using the D-quadrant of the brain, with my most descriptive indicator being holistic, I am always looking for time-saving ways in which multiple outcomes can be reached at the same time without compromising the quality of the learning that takes place.

By nature I facilitate learning in an interactive manner that keeps the students actively involved during the learning sessions but activity-based facilitating of learning is sometimes time-consuming. Generally, assessment is seen as a separate activity after learning has taken place. With the use of case studies learning and assessment can take place at the same time. If the case study is planned and developed with care, a wide range of the curriculum content can be covered by using one case study.

I had to find an effective way to save time without compromising the quality of the learning experiences or the assessment that takes place. The learning activity that was included in the curriculum of the DHETP allowed me to discover a tool that could meet my specific need at the time and I am still, 12 years later, using the knowledge that I have gained through the learning activity that I had to complete in 2000. The success of the use of case studies in my practice as facilitator of learning was empirically tested in various formal and informal action research projects that I have conducted through the years. Unfortunately only the two formal projects were documented in report format (Boshoff 2000d; Boshoff 2007:86-92; 125-128).

The fact that the development of case studies was not part of the curriculum content of the assessment related module but that it was part of the development of a problem-based learning activity, allowed me to receive real-life experience of the true value of inter-curricular learning and assessment. I could immediately use the case study that was developed as part of my assignment as a formative assessment tool during the learning sessions that I facilitated at the time.

Case studies development should always be included in the curriculum of the PGCHE and a PDP for academic staff members who have never studied towards an

education qualification. It can be included in the curricula of both the modules relating to facilitating learning and assessment practices in order to ensure that the students realise that it can be used as a dual purpose tool.

I cannot remember what was included in the assessment-related learning activities and had to revisit the assignments that were completed at that time to be reminded of the content. Ironically, I found that the development of a written examination paper was the assignment for the assessment-related module of the curriculum of the DHETP in 2000. It would be expected that the development of alternative assessment tools such as observation sheets, rubrics and checklists would have been included in the curriculum of a qualification that aims to create a move towards learning-centredness and moving away from traditional written examinations.

During the interviews with the respondents who studied after 2000 it was interesting to find that only one aspect of assessment was immediately mentioned when asking them about the curriculum content of the module Assessment Practice. All the respondents immediately referred to rubrics. It was also mentioned that the development of other assessment tools was hardly discussed. The main focus was rubrics.

One of the interview respondents attended the course at an off-site venue and the module was not facilitated by the same facilitator of learning who facilitated the module on campus. The development of multiple choice questions was included in the curriculum of the module Assessment Practice that was offered at the off-site venue. I was fortunate enough to be able to attend this session as hostess for the day. Through the experiences on that day I realised that the development of multiple choice test items that can provide credible and valid assessment results, is a science and an art on its own.

I also attended an additional session facilitated by the same facilitator of learning and again experienced the session as valuable as I learned about aspects of multiple choice test items that I did not know before. PMI offered a professional development programme at the Agriculture and Science faculty of a public HE institution. The facilitator of learning that facilitated the off-site sessions mentioned

above, was contracted to facilitate an assessment practice learning session and he focused on the development of multiple choice test items. Academia of the public institution who attended the session had all been in practice for many years already and all commented that they realised that multiple choice questions are used as a "filler when examiners need a few marks to reach the required number of marks". They continued by saying that they had never known how complicated it is to develop valid multiple choice test items.

- **Education communication**

Only one respondent who studied in 2000 commented on this module. My personal experiences in this module correlate in all aspects with responses received during the interview.

The assignments that had to be completed in the communication-related module were enjoyable and interesting. They entailed the following:

- We had to read a story while using our voices to create nuances that would contribute to setting the mood in the story. This can be explained with the example of imitating the sound of the wind while reading a part that refers to the wind or reading in a soft, slow and calm voice when a tranquil atmosphere had to be created. These readings had to be captured on an audio tape.
- Prior to the readings, we had to develop a list of criteria that would be used during the self- and peer assessment of our reading. These criteria had to include as many as possible nuances relating to verbal communication. Examples of possible criteria are clear pronunciation, pitch, tone and tempo, to name only a few.
- After the reading we had to do a self-evaluation and peer evaluation.
- We then had to improve on the first three minutes of the reading based on the feedback received from the self- and peer assessment.
- The second task entailed the delivery of a five minute speech on any topic of our choice. These had to be videotaped.
- We had to view the recordings and we had to write reflection reports on our performances.

It was interesting that the respondent who previously indicated that she did not enjoy any tasks that needed creative abilities mentioned the communication tasks as the only tasks that she enjoyed.

- **Research supervision**

Only one respondent referred to the research supervision module. She indicated that it had been a waste of time for her as it focused on research supervision on university level of studies and she was working on FET level. She had to choose the module as there were not enough electives to choose from and she had to choose what sounded most interesting from the modules that were available.

4.4.3.2   Facilitation of the modules

The following comments were made regarding the manner in which the different modules were facilitated:

- The introduction of fun exercises in the learning activities as a way of presenting the curriculum content created an awareness of the value of enjoyment in the learning process.
- The practical illustrations and activities that the HBDI® practitioner used to introduce the Herrmann theory to the students created a good introduction of what was to be expected and can be referred to as excellent practical examples of activities that can be used during learning sessions.
- The group activities allowed one to experience both the advantages and disadvantages of group activities. It also allowed the students to experience the influence of different thinking style preferences on human behaviour during the learning process.
- The order in which the groups were formed during the HBDI® introduction sessions created an opportunity to experience how the different thinking style preferences of the group members can influence the dynamics in the group. The first grouping was done by grouping participants with similar brain preferences and the re-grouping was done by considering different preferred thinking styles.
- The practical applications that were experienced such as the work done in the computer laboratory allowed the students to experience the learning content with

the support of the facilitator of learning. This created a sense of security as at that stage (1999 and 2000) not all students had the knowledge of using computers or had access to computers in their workplace.

- The activity-based way of learning is more time consuming than the traditional "spoon-feeding" style. Three respondents identified the time aspect as one of the disadvantages of the activity-based approach to facilitating learning.

- Some facilitators still offered the content in the traditional manner. Relief was experienced when the way to facilitate learning that is advocated in the qualification was used in one of the modules (1999).

- The reading from books and/or the use of the traditional lecturing style that was experienced in some of the modules contradicted what is propagated in the curriculum of the qualification. This practice of not practising what you preach created the idea that the methodologies and styles that are suggested cannot be used in all subject areas (2006 and 2008).

- The MS PowerPoint slides that were used by the facilitators did not always adhere to the criteria that were set in the module relating to learning media. The slides were overloaded and the font sizes changed without reason.

Considering all the responses from the different years, it seemed that 2000 was a very successful year for the qualification. All the facilitators of learning were highly qualified and all the modules, except the leadership and management module, were facilitated in the way that is propagated in the curriculum of the qualification. Therefore the notion of practise what you preach was met.

4.4.3.3   Assessment used in the qualification

A clear distinction was made between the content of the module Assessment Practice and the ways in which assessment was practised by the facilitators of learning who offered the different modules of the qualification between 1999 and 2008. This section comprises information obtained during the interviews relating to the latter.

- The completion of the HBDI[®] online acted as a good example of how electronic assessments can be utilised.

- Although the thinking style preferences of some of the interview respondents are not to follow strict rules and regulations it was a general feeling that the assessment criteria for most of the modules were not clearly stipulated and one never knew what was expected in a task or in an assignment.

- The absence of clear assessment criteria created uncertainty that did not always contribute to the learning process. Sometimes the uncertainty created stress that hindered the learning process as it created a feeling of being in a very small boat drifting around on a very wide ocean left to the mercy of the elements (freely translated from Afrikaans). More structure that can create clarity on what is expected is needed.

- The facilitator of learning who offered the module on assessment is highly qualified in her field and passionately propagated the use of rubrics during the assessment process but she used a rubric for assessing the first assignment only. The other assignments of the module on assessment were assessed in the traditional way of assessing essays.

- Some of the topics that were repeated in the different modules should have been assessed in a cross-curricular fashion. Cross-curricular assessment is another aspect that was included in the curriculum of the module on assessment which was not practised.

- The way in which groups were formed to complete group assignments for assessment caused frustration. As the students were geographically very widely spread, the groups were formed based on the closest geographical distance among the students. In some instances it resulted in groups of which all the members had the same thinking style preferences. In other instances colleagues from the same workplace were grouped. This resulted in having a closed perspective as one could not draw knowledge from the experiences in other workplaces. In one instance it resulted in piggybacking when assessment tasks had to be completed.

- When group assignments had to be done all the group members were awarded the same mark. There was no system in place to differentiate the mark obtained by the group members according to the contribution that they made to the final assignment that was submitted. This had a negative impact on the principle of group work that was propagated in the curriculum of the qualification.

4.4.3.4   Ergonomics and logistics

I found it interesting that two of the IRs mentioned the ergonomic and administrative frustrations experienced during their studies right at the beginning of the interview. In one instance it was mentioned before the interview started. The responses became more significant once I realised that respondents with dominant thinking style preferences from all four quadrants of the brain mentioned the same frustrations. The responses are summarised below.

- The classes were offered in different venues and no notice was sent out beforehand. This meant that someone always entered the class late as the latecomer had to search through the whole building to find where the session was taking place.

- Evening classes are offered during the winter but the heating system works during office hours only. This resulted in the students having to bring blankets to keep them warm which is not conducive to the learning process. The students did not want to get out from under the blankets to take part in activities. It made them "to sit and pray" for the end of the session to arrive and they did not concentrate on what was said.

- Scheduling information regarding the modules that were offered on a specific day was not communicated beforehand. This caused one to have to carry all the books and files containing the hand-outs to class as one did not know what would be used and what not during a specific session.

- The 2000 group attended full-day classes once a fortnight and sometimes once a month. Only when the day started were they informed that the classes would run

from 08:00 till 20:00 on that day, which usually was a Friday. The late Friday arrangement created family problems as it was hard to believe that the university would offer classes for the same group of students for 12 hours on one day and family arrangements had to be cancelled.

- In 2000 it happened that the students arrived at 08:00 based on the starting time of the previous classes just to hear, when enquiring why nothing was happening, that the class for that day would start at 11:00.

- In 2000 some of the classes were offered on a Saturday which was experienced to be the most convenient.

- Working for a full-time employer made it hard to attend during the day. This was especially true if one was a facilitator of learning; one's students were then without a facilitator for the day and the classes that one was supposed to offer had to be cancelled.

4.4.3.5   Lifelong learning

The number and depth of life changing experiences that will result in behaviour that will last forever is one of the most valuable criteria used to evaluate the success of a learning intervention. Another sign of a successful intervention is when the students use the knowledge that was obtained during the intervention as a framework around which further development can be structured.

Some responses that can be regarded as evidence that lifelong learning took place while studying towards the DHETP and the PGCHE are provided below:

- "After every class I was so enthusiastic about what I had learned that I immediately shared the knowledge with colleagues who were not studying towards the qualification." She further explained that after 13 years since completing her DHETP studies she still helps her peers to develop innovative learning activities.

- "During my studies I have experienced the feeling that is created when having aha-moments and I value these so much that I try and include aha-moments in all the learning sessions that I facilitate."

- One of the respondents mentioned that understanding the Herrmann Whole Brain® theory was a life changing experience. She always felt inferior to colleagues or family members who were excellent academic achievers and she could never go to university as her marks were too low to obtain university entrance.

  When realising that her strength lies in non-factual data and beyond, and that she definitely contributes towards the personal development of others, the way in which she views herself has improved tremendously. Whereas she previously did not want to take part in family discussions as she felt that her views had no value, she can now speak of topics that her "clever" family and colleagues know nothing about.

  The knowledge of thinking style preferences also assisted her to better understand the behaviour of others and she is not upset as easily as before because of something said.

- "If you are going to teach a course on educational best practices, then you better practise what you preach …" He continued by saying that he reflects on the aspects that really frustrated him during his studies and he then does absolutely everything possible … "plus and beyond" … to prevent the same negative situations from happening in the organisation which he is in control of.

- Even the respondent who did not enjoy her studies said that although she will never be comfortable with the use of, for example, games in her classes, she is now always aware of the fact that there can be students in her classes with thinking style preferences that are not the same as hers. When she sees that a student does not understand something she tries to explain it from a right brain perspective although she really has to think hard to find a way to accommodate that student.

- Theoretical assessment frustrate and disadvantage the right-brain orientated student and create an unfair advantage for the left-brain orientated student. The value of the practical and theoretical assessments should be weighted equally in relation to the final mark that is awarded. In order to ensure that she allows each student to develop to his or her full potential the respondent tries to balance all her formative assessment tasks to be Whole Brain®-based although she does not have the power to change the structures followed in national examinations that are written in public institutions.

- The studies were very interesting and valuable and therefore he considers to, on an annual basis, send another one of his staff members to study towards the PGCHE offered at UP.

- One of the experiences that were labelled as being life changing was self-discovery through the development of a poster in which each person had to display his or her self-perception and purpose in life. She described the experience of sharing the poster with others as a sacred moment. This experience allowed her to realise that unpleasant personal situations can be changed into stimulating ones and need not always be a stumbling block to learning.

- A very similar experience was explained when a respondent referred to the task of developing a metaphor that shows the relationship between one's personality and the subject that one facilitates.

4.4.3.6   General comments

At the end of the interviews the respondents were asked if they wanted to add any final comments. I believe these final comments might be worth more than the comments that were received during the interview. All the respondents received the list of questions a few days before the interview and could therefore decide on responses that they deemed important to be included in the report of the study under discussion.

- All respondents referred to the huge amount of work that had to be done to complete the research project and to compile a professional development portfolio as part of the research evidence. They were studying on a part-time basis while being employed full-time in highly stressful and fast paced environments.

- The amount of time that was needed to complete the learning tasks far exceeded the prescribed number of notional hours in relation to the credit value of the qualification.

- The impression was created that the facilitators of learning wanted to see how far the students could be pushed through an overload of work. This impression reminded of the attitude of facilitators of learning working with students in first year pre-graduate studies. Most of the students studying towards the PGCHE are all highly qualified professionals and some are employed in executive positions in their place of employment. They "studied towards the qualification by [their] own choice and were not forced by a parent to enrol and now had to undergo an attitude breaking experience".

- Some of the topics were included in the curriculum of more than one module. This created the impression that the curriculum had not been planned properly and that the facilitators of learning simply included what they liked to facilitate. If the repeats appeared in elective modules it would have been understood but the repetition of topics appeared in core modules.

- The fact that the qualification carries transferable credits adds value and that can be seen as a motivator to spend the huge amount of time involved in the different modules.

- One respondent suggested that the PGCHE should be made compulsory for all facilitators of learning, working in both private and public HEIs, who have not completed any formal education related studies. However, the majority of respondents indicated that the lack of time was identified as the most prominent reason why it cannot be expected from part-time facilitators of learning to attend a

PDP which is research-based as a compulsory requirement to be contracted to facilitate learning.

- The qualification should be offered over a minimum period of two years in order to provide a wider spread of time between the sessions. It seemed that the developers of the qualification had full-time students in mind although the main target market is part-time students.

- Another view was that it might be a less daunting experience if a PHE institution where mainly part-time facilitators of learning are employed can offer the same curriculum content as that of the PGCHE as a professional development programme. The pressure to perform is then absent and facilitators of learning may be more willing to participate as they do not have to fear possible failure due to workload in their full-time place of employment.

- A development programme can be used to create an interest in studying towards the formal qualification. The facilitators of learning can then continue at their own pace choosing the modules that they are interested in. The experience in the development programme will assist them to make better choices regarding the modules that they want to study towards.

- It was suggested that practical experience in an educational institution or in a corporate training environment for a minimum of one year should be set as one of the minimum admission criteria for studying towards the PGCHE. This view is based on the situation that was experienced when students who do not have practical experience in the training and development or education environments sometimes feel completely lost as they do not have the baseline knowledge needed to "survive" the PGCHE learning tasks.

4.4.4 Discussion of the findings relating to my mentorship practices

The discussions of my mentorship practice do not include only information that was obtained during the interviews that were conducted as part of the study under discussion. The readers were informed about:

- my own experiences while being a mentor for my peer colleagues who were studying towards the PGCHE during and after 2006;

- feedback that I received after completing the induction process of a part-time facilitator of learning at PMI, for whom I was the research supervisor during her Honours level studies at PMI;

- reflective notes of my experiences of being a supporting peer for my colleagues who had been studying with me towards the DHETP in 2000.

4.4.4.1 Discussion of the mentorship-related responses received during the interviews

Two respondents who have completed the PGCHE since 2006 indicated that they had not even thought of having a mentor during their studies. During the interviews it became clear that both respondents are highly self-motivated, success-driven and they are satisfied only if they can excel in what they are doing. Both indicated that they prefer working on their own in whatever they do.

Although one of the two respondents indicated that she did not need a mentor she said that some of the students studying towards the PGCHE need to have mentors during their studies. Some students are not always sure of what is expected from then and they then start to panic and need some kind of support. She referred to one of her colleagues who wanted to deregister from the qualification as she experienced the confusion as too much to handle. She was not really a mentor for her colleague. She just helped her to understand what was needed in the different assignments. She had not even seen any of the completed assignments done by her colleague but her support by providing clarity was enough to motivate her colleague and the said colleague completed her studies.

A) Discussion of the interview with Estelle

Estelle was a colleague of mine at my previous workplace during the time of her studies. She had a discussion with me on the day that followed the first contact session that she attended as part of her studies towards the PGCHE. She had mixed feelings about the experience. On the one hand she was excited about the "new

things" that she was introduced to and on the other hand she experienced a feeling of insecurity as she did not know where to start. She then requested to have a session with me so that I could see what she needed to do and then help her to create structure to see where everything fitted. I could relate to her feeling of being insecure and not knowing where to start as I had experienced the same feeling on the first day of my studies in 2000. My experience of the first day was that we had received an overload of information in a period of eight hours with hardly any breaks.

During our first discussion session I could identify that Estelle and I had the same thinking style preferences as she narrated the experiences of the day in the same way that I would have done. My natural behaviour when experiencing something is to concentrate intensely and I try to capture every moment in my mind through memorising what is said, what I see, what I experience by being actively involved and remembering the feelings that I am experiencing. After an experience I relive the experience in my mind. I do not concentrate only on certain parts of the experience, I relive the complete experience in the sequence that it had happened and I try and recall even the finest detail of the experience. I usually withdraw myself from others in order to, at my own pace without any external distortion, revisit the information and organise it in a manner that makes sense to me. When I then later have to recall something from the experience I can, in detail, recall the experience as a whole and in my mind I can see, hear and feel everything that I had experienced. Estelle included all of the mentioned aspects in her narration of her first day's experiences. We even shared the same excitement and passion for what had to be done in her studies.

This behaviour of trying to remember the experience as a whole can be linked to my strong preference for the use of the right-hand side of the brain and more specifically the D-quadrant of the brain in which my most descriptive indicator of *holistic* lies. My dominant emotional preference (C-quadrant) with huge emphasis on people awareness allows me to remember even the emotions expressed by the other participants in an experience.

At the end of the session Estelle said that she could see that I understood her way of thinking and she asked me to be her mentor during her studies. I saw my role as

mentor in her studies as an opportunity to relive the excitement and passion that I had experienced in my own year of studies towards the DHETP in 2000.

During the interview with Estelle the introductory question to the part relating to our mentor-mentee relationship was about what she expected from the person who would act as her mentor during her studies. She responded that she expected that her mentor would guide her in her studies by:

- telling her where to start;
- correcting her where she went wrong;
- teaching (sic) her the way that she was taught (sic);
- providing examples of how everything should be done;
- telling her exactly what her portfolio of evidence to be submitted for summative assessment should look like.

Considering the tone of voice, facial expressions and body language that were displayed while she responded led me to comment that it seemed that not all of these expectations had been realised. She replied that the expectations had "most definitely not" been realised. She then immediately continued by explaining the way in which I guided her through her year of studies. She stated that I:

- never spoon-fed her;
- never provided examples;
- allowed her to think for herself and to take full responsibility for her own learning;
- peer-assessed her work in a realistic manner based on the expected standards to be reached and I provided constructive and positive feedback. Estelle narrated that she was ashamed when she received the first feedback on her work as many mistakes had been identified. I then assured and motivated her by saying that she should experience the feedback as part of her learning curve and not as a failure. After this assurance she could not wait to receive my feedback when she had submitted a part of her work to be peer-assessed.

Estelle started using the same approach when providing feedback to her students. They reacted in the same manner as she did when she received her first feedback

and she then assured and motivated them in the same way that worked for her as explained above. Her students became more motivated to accept responsibility for their own learning. She experienced a definite increase in her students' level of enthusiasm.

Estelle had learned some practices that extend beyond the classroom. She specifically mentioned that she had learned to read everything critically. In addition to critical reading, she had improved her report writing abilities by continuously rereading her work and asking whether it said exactly what she wanted to say. She reread her work to ensure that there was no ambiguity in the way that she reported on the situation at hand.

Estelle described her way of living prior to her studies towards the PGCHE as being like a horse with blinkers as she lived by just following her tried and trusted ways of doing things and she never searched for anything new. Her studies made her aware of the fact that there can always be improvement in life. She now experiences learning and change as being a cure to ensure a healthy mind and a successful and fulfilled life.

Estelle referred to the value of creating a metaphor for one's life as it creates a benchmark for one's own actions. She loves bonsai plants and therefore she decided to relate her metaphor to a bonsai. She based her metaphor on the theoretical grounding of holistic growth and therefore her complete study was based on the idea of a bonsai versus a big tree. The question that she continuously needs to answer in her practice as facilitator of learning and being the person responsible for her own personal growth is: Am I a grower of bonsai trees or big trees?

Estelle explained that a bonsai is formed according to the needs of its grower. The bonsai is not allowed to grow to become the size that it is naturally intended to be. The grower shapes it by pruning it into the desired shape. The growth is controlled through the amount of water and food that it is given. The size of the pot in which it is planted restricts the development of the roots of the plant which also results in restricted growth.

Estelle continued by saying that if we want to grow big trees to become what they naturally were intended to be we should replant them in a space where the roots are not restricted and we should provide all the water and food that is needed. We should not prune the tree in order to allow it to grow into the shape that it was naturally intended to be.

When considering Estelle's comments on the level of feedback that I had given on her work where she felt "ashamed" of submitting her work to me, it can be argued that this comment created a contradiction with her comment that we should not prune the tree. The comment on the level of feedback referred to the instances when I was reviewing her assignments and the different parts of her action research report. I extensively corrected the reporting language that she used. If one relates the editing of Estelle's language to the pruning of a tree, the reason for pruning a fruit tree comes to mind. The grower of a fruit tree prunes away the access foliage on the tree in order to ensure the development of high quality fruit on the tree. The fruit, which is in the development stage, can use a larger amount of the water and nutrition that the tree takes from the soil and the fruit grows to be bigger and sweeter than it would have been if the foliage had not been pruned. Therefore the pruning of her language ensured an increase in the quality of her work.

At places where Estelle did not display any critical thinking about an idea or concept of which it is known that different viewpoints exist, I would add a comment that would make her think critically about the idea or to extend her reading on the topic. This action can be related to the idea of replanting the tree into a space where the roots are not restricted and the tree can grow to its naturally intended size.

When evaluating my practice as mentor against Estelle's criteria for being a grower of big trees I can understand why, at the end of the interview, she said that she experienced our mentor-mentee relationship as being successful. The following ideas come to mind:

- I never restricted her thoughts by spoon-feeding her with clear guidelines to be followed. The practice of not providing examples that she could use without critically evaluating them forced her to search for the answers herself and take responsibility for her own learning.

- I provided guidance only when I saw that Estelle needed guidance to support her growth and to prevent her motivation levels from dropping to a level where she would lose interest in the learning process.

- I never restricted Estelle's ideas as I accepted any idea that she brought to the table during our conversations. In instances where I could identify a possible reason for the idea to be unsuccessful or not as effective as Estelle had wanted it to be, I simply provided her with more aspects to consider during the development of, for example, a learning activity. In some instances I would for instance say to her: "It would be interesting to know how [this] would influence [that]". Although I knew the answer, I wanted her to find the answer on her own.

Towards the end of the interview I posed the question of what my most valuable contribution to her practice as facilitator of learning was. Estelle identified the introduction of edutainment into her practice as something that she had never thought of and that she never experienced before. I mentioned to her that the development of the computer game which was part of the curriculum of the PGCHE can be regarded as edutainment. She replied that she specifically referred to my help with introducing the use of music, song, dance and poems.

Estelle continued by saying that edutainment was so popular with her students and that the students had experienced "deep" learning through the edutainment activities; she suggested that edutainment be included in the curriculum of the PGCHE qualification. She mentioned that all educational institutions should introduce edutainment to all academic staff members, whether they have received formal educator education or not.

When asked what I should improve in my role as mentor Estelle mentioned that the only suggestion that she wanted to make was that I should spend more time with my mentees. She felt that she sometimes needed to discuss something with me but my work schedule was always so full that I hardly had time to spend with her.

B)   Discussion of the interview with respondent 6

The discussion in this section relating to the interview with respondent 6 (IR 6) includes rich background information to allow the reader to understand the context in which my relationship with IR 6 developed.

IR 6 completed all her studies up to BSc Honours level at PMI. I was her research supervisor while she was completing her BSc Honours dissertation of limited scope. Towards the end of the data collection period of the study under discussion she was appointed as a part-time facilitator of learning at PMI. Therefore the results of the mentoring relationship while being colleagues are not discussed in full. The information that is provided explains how our mentor-mentee relation was renewed once she was appointed as a part-time facilitator of learning.

I was newly appointed at PMI at the time when I became her research supervisor and therefore we did not have a longstanding relationship prior to my involvement in her research process. As time went by the students developed an open relationship with me and I was then told by a few students that my predecessor "warned" the students that "things will be done completely differently" from what used to be as [I] am very strict by nature. Until today I do not know what created this impression as I worked with my predecessor for only three Saturdays while I was still employed at my previous employer in order to ensure that I knew the basics of my new position.

As with Estelle, the introductory question posed in the interview with IR 6 was about what she expected from the person who would act as her supervisor or mentor during her studies and in her practice as part-time facilitator of learning. IR 6 responded that, as a student, she did not know what to expect as she hardly knew me since I was newly appointed at PMI at the time when I became her research supervisor. The students were used to the friendly nature of my predecessor and by considering the above-mentioned "warning" that the students received, one can understand why IR 6 did not know what to expect.

At the same time that IR 6 was about to receive the first feedback on her research proposal I had to take a decision regarding a situation (of which the information may

not be disclosed) that arose during the contact sessions of the course/module that she had attended at that time. The decision was not accepted well by the students as I had to protect academic ethos and integrity and it seemed to the students that I did not consider their interests. I had one-on-one discussions with the students to ensure that all could understand that I did consider their interests when deciding on the action to be taken to correct the situation. My decision to have one-on-one discussions with the students also aimed at creating an opportunity to develop a closer relationship with them as I was the research supervisor for them all. It would also provide a confidential forum in which every student could clear all personal misconceptions about my vision and mission for effectively fulfilling my role as Academic Manager and to ensure a high standard of academic experience for the students.

During the one-on-one session with IR 6 she aired her views and fears that created constraints in her learning process and many of the fears that she expressed reminded me of my own experiences as a part-time student. When thinking of possible ways in which I could help her to eliminate her fears, I remembered the positive results that I had experienced during my Master's research project by sharing my own experiences as a student which in turn resulted in a closeness between the students and me. I then shared my own experiences regarding ways in which I could overcome the constraints of being a part-time student and a full-time employee with IR 6. During the interview IR 6 said that the discussion showed to her that I was in the same situation as the students at PMI and that I did have their best interest at heart. The discussion saved her from developing a negative attitude towards her studies. My experiences motivated her in the sense that she thought "if you can do it, I can do it". IR 6 mentioned that, over time, she observed consistency in my approach towards the students and my dedication in whatever I did. This created a feeling of trust which is needed in any relationship.

Before the meeting in which I had to provide feedback to IR 6 on her research proposal I reminded myself of the feelings that I had experienced on the day that I received the first feedback on my research proposal for research that had to be conducted as part of my studies towards the DHETP in 2000. Until today I appreciate the value of the intensive feedback and support that I received from my

supervisor and therefore I follow his example when providing feedback and support to students. I remember the shock that I experienced when opening my proposal and seeing the number of comments made by my supervisor. Although he took the trouble to telephone me to prepare me for what to expect and explained to me what the purpose of the intense feedback was, I still did not believe what I saw. Before I handed the feedback to IR 6 I informed her about the purpose of the intense feedback that appeared in her research proposal.

During the interview IR 6 expressed the same feelings of shock and failure experienced the moment she opened the proposal. She stated that she immediately felt more comfortable once she remembered that I had told her that she should focus on the value that the corrections that she had made to her research proposal added to her learning process and that she should not view the feedback as a defeat. Once she started analysing the feedback that she received on her research proposal in a more positive perspective, she realised that I did not only criticise what she had done but that I also provided constructive feedback such as ideas that she could use to improve her work. The change in her perception and the trust that developed in our relationship created a feeling of excitement and she could not wait to get the feedback on the different parts of the research report once it had been submitted for comments.

IR 6 stated that the biggest value that she received through our relationship was as a result of my approach of no spoon-feeding. I provided just enough information to develop curiosity within her and the questions that I asked challenged her to search more deeply into the matter discussed in her research report. I did, however, sometimes provide information about additional sources that she could refer to and different viewpoints to consider. She appreciated this help as it assisted her in spending time on the analysis of what was said in the sources rather than spending time to find additional sources.

IR 6 mentioned that she appreciated the time that we spent together whenever she requested it. Our discussions created the opportunity to test her views before she spent hours writing about her views, only having to change it later. This assisted in saving the limited time that a part-time student has.

With her positive attitude towards her research, her dedication that made her a cum laude student, her curiosity to find out something more about the topic that she was researching and the acceptance of the constant editing of her academic language she received the award for the best dissertation of limited scope on Honours level in her final year. The decision was not taken internally by PMI as there were three possible top achievers and to prevent any claims of favouritism or subjectivity, the top achiever was selected by an external moderator.

During the interview IR 6 said that by the time that she was appointed as part-time facilitator of learning we had already created a relationship of trust and therefore she was more relaxed and trusted that I would guide her in the correct direction.

The induction session that she attended at the start of her relationship with PMI as a part-time facilitator of learning took place during a time that I was working at a client away from campus. During the induction session she was informed only about the administrative procedures that had to be followed. As she had been a student at PMI for four years she was aware of the academic requirements such as the number of tests and assignments to be included as formative assessment during a course/module. It was believed that she had several examples of class activities that she could use in her practice as facilitator of learning. She also received all the documents that stipulated the academic regulations to be followed, inter alia the PMI national summative assessment format guidelines (NSAFG) (PMI 2009a). When I returned to campus, I had a short discussion with her during which I mentioned that she had to find ways in which she could involve the students during the contact sessions.

During the first course/module that she facilitated an analysis of the student feedback forms indicated that IR 6 used mainly a traditional lecturing style and she involved the students only by asking them to provide practical examples from their different working environments. I then arranged for a meeting in which I could have a discussion with her regarding ways in which she could involve the students more actively in the learning process.

While discussing the inclusion of learning-centred activities during the contact

sessions, she commented that she followed the example set by the facilitators of learning who facilitated the contact sessions that she attended while being a student at PMI. Her response was no surprise. When I was appointed as a facilitator of learning in the FET environment for the first time, I also followed the example that was set by the lecturers (traditional term used on purpose) of the contact sessions that I attended during my studies. Only once I had developed more confidence in my role of facilitator of learning did I summon the courage to take up the challenge to change my practice although I received much criticism from my colleagues who were formally trained as educators and who had been in practice for many years.

I explained to IR 6 how she could first try to use posters that the students had to create during the contact sessions and to challenge the students by asking them to study and then present certain parts of the learning content to their peers. At first she just looked at me without saying a word and then she asked me to assist her in changing her practice. The realisation by both IR 6 and me that I would have to support her in her process of professional development as a facilitator of learning resulted in the renewal of our mentor-mentee relationship.

Although IR 6 could not indicate anything that frustrated her or that could have been done differently, the short interview confirmed what other interview respondents had said and the following important aspects can be deduced from her responses:

- It is important to spend enough time with one's mentees.
- Mutual trust is needed to ensure success of the relationship.
- The mentor must practise what he or she preaches during the relationship as it provides authenticity to his or her views.
- The actions and behaviour of the mentor can either motivate or demotivate the mentee.
- It is important to allow the mentees space in which they can develop a responsibility for their own professional development and/or academic growth.
- The mentees should be challenged with tasks in which they can use their own initiative in order to ensure personal and professional growth and to prevent boredom and a dependency on the mentor.
- It is important that PDPs are offered continuously, especially in an environment where the facilitators of learning have not received any formal educator

education as the poor habits of one generation of lecturers (traditional term used on purpose) are transferred to the next generation.

C)   Reflecting on the responses relating to a mentor-mentee relationship

The most significant aspect that I have learned from the interviews with Estelle and IR 6 was that a mentor has a much bigger influence on the mentee's life than I ever would have thought.

The most significant comment that Estelle made during the discussion of our mentor-mentee relationship was: "I am aware of my mentor's influence in my life each and every minute that I am alive." The ultimate feeling that I experienced at the moment when Estelle made the comment was that I could just pray that I had not left an imprint on her mind that could be detrimental to her life. I had never realised that my involvement in her studies and in her professional development as facilitator of learning had such a big impact on her as a person. This single comment made by Estelle highlighted the responsibility that a mentor carries in assisting the mentee to develop to his or her full potential. It underscores the fact that a mentor should never try to create a clone of him- or herself; the mentee should be allowed to develop in his or her own way.

Throughout our relationship IR 6 mentioned the impact of what I do and how I do things has on her life but I still did not really comprehend the true level of the impact that it had on her life. I only truly understood the level of the impact when reading the acknowledgement part of her dissertation. IR 6 wrote "[…] I am thanking you, for all your advice, mentorship and understanding during my research. I reached for the stars, but by means of your encouragement and guidance, you exposed me to the universe. You are an icon to me; thank you!"

Both Estelle's and IR 6's comments on my influence in their lives definitely had a huge impact on my own life. It forced me to reflect on my values and ethos as a facilitator of learning, mentor and manager. It forced me to rethink and re-evaluate my living theory. Every time that I think of Estelle's and IR 6's comments I become more aware of the fact that when you are a mentor for someone, you also become a

role model. This makes me think of what people see and hear when they observe my actions and listen to what I say and how I say it. This awareness of being a role model has resulted in a process in which I constantly rethink my ontological foundations. I am constantly spiritually reminded that I had been created with a specific purpose in mind. In order to be able to fulfil my purpose in life I constantly ask the ontological question: Am I who I am supposed to be; am I where I am supposed to be and am I fulfilling my purpose in life?

When attending the HELTASA 2010 conference, I was reminded of the burning ontological question within me. Professor Peter Seldin of Pace University, New York, one of the keynote speakers at the conference, started his presentation by stating that he received a professorship and after a while in office he realised that he did not belong in an office doing administrative work. He realised that he belonged in the lecture hall as that was where he could add value and fulfil his purpose in life. He then resigned from his position as professor and returned to his lecture hall (Seldin 2013).

At that moment I realised that I was closer to being able to answer my ontological question. I am a facilitator of learning by calling and passion and I just exist in my position as manager of academic affairs. I had to find a way in which I could create a balance between my existence as manager and living my purpose in life as a facilitator of learning. The only way in which I could fulfil both roles and at the same time allow everybody in my work environment the time and attention that they required from me, was by spending more time at work.

Unfortunately, in my quest to create a balance between my calling and that what is expected from me as part of the position that I am employed in, I did not realise that I was losing my life of being a mother, grandmother, daughter, sister and friend. All my time was consumed by work-related activities and it became so obvious that one of the students of PMI, whom I was a mentor for during his studies, wrote in a recommendation on my LinkedIn webpage that "Annette is a highly dedicated Academic Manager and ensures that the highest level and standard of education is achieved by creating an environment truly conducive to learning, even if this means dedicating not only time but a great deal of her life towards this objective, probably at the expense of personal, social and family time" (Ramrethan 2011). When I read the

part where Ramrethan (*ibid*) states that I am a role model for him my previous realisation, that if you are a mentor for someone you immediately also become a role model, was confirmed once again.

Considering Estelle's comment on the influence that my living practice as mentor have had and still has on her life, I know that I cannot live an unbalanced life any longer. This will portray the false message that one has to lay down one's personal life in order to be successful in one's career. I realised that I will have to focus on creating a balance between life at work and life at home. This will only be possible by making a decision about the role that I am willing to fulfil at work and by being willing to live with the consequences of my decision.

D)   Discussion of my experiences while supporting peers during our studies towards the DHETP in 2000

When I studied towards the DHETP two of my colleagues, IR 4 and John (pseudonym) were enrolled at the same time. Due to geographical convenience and easy access for group work, we automatically formed a group. I was the only predominantly right brain-orientated member of the group. Both IR4 and John have an extreme preference for the A-quadrant, with the B-quadrant as their second most preferred quadrant and with hardly any difference in the scores for the two quadrants. My preference of the C-quadrant as my most preferred quadrant with the D-quadrant as second most preferred quadrant, also with only a small difference in the scores of the two quadrants, created many frustrations in the group. However, my dominant preference for the C-quadrant allowed me to be tolerant with my peers, IR 4 and John, although I felt that my supporting them used a huge amount of time that I could have spent on my own studies. Only later during our studies did I recognise the value of supporting one's peers.

The fact that I, by nature, facilitate learning in a very practical, interactive and learning-centred manner, made me enjoy every minute of the contact sessions and the formative assessment tasks that we had to complete. Due to the very long contact days and long hours of using higher order cognitive skills during the learning

activities, I was exhausted at the end of the day, but was at the same time excited about what I had learned and experienced.

The innovative approach followed during the contact sessions created frustration for IR 4 and John. During our trip home this resulted in a discussion that could be perceived as them being completely negative towards their studies. The discussion would start off by IR 4 and John complaining about the disorganised and unplanned manner in which the day was scheduled without prior notice. Although my strong preference for the D-quadrant allowed me to be tolerant about the unplanned scheduling, I must admit, I also became upset by the continuation of the lack of communication regarding the scheduling of the contact sessions and that we were informed only on arrival of the day's schedule. However, I did not allow my frustration to have a negative influence on my enjoyment of the day.

The conversation then turned to the content and activities of the day. The frustration of both IR 4 and John became very clear during the discussions. This resulted in a conversation in which I had to summarise the day's events while providing practical examples of how they could use the different aspects in their practices. Through providing the summary of the day to IR 4 and John, I experienced the truth in the words of the French moralist and essayist, Joseph Joubert, saying, "to teach is to learn twice". I used this opportunity to think aloud and to relive the day. This helped me to remember even more of the detail of the day as IR 4 and John were quick to correct me if I said something incorrectly. Although I could at that stage not understand why I had to summarise the day's events although they could remember everything so clearly, I found it quite amusing.

After about three months I had a better understanding of how the preferences for using the different quadrants of the brain as explained by Herrmann can have an influence on how one remembers information. IR 4 and John who both have a strong preference for the A-quadrant of the brain could remember the factual information that was presented during the day. This might also have been the reason why they experienced a more intense feeling of receiving an overload of information. I realised that my strong preference for the D-quadrant allowed me to provide IR 4 and John with a broad overview of the activities of the day. I could link the activities and curriculum content that were presented on that day to what had been discussed in

other contact sessions. The feeling of receiving an overload of information in one day was lessened as IR 4 and John then realised that not all the information that was presented was new information. In some instances it was the same information that was presented in another way.

The first time that I provided practical examples during my summary of the day resulted in another surprise. During the next contact session we had to present the assignments that we had to complete. I realised that the practical examples that I provided in the summary of the day were changed into my peers' assignments, with just a few improvements on my original ideas. At first I was annoyed as I had a feeling that it was unfair that I then actually had to think of three ideas for each assignment and they only had to improve on my original idea. At first I did not understand that the experience was a good learning curve for me and only later did I realise how it helped me to develop my own skills as facilitator of learning.

After the next contact session I summarised the day's events without providing practical examples. Once asked to provide practical examples I acted as though I could not think of any. Knowing that IR 4 and John quickly corrected me when I said something that was not completely correct, I made vague comments which I knew were not correct. When they responded by saying that my example was not correct I asked them to explain to me what the correct application would be as it seemed to me that I did not understand the work well. Without their realising that I actually planned it that way, they created their own practical examples that were then turned into their assignments. Once they realised that I actually forced them to come up with their own ideas, the powerless feeling of "I cannot think creatively" disappeared. The discussions with my peers while driving home after the contact sessions provided both them and me with an opportunity to, in a Whole Brain® manner, make sense of the activities that took place and of the information that was shared with us during the contact sessions of the day (Table 16).

Table 16: Brief summary of the Whole Brain® approach that was followed during discussions with peers

All revise factual information	• I provide a holistic structure on how the new knowledge fits in with the knowledge obtained during previous contact sessions and the interconnected relationship with the curriculum of other modules; • they construct an inter-related framework
All identify ways in which the knowledge can be practically implemented	• I learn from the factual information that was remembered by my peers; • they learn from the holistic view that I create (social constructivism).

My peers assisted me in revising the factual information that was shared during the contact sessions. I assisted them in developing a holistic view of the information and activities of the day and to think more creatively. Only once we had been introduced to the theory of social constructivism did I develop a deeper understanding of the value of having reflective discussions with my peers.

For John I became more of a mentor than just being a peer. Already after the first contact session I had to exert myself to prevent him from de-enrolling. John's urge to de-enrol continued through the first six months of our studies. I had to motivate John to view his frustrations as a challenge and I had to provide him constantly with guidelines of what to do next when completing the assignments. He could not handle the uncertainty. One of the respondents mentioned that she too had to motivate one of her peers not to de-enrol (Section 4.4.4.1) as her peer could not handle the uncertainty that was experienced during their studies. In both cases the urge to de-enrol from the programme was caused by the insecure feeling of not knowing what to do without clearly laid down guidelines. By nature John stresses very easily and when he does not understand something he immediately wants to quit.

Although John's order of preference for using the different quadrants of the brain is

A, B, C, D, my mentoring was done in the order of C, A, B, D, C (Figure 12).
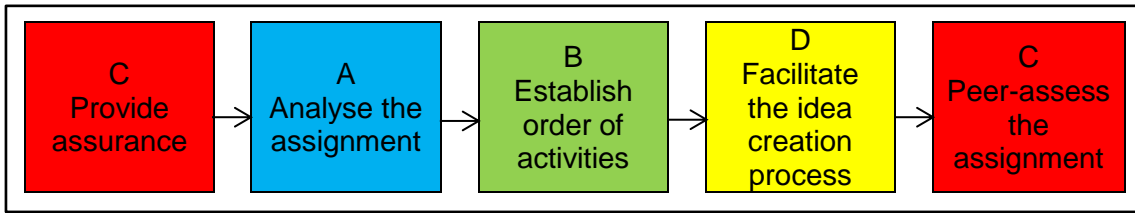
Figure 12: Whole Brain® order followed during mentoring sessions with John

I started the session by assuring John that he was not alone as all of us found the work to be too much for the time in which it had to be completed. I assured him that I would help him by explaining everything that he did not understand and I would assist him in creating structure for what we needed to do (C-quadrant). I then assisted him in analysing the assignment to find what we needed to do (A-quadrant) and we created a sequence in which the different activities had to be done (B-quadrant). Next, I facilitated the process to get him to think of an innovative way in which he could show that had reached the outcomes that were needed to be reached by means of the assignment (D-quadrant). When the assignment was completed I had to peer assess it before it had to be submitted for assessment and I had to put John at ease that I believed that he would receive a pass mark for the assignment (C-quadrant). In order for him to create a better understanding of the Herrmann Whole Brain® theory I had drawn the process flow as displayed in Figure 12 before the first two mentoring sessions. From the third session he had to provide the planning of the session in the form of a Whole Brain® flowchart. At the end of our year of study John commented that the order that was created with the flowchart provided structure to what he had to do and he realised that he was forced to use all four quadrants of his brain during the completion of the assignments.

During the second mentoring session with John I realised the significance of the influence that one's brain preference has on one's ability to adapt to the ergonomics of the environment in which learning takes place. We met at my home for the second session as it took place during the college holidays. I could sense that John was very uptight although I tried to put him at ease. His whole posture was tense and he frowned constantly. When we reached the stage where he had to start developing an innovative and creative learning activity, he just snapped and declared aloud that he

just could not handle it anymore. When I tried to calm him down by saying that I promised that I would help him with the development of the task he shouted at me: "That is not the problem!" Quite shocked, my first C-quadrant reaction was to ask him to leave my house as I was trying to help him and now he was shouting at me. Fortunately my D-quadrant curiosity urged me first to find out what the real problem was. I was taken by surprise when he said: "I cannot handle the noise anymore". Still not knowing what he was referring to I asked: "What noise?" I just started laughing when he declared: "The terribly loud music!"

My teenage son was at home and he was in his room listening to music by the band Metallica. The music was not very loud as the rule in my house was that the volume might not reach a level where one has to raise one's voice to be heard and it might not be a disturbance when one answered the telephone. When I replied that the music was not loud, John replied that he could not think with the music playing, especially not that "terrible" music. Needless to say, my son had to agree to turn the music off. We completed the session as John was immediately calmer and more relaxed once the music had been turned off.

I later asked John why he had experienced the music as being terrible, as he himself was still young enough to be expected to appreciate the music of the band Metallica. John replied that any music that does not have a specific rhythm, with only a few instruments that can easily be identified, disturbs his thinking pattern. This then made sense to me as his explanation suited his second most dominant B-quadrant that indicates a preference for order and proper organisation. His preference for a quiet environment was then considered when deciding upon the time of the mentoring sessions. The meetings were scheduled to take place after college hours when there were no more students on campus who could create noise.

John later told me that he finds it hard to stay calm and collected during the contact sessions that he facilitates if the students have to, during the session, move into groups for group work. He then said he does not know how to solve this intolerance for noise during the contact sessions.

I asked John to draw the Whole Brain[®] process flowchart before we started our

discussion. I told him to think of how he solves a simple problem at home and what the order of his thoughts is while solving the problem. Without a problem John could say that he needs to analyse the previous session to determine when or how the noise is created. He then has to find a way to correct the problem, implement the solution and then see if it works. John then created the Whole Brain® flowchart displayed in Figure 13.

A Determine the time that noise is created	D Create an idea to prevent noise	B Implement the idea that was created	C Reflect on frustration levels experienced
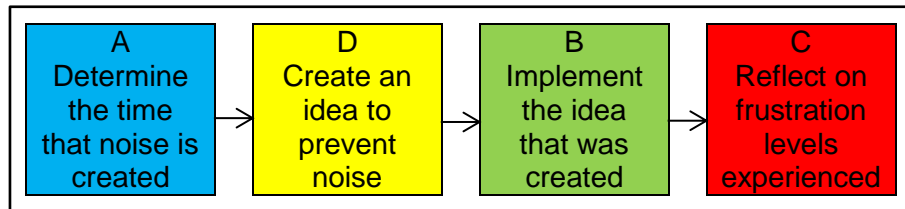
Figure 13: Whole Brain® process followed to correct John's frustration levels caused by noise

During our discussion John indicated that his highest level of frustration was when the students moved their desks for group work. On asking him how it can be prevented his first reaction was not to use group work. I just looked at him without saying a word. He then realised that his reply was not accepted and I was waiting for him to suggest an alternative. He eventually said that he can get the students to move the desks when they enter the class. The desks will then not be moved during the session. John tried his suggestions during another contact session the next day and reported that it worked much better as the noise of the students' voices still upsets him but the loud noise of the moving of the furniture during the session is eliminated.

When reflecting on all our work sessions I realised that John experiences a natural block to the use of the D-quadrant of his brain. His first reaction is always. "I cannot" when he has to use the D-quadrant of his brain. I then urged him to reflect on all the times that he could create something innovative after his first reaction was that he could not. He was very surprised when he realised that his first reaction was to be negative when he had to use the least preferred part of his brain and once he was supported he could use it successfully although he still was not comfortable during the activity.

During this simple exercise of solving a problem John had also learned about the

importance of considering ergonomics during the learning sessions as noise can also irritate a student who is left brain-oriented. John learned that he should not immediately react negatively once he has to use the D-quadrant of his brain. I was delighted when John mentioned that he now realised that one does not use the different quadrants of one's brain in the sequence of the preferred quadrants. In every situation another order of the different quadrants appears.

After reflecting on why his first reaction always was to believe that he could not think creatively, he stated that his D-quadrant score was so low that he believed he could not be creative. Once he had realised that we all use all parts of our brains, although we naturally prefer to use some quadrants more than others, he realised that the phrase "I cannot" was an exaggerated statement that created the impression that he is negatively inclined.

The most significant lesson that I have learned from being a mentor for John is that a mentor who bases the mentoring on a Whole Brain® approach should know and understand something about the mentee that goes beyond the work environment in which the mentoring takes place. This lesson was learned purely by chance. After completing our studies I was invited to enjoy dinner with his family to celebrate the success of our studies. I could not believe my eyes when I walked into his back garden. It looked like a park of which the layout had been designed by a well experienced horticulturalist. When complimenting him on the beauty of the garden he calmly said it was all his work and his wife added that he also designed the layout of the garden. There in front of us was a perfect Whole Brain® designed garden.

John explained that he sat for hours collecting data about the maximum growth height, times of flowering, colours of the flowers, shades of green and other colours in the foliage of the plants, seasonal loss of leaves, seasonal change of colour of the leaves, and so forth. He then used this information to design a garden that would create a specific line against the sky once the plants were fully grown. John designed the garden in such a way that once the one plant lost its flowers or leaves another one planted behind it would still have leaves or flowers of the same colour to prevent the idea of having an empty space in the garden. The strict symmetric lines of the flowerbeds were softened by the use of different small grass types planted on

the edges of the flowerbeds. Blocks of colours could be seen but by using the colour of the foliage of the plants in between the colour blocks the one colour naturally blended into the next. I had never seen John displaying so much passion about anything else.

Table 17: John's analysis of his Whole Brain® garden

• Collect data about the botanical characteristics of the plants • Analyse the data to use the knowledge during the planning of the layout of the garden	• Colour patterning used • Ways of blending the colours • Ways in which strict lines are softened • Being able to imagine what the garden will look like once it is fully grown • Creating a specific skyline once the plants are fully grown
• Plan the layout of the garden • Strict symmetric lines follow • Determine which plants should be planted at the back and which in front of other plants • Planning done according the botanical characteristics during different times of the year	• John's passion for the garden • The pride that John experiences when people comment about the beauty of the garden • The joy it creates for John's wife if he picks the first flower of the season and gives it to her with a kiss

Had I known about this garden before, it would have been much easier to convince John that he actually can be creative and use all the quadrants of his brain. During one of our mentoring sessions I asked him why he ever believed that he cannot use his Whole Brain® if he can grow such a perfect Whole Brain®-based garden. He looked at me for a while as if he was thinking and then smiled and said that he never realised that it is a "Herrmann" garden. Table 17 displays what I can recall we had done to determine which parts of his brain John used to design his garden.

John and I still worked together for three years after our studies were completed and we regularly had discussions in which I supported him to think of creative ways in

which he can present the curriculum content of Mathematics for which he is the facilitator of learning.

4.4.4.2   General note after reflecting on the responses

Something that I discovered during the interviews is that PHEIs pay much attention to the quality of learning that takes place during their contact sessions. The traditional view that private institutions are in it just for the money should be changed. In most instances PHEIs focus on niche fields of expertise and they rely on part-time facilitators of learning who are employed on a full-time basis in the specific field that the different institutions focus on.   This poses the problem that the facilitators of learning do not have time to attend formal educator training sessions.

The aspects that were identified during the interviews that need to be included in the curriculum of a PDP for academic staff who are employed in the PHE environment are listed in Chapter 5.

The next section allows you to meet Annelise who was the most active participant of the PDP.

4.5   INTRODUCING ANNELISE

When asking Annelise which pseudonym she wanted me to use when referring to her in this thesis, she stated that she wanted me to use her real name as she was comfortable with the idea that others would know what she was doing during her process of transformation from being a lecturer (CHE 2004b:19) to becoming a facilitator of learning. For the same reason she provided permission for the use of photographic evidence in which she is identifiable.

Annelise is employed as a full-time Production Planning Manager in the industrial manufacturing environment at a large organisation that provides products for the local as well as international market. She facilitates learning in the contact sessions of the following courses/modules offered at PMI:

- Supply Chain Management offered on second and third year level of studies towards a three year NQF level 6 qualification.
- Logistics Management on first and second year level of studies towards a two year NQF level 5 qualification.

Table 18 shows additional attributes of Annelise that are relevant to the research study under discussion.

Table 18: Annelise's attributes

Race	Gender	Highest qualification	HE experience other than in PMI		Education qualification		Registered assessor	
			Yes	No	Yes	No	Yes	No
White	Female	BSc Honours: Industrial Technology and Management	✓		✓		✓	

4.5.1   Herrmann Whole Brain® comparison of Annelise and myself

At the onset of the research study under discussion I had to consider how the differences between Annelise's and my own brain dominances and therefore thinking style preferences might influence our mentor/mentee relationship. I reflected on our work relationship in the period prior to the onset of the research study.

Figure 14 is a graphical representation of the statistical HBDI® results of Annelise and myself. The blue line indicates Annelise's profile and the black line indicates my profile. Figure 15 provides the statistical HBDI® results of Annelise and myself.
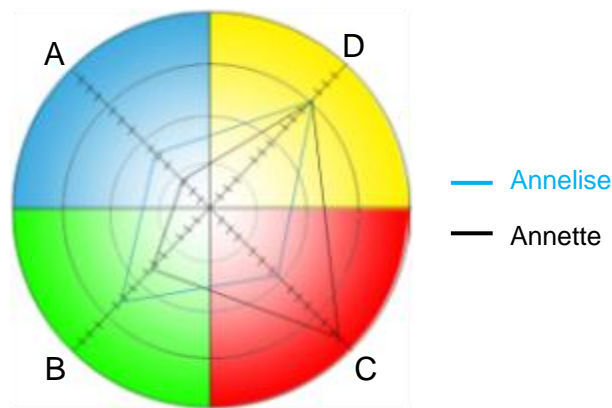
Figure 14: Graphical representation of HBDI® results of Annelise and myself

Profile scores					
	Annelise	54	89	63	104
	Annette	30	57	125	101

Key descriptors (∗ most descriptive)

	Annelise	Factual	Conservative	Emotional x	Imaginative x
		Quantitative	Controlled x	Musical	Artistic ∗
		Critical	Sequential	Spiritual	Intuitive x
		Rational	Detailed x	Symbolic	Holistic
		Mathematical	Dominant	Intuitive x	Synthesiser
		Logical	Speaker x	Talker x	Simultaneous
		Analytical x	Reader	Reader	Spatial

	Annette	Factual	Conservative	Emotional x	Imaginative
		Quantitative	Controlled	Musical	Artistic
		Critical	Sequential	Spiritual	Intuitive x
		Rational	Detailed	Symbolic x	Holistic ∗
		Mathematical	Dominant	Intuitive x	Synthesiser x
		Logical	Speaker x	Talker x	Simultaneous
		Analytical	Reader x	Reader x	Spatial x

Work elements

	Annelise	Analytical 3	Organisation 5	Teaching 4	Integration 3
		Technical 5	Planning 5	Writing 3	Conceptualising 2
		Problem solving 4	Administrative 3	Expressing 2	Creative 4
		Financial 2	Implementation 4	Interpersonal 2	Innovating 5

	Annette	Analytical 2	Organisation 2	Teaching 5	Integration 5
		Technical 3	Planning 2	Writing 5	Conceptualising 3
		Problem solving 3	Administrative 4	Expressing 5	Creative 3
		Financial 2	Implementation 4	Interpersonal 4	Innovating 4

		Introverted							Extroverted		
Introverted/ extroverted	**Annelise**								x		
	Annette									x	

Figure 15: Statistical HBDI® results of Annelise and myself

4.5.1.1 Considering possible influences on our mentor/mentee relationship based on the Herrmann Whole Brain® theory

The following aspects were identified as possible factors that might have had an influence on our mentor/mentee relationship:

A) A-quadrant

Both Annelise and I are not keen users of the A-quadrant thinking style. I have no descriptors that fall in this quadrant and Annelise has only one descriptor in this quadrant, namely *analytica*l. This would mean that I had to move outside my own comfort zone and regularly ask Annelise questions that would lead her to use more of the A-quadrant skills. It was expected that this would happen mainly when analysing observation notes or video evidence that was collected during the contact sessions that she had facilitated and during the analysis of assessment tools that she compiled.

B) B-quadrant

Annelise's descriptor of being controlled fitted in with my experience of her as always being in control of the contact sessions that she facilitated. She planned the learning activities in advance in order to ensure that all the outcomes could be reached in the available time. The descriptor *detailed* would necessitate that I provide detailed information during feedback sessions that formed part of my evaluation of her practice as facilitator of learning.

When completing the HBDI® online test, Annelise did not choose "reader" as a descriptor in either the B- or the C-quadrants. Both of us indicated speaking or talking (C-quadrant) as being indicators of our preferences. We share the belief that talking is faster than typing and we both find the immediate feedback in a verbal conversation productive and timesaving. It allows more time for conversations such as quick reflection sessions and brainstorming after a contact session. Therefore we did not communicate regularly via e-mail or through other forms of written communication.

Seeing that both of us scored a rating of four for *implementation*, we could easily work together when Annelise wanted to implement innovative ways of facilitating learning.

C) C-quadrant

Both Annelise and I rely strongly on intuition (C- and D-quadrants). Therefore I could easily understand it if she wanted to do something extraordinary on the spur of the moment during a learning activity that she facilitated. This unexpected and extraordinary behaviour resulted from her having a feeling or a belief that the students did not understand something that she had explained. She would then think of something that had not been done or said before to explain the concept.

I found it strange that she scored only two for both *expressing* and *interpersonal*. I know her to be very open to the students and her colleagues. During general discussions it seemed that she did not experience any problems with expressing herself. She regularly motivated and supported students who experience personal situations that could have an influence on their learning process.

Annelise's introvert/extrovert rating of seven on a scale of one to nine, tilting towards being extroverted, seemed to be in contradiction with her low interpersonal rating. However, I interpreted it as being a possible indication that she wanted to work alone with only a few mentoring sessions and I decided to stay in the background. I would let her take the lead in the relationship and only intervened when really necessary or when asked to.

Her *emotional* descriptor becomes evident when she passionately talks about learning and the experiences that she had during a contact session. She regularly narrates feedback that she received from students who have experienced problems with learning whom she assists to become motivated again.

D) D-quadrant

The fact that Annelise is creative and innovating means that one could expect that

she would be able to think of interesting ideas to use during her contact sessions and when compiling formative and summative assessment tasks. She may also make use of unusual learning activities or media, suiting her artistic style.

There is a very small, and therefore insignificant difference between Annelise's and my own scores for the D-quadrant. In the overall score there is a difference of three and a difference of one for work-related elements. The strong correlation between our scores for the D-quadrant could ensure that we would find it easy to develop alternative learning activities.

With these basic ideas of the different quadrants in mind, I decided that I would go with the flow of the relationship. I would not decide beforehand on strict rules and regulations such as scheduled preparation or feedback meetings. Annelise and I had an open and relaxed relationship and even before the commencement of the research study she regularly communicated with me regarding things that had happened during the contact sessions that she facilitated.

4.6   ANNELISE'S PRACTICE AS LECTURER PRIOR TO THE IMPLEMEN-TATION OF THE PROFESSIONAL DEVELOPMENT PROGRAMME

PMI is the only HE Institute at which Annelise has studied. Therefore when she was contracted for the first time as a facilitator of learning, the only benchmark that she could use for her practice were her experiences as a student in PMI. During her studies at PMI the courses were delivered mainly through the traditional lecturing style. The lecturers (traditional term used on purpose) brought their work experience into the classroom to be used as practical examples when discussing the different concepts, processes and procedures that are included in the curricula of the different courses of the qualifications offered by PMI.

The information in the paragraphs below, describing Annelise's practice as lecturer (term used on purpose) before the start of the PDP, is based on qualitative baseline data that was collected as part of my duties as specified in my task description of quality assurer of *teaching* (sic) *and learning* (CHE 2004(b):11, 18) that takes place in PMI. During our reflection sessions which formed part of the activities of the PDP,

she sometimes commented on her practice as being a lecturer and not a facilitator of learning. These comments were also considered in the discussions.

- **Subject knowledge**

Since the first time that I attended the contact sessions that Annelise facilitated, I had realised that she is a subject matter expert with a wide range of experience in the industrial manufacturing environment. She also has the ability to apply her knowledge and experience in different contexts. She is able to provide examples that fit in the diverse working environments of all the students attending the contact sessions that she facilitates.

- **Managing her practice**

Annelise always ensured that she completed the curriculum in the given time and she usually planned in such a way that the last contact session in the programme could be dedicated to revision. She ensured that the printing and/or copying of documentation such as the additional hand-outs and formative assessment tasks were done before the start of the session in which they would be distributed. All the necessary formative assessment tasks were completed in the specified time as per the PMI prescribed operating procedures.

- **Student participation**

Before the start of the PDP Annelise' natural instinct was to aim at achieving student participation during the contact sessions that she facilitated. She always tried to involve the students by asking them to provide relevant examples from their own industries and workplace. As it commonly happens during interactive learning activities, only some of the students participated actively and reacted to questions posed. It was usually the same students that participated in the activities. The other students did not participate and were merely spectators of the activities that took place during the contact sessions.

- **Questioning style**

Annelise's questioning style was to pose mainly fact-based, to the point, closed questions. The main purpose of the questions posed at the beginning of the contact session was to refresh the students' minds about the topics that had been discussed in the previous sessions. The questions that she posed while facilitating the sessions aimed at getting the students to participate in the sessions. These questions were still mostly fact-based. At the end of the contact sessions she posed questions that summarised the topics discussed. This was done to determine whether the students understood the concepts that were discussed during the contact session. It also served as the conclusion of the session.

If the students did not react immediately, she would answer the question herself and think of an idea from one of the students' working environment to use as an explanatory example.

- **Use of media**

Annelise never used visual media such as PowerPoint presentations during her contact sessions. The only media that she regularly used were the whiteboard, the learner guide and the textbook. She highlighted important parts in the learner guide in different colours. She sometimes distributed additional hand-outs that she had prepared that would make it easier for the students to understand a specific topic. The additional hand-outs comprised mainly alternative, more descriptive definitions of the concepts under discussion and visual representations thereof. These were obtained from printed or Internet sources and were all duly referenced.

- **Creating an atmosphere conducive to learning**

Annelise has an open and relaxed relationship with her students. She sometimes uses humour to get the students to participate in the discussions during the contact sessions and to create a pleasant atmosphere. During tea breaks or as part of the process of creating a relaxed atmosphere at the start of the session, all the students

have free discussions with her, such as predictions about the outcome of sporting events of the weekend as she is also a keen supporter of a variety of national sports.

4.7   ANNELISE'S PROFESSIONAL TRANSFORMATION

During the contact sessions that were offered as part of the PDP, Annelise actively participated in the learning activities. She showed enjoyment and at the same time, understanding of the topics at hand. Already after the first contact session of the PDP, she mentioned that she was sure that allowing learning style flexibility would provide opportunities for the students to create a deeper understanding of the curriculum content. She based her belief on the experiences that she had while completing the innovative learning activities that were included in the PDP contact sessions.

4.7.1   Questioning style

The first changes that were observed during Annelise's transformation process towards becoming a facilitator of learning rather than being a lecturer were related to her questioning style.

There is enough evidence to believe that the transformation in Annelise's questioning style will be permanent. The reason for this is that she was not always informed of an observation session prior to the commencement of the session. It is therefore believed that Annelise's transformation was not just an act of window dressing.

My practice of attending the contact sessions unannounced was adopted as a result of reflecting on fifteen years of experience of being a peer assessor and/or mentor for peers or as being the quality assurer of the facilitating of learning practices in an educational environment. Some of my peers were attending PDPs offered at their workplace or they were attending formal courses at a public HEI while studying towards a formal qualification in education. I experienced that when my peers were aware of the observation session that would take place they planned a contact session to be as close as possible to being perfect. When I then attended another

session without prior announcement, I found that there was no evidence of the transformation that had been displayed in the previously announced session.

Annelise did not experience my unannounced visits as intimidating. All the facilitators of learning at PMI are used to my habit to attend, without prior announcement, some of the contact sessions that they facilitate. During the induction meeting when they enter into a fixed term facilitator of learning contract with PMI for the first time, they are informed of this practice. They can also relate this to their own working environment where they are used to random quality assurances stoppages on the production line or random samples that are taken from the production line for quality check purposes.

The transformation in the questioning style that Annelise has experienced since the start of the PDP is summarised below. The aspects mentioned were observed during unannounced attendance to some of the contact sessions that she facilitated over a period of eighteen months since the implementation of the PDP. The sessions were selected in such a way that a specific pattern of attendance could not be identified.

Qualitative baseline information that was collected as part of my duties as quality assurer of the *teaching* (sic) *and learning* (CHE 2004b:11, 18) that takes place in PMI is included in the discussions of Annalise's transformation.

Annelise sometimes commented on her questioning style during our reflection sessions after my quality assurance attendance of her contact sessions and the information that she shared through these comments was included in the summary below.

- After posing a question, Annelise allows a longer period than before for the students to think about possible answers to the question. If the students do not react, she poses another question that will lead the students to consider the same topic from another perspective. She continues with this process until the students are able to answer the original question on the expected level.
- When a student poses a question during a learning session, Annelise does not answer the question with a straight fact-based answer anymore. She applies

the Socratic questioning style that entails answering a question by posing another question. If the student who posed the original question cannot answer her response question, she poses the question to the rest of the students. This then stimulates student participation as some of the other students then attempt to answer the question.

- In some instances when a student poses a question, Annelise immediately asks the rest of the students who are attending the session what they think the correct answer is.

- Annelise now uses more open-ended questions right from the start of the contact session, with the main purpose to stimulate the students' thinking processes and to increase the level of understanding of the topic under discussion.

- Open-ended questions that necessitate the students to substantiate their viewpoints are asked at the start of the contact session with a dual purpose in mind. Firstly it aims to remind the students of the learning content discussed in the previous contact session. Secondly, it is used as a method of diagnostic assessment to determine the level of understanding that the students have after a seven-day period has elapsed since the previous contact session.

- Annelise poses questions that challenge the students to consider and display their own perceptions of or attitudes towards the topic at hand.

- Annelise successfully succeeded in combining the closed questions that she has used prior to the start of the PDP with the style that she has adopted while doing action research on her own practice as facilitator of learning.

When trying to determine the reasons for Annelise' questioning style transformation, we found the answers in her reflective comments in which she stated that she had learned that:

- different types of question have different purposes;

- closed questions still have a place in the learning process as one sometimes needs to assess the fact-based knowledge of the students;

- the posing of questions during a learning session can be used for a variety of reasons such as to:

- determine the level of the students' embedded knowledge of the topic to be discussed (pre-assessment);
- diagnose areas to be considered when planning remedial learning sessions (diagnostic assessment);
- stimulate the students to use their higher cognitive levels (formative assessment);
- ensure embedding of the new information that is added to their existing bank of knowledge;
- stimulate student participation.

- open-ended questions are more learning-orientated than closed questions;
- questions can be used to get the students involved up to the closure of the contact session as the learning content that has been discussed during the session can be summarised by posing questions to the students rather than just repeating the facts;
- questions do not necessarily need to be answered by providing an answer; they can be answered by posing another question (Socratic Method).

This section focuses only on Annelise's learning that took place regarding the use of questions as part of the process of facilitating learning during the contact sessions. The transformation that she has experienced relating to the posing of questions as part of being an assessor of learning is discussed in Section 4.7.4.

4.7.2   Developing innovative learning activities

Immediately after the start of the research study under discussion, Annelise and I had a feedback session in which I provided her with feedback after attending one of the contact sessions that she facilitated.

During the feedback session I commented on the improvement of her questioning skills since the implementation of the PDP as it resulted in better student participation during the contact sessions. Apart from the changes that she had made relating to her questioning style, she still relied mostly on activities that provided mainly theoretical information in the contact sessions that she facilitated. I then

suggested that she attempt to develop an innovative learning activity that would allow for learning style flexibility.

Based on the successes that I experienced with the introduction of songs in my own practice as facilitator of learning in the past, I suggested that she attempt to develop a learning activity that would involve the creation of a song. After sharing a few ideas Annelise decided to develop her first sing-along learning session.

4.7.2.1 Sing-along time

The first group of students who experienced Annelise's new innovative way of facilitating learning were enrolled for their second year of study. Annelise surprised and challenged the students through a group activity in which she requested them to create a song that would indicate the different elements needed to ensure the success of a supply chain. They had to include practical examples of the different elements. This part of the learning content is seen as one of the most important parts of the curriculum of the Supply Chain Management course/module. Therefore the students must know the theoretical facts and they must be able to apply the theoretical principles in the workplace.

Toy musical instruments such as shakers, symbols, triangles, ornamental bells and plastic containers that acted as drums were provided to the students for use during the staging of the song.

a) Objective and order of the learning activity

The objective of the activity was to assist the students in memorising a long list of theoretical facts, combined with examples of the practical application of each fact in their employment environment.

Table 19 shows the order that was followed during the sing along innovative learning activity. The different theories that were considered during the preparation of the activity are mentioned and the actions that were taken based on the different theories are indicated.

Table 19: Order of the activity and the different theories addressed by the activities

THEORY	SUBDIVISION	SUBSTANTIATION

Step 1:   Annelise provided an overview of the theoretical information.

THEORY	SUBDIVISION	SUBSTANTIATION
Herrmann	A	Theoretical facts were discussed.
	C	Students had to listen to another person who was sharing information (interpersonal).
Gardner	Verbal-linguistic	The facilitator of learning used verbal language in combination with written language in the learner guide.
	Audible	The students had to listen.
	Interpersonal	The student had to listen to another person.
	Intrapersonal	Understanding must be created by the student himself or herself.
Bloom	Knowledge	Factual information.
	Comprehension	The students had to make sense of the explanations.

Step 2:   The students were divided into groups.

THEORY	SUBDIVISION	SUBSTANTIATION
Herrmann	A	Grouping was done based on numbers allocated to the students.
	B	Students had to organise themselves into groups according to the rules set by the facilitator of learning.
	C	Group work.
Gardner	Logical	Numbers were used in the grouping and the students had to use the numbers to organise themselves into groups according to the numbers.
	Interpersonal	Group work.
Bloom	Synthesis	Grouped together according to similar numbers allocated.

Step 3:   The rules of the song were explained.

THEORY	SUBDIVISION	SUBSTANTIATION
Herrmann	B	Song had to be created according to rules. The activity had to be completed in a specific sequence. A time limit was set for the activity.

THEORY	SUBDIVISION	SUBSTANTIATION
Gardner	Logic	The activity had to be completed step by step in a specific sequence.
Bloom	Comprehension	Students had to understand the rules.

Step 4: The students worked in groups inside the classroom to create the lyrics of the songs.

Herrmann	A	Facts needed to be included.
	B	Lyrics had to meet set criteria.
	C	Group work including all members' ideas.
	D	Creating lyrics from nothing and creating a music score or matching the lyrics to an existing music score.
Gardner	Interpersonal	Group work including all members' ideas.
	Verbal-linguistic	Students had to talk to one another and the lyrics were compiled by using words.
Bloom	Knowledge	Factual information was included in lyrics.
	Comprehension	Understanding the meaning of the concepts in order to provide practical examples.
	Application	Practical examples provided.
	Analysis	Analysis of the learning content to identify the concepts that needed to be included.
	Evaluation	Determining the most important concepts to be included.
	Synthesis	Creating the lyrics of the song.

Step 5: Students chose musical instruments for their group.

Herrmann	A	Number of group members had to be considered to ensure that all had an instrument.
	C	Selection to include all group member brain dominances.
Gardner	Logical	Number of group members had to be considered.
	Audible-musical	Students used the instruments to hear the sound that the instrument produced before it was selected.

THEORY	SUBDIVISION	SUBSTANTIATION
	Interpersonal	Had to ensure that all group members had an instrument.
Bloom	Evaluation	A choice had to be made from different options.

Step 6: Students moved to the parking area to add the music score and to practise their songs.

THEORY	SUBDIVISION	SUBSTANTIATION
Herrmann	A	Theoretical facts were revised.
	B	Roles of members were identified (organise) and the sequence of the staging was determined.
	C	All group members were involved.
	D	Students had to be creative and they experienced it as a fun filled activity.
Gardner	Logical	The presentation had to last no longer than 5 minutes.
	Interpersonal	All group members were involved.
	Bodily-kinaesthetic	The students used their hands to play with the instruments and danced to the beat of the music.
	Audible/musical	The students had to listen to the songs to know what was said.
	Verbal-linguistic	Students had to create lyrics.
	Naturalist	Outdoor activity allowed them to experience natural phenomena such as the wind and the sun through their senses.
		They realised that the acoustics outside the venue differ from those experienced inside the venue (sound waves, therefore also audible).
Bloom	Knowledge	Theoretical facts were included in the song and some students had memorised parts of the song.
	Synthesis	The music score had to be synchronised with the lyrics.

Step 7: Students staged the song.

THEORY	SUBDIVISION	SUBSTANTIATION
Herrmann	A	Theoretical facts were revised.
	B	The planned sequence of the staging had to be followed.
	C	All group members were involved (interpersonal)

THEORY	SUBDIVISION	SUBSTANTIATION
	　	Some students had to adapt to the situation when feeling uncomfortable with being outside their comfort zones (intrapersonal).
	D	Students experienced it as being a fun filled activity.
Gardner	Bodily-kinaesthetic	The students used their bodies to play the instruments and to dance.
	Visual/spatial	The other groups had to observe the acts.
	Audible/musical	Students had to listen to the songs to know what was said.
	Interpersonal	All group members were involved.
	Verbal-linguistic	Students had to sing using verbal language.
	Intrapersonal	Some students had to adapt to the situation when feeling uncomfortable with being outside their comfort zones.
Bloom	Knowledge	Theoretical facts included in song.
	Evaluation	Students evaluated the content and presentation of their own song against those of the other groups.
	Synthesis	The different group members had to sing in harmony with others and the music.

The analysis above shows that all aspects of the Herrmann whole brain theory, Bloom's taxonomy and the original elements included in Gardner's multiple intelligence theory were addressed through this learning activity.

The following critical outcomes (COs) and developmental outcomes (DOs) (SAQA 2000:18, 19) were fulfilled through this learning activity:

Critical outcomes:

CO 2. Work effectively with others as members of a team, group, organisation and community.

CO 3. Organise and manage themselves and their activities responsibly and effectively.

CO 4. Collect, analyse, organise and critically evaluate information.

CO 5. Communicate effectively using visual, symbolic and/or language skills in various modes.

CO 7. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

Developmental outcomes:

DO 1. Reflecting on and exploring a variety of strategies to learn effectively.

DO 2. Being culturally and aesthetically sensitive across a range of social contexts.

b)   Observing the learning opportunity

This section allows you the opportunity to share our experiences during the sing along learning opportunity.

As the first step the students created the words of the song inside the venue (figure 16).

Figure 16: Creating the words of the song

Step 2 was practising of the song in the parking area (Figure 17).

Figure 17: Practising the song

During the practise session Annelise visited each group to ensure that all group members participate in the activity (Figure 18).

Figure 18: Annelise facilitating the song practise

In the final step of the activity the students had to present the song to the members of the other groups (Figure 19).

Figure 19: Staging the song

By doing informed non-participative observation the following aspects were observed:

- Some of the students mumbled about the fact that they were adults and not children and that they were supposed to be studying at university level and not at primary school level.
- Annelise planned for group work but did not consider a way in which the groups should be formed. At the time that the students had to form groups, she asked me to provide an idea of what to do.

The easiest random manner that I could suggest that would allow me not to become involved in the activity was to count the students and calculate the number of equal numbered groups that could be formed. It should be remembered that the groups should not include a large number of students, preferably not more than six students per group. One then starts at one end of the venue providing each student with a number from one to the number of students that are in the groups. All the students with the same number then form a group, implying that all the students who have been allocated number one need to group together, all those who have been allocated number two group together, and so forth.

In this instance the numbers ranged from one to four, based on the number of groups that needed to be formed. One group had five members as an unequal number of students attended the contact session. Six groups were formed.

- At the beginning of the activity it was relatively quiet while the students had to make sense of the theoretical knowledge that needed to be included in the lyrics of the song.

- A few students were hesitant to participate until they saw that some of their peers immediately started playing with the toy instruments and others started singing along and acting playfully.

- Annelise continuously moved among the groups to ensure participation by all the students. If one of the students was not participating while the group was creating the lyrics of the song, she asked the student a question, such as what he or she thought the most important aspect was that should be included in the song. This stimulated the students' participation in the activity.

- While the students were practising the song in the parking area, Annelise again moved among the groups to ensure that all students participated in the activity. If someone was not participating, Annelise joined the group in the singing and dancing, urging the student to sing along with her.

- The students were self-disciplined and they returned to the venue on the time that was stipulated before they went to the parking area to practise the song.

- The students paid full attention to the songs that were staged. They did not have any discussions while the songs were staged; some tapped their fingers on the desks.

- While being part of the audience, some students even moved their bodies to the rhythm of the songs that were staged.

- Some hesitance was noted when the songs had to be staged. The most used comment was: "I can't sing".

- By the time that the songs were staged some of the students already knew the lyrics of their songs as they sang along without looking at their notes.

- During the staging of the song all the students displayed enjoyment by continuously laughing and smiling.

- Some groups used well known music scores and added lyrics to suit the score while others created their own tunes. The known music scores that were used are Shosholoza (a traditional South African, Ndebele folk song), the FIFA World Cup 2010 theme song and the well-known Christian hymn, Amazing Grace.

## c)	Reflecting on the learning activity

In order to evaluate the success of the learning activity, I analysed the field notes that were made during the observation. Annelise reflected on her own practice and we then had a session when we compared our findings. We asked two questions during the reflection session in order to provide structure to the session. The first question was: What worked well during the learning activity? The second question was: What can be improved in the future? The paragraphs that follow provide the answers to these questions.

## i)	What worked well during the learning activity?

- The necessary theoretical knowledge was included in the contact session as per the session plan.
- The communication that took place when the rules were explained was effective as the students all understood the rules to be followed during the learning tasks.
- The manner in which the students were divided to form the groups worked well as it separated close friends that always work together as a group. This allowed them to be in different groups and get exposure to a wider perspective than they are used to in their closed circle of friends.
- Annelise's support during the group activities kept all the students involved.
- Annelise asked questions to stimulate the students' thinking processes and she did not immediately answer the questions herself if she did not receive immediate responses from the students.
- The musical toys and homemade musical instruments created a relaxed atmosphere as the students used them to create rhythm and this made the singing easier and fun.

- Hand movements easily show anxiety and the students' keeping their hands busy with the instruments allowed them to focus more on what they were singing than trying to think of what to do with their hands.

- We were surprised to see that one of the students who usually appears to be very introverted was the main driver of the activity in his group. He kept on singing when the others became unsure and wanted to stop. When they heard him continuing with the singing they joined in again. He also volunteered on behalf of the group to be the first group to stage their song.

- Usually there are discussions in the groups after the presentations of the other groups and some groups make changes to their presentations based on what they have observed in the presentations that were completed. This did not happen during the current presentations.

  We thought of the following possible reasons for the students not to change their presentations between the presentations of the other groups:
  - It would not have been possible to rehearse the song again if changes were made to the lyrics or the music score;
  - the students might have enjoyed the presentations so much that they did not even think of changing their own presentations;
  - the students might have realised the diversity of the presentations and that they did not mind their presentations to be different from those of the other groups.

- The time management of the activity was effective as the activity was completed within the planned timeframe.

- The students were energised and more alive than what is usually experienced by that time of the day.

ii)   What can be improved in future?

- The greater the number of groups, the longer it takes to allow each group to provide feedback. The option of fewer groups with more members should be experimented with.

- Annelise should include the division of the groups in her planning of the session.

d)   Student feedback

At the end of the contact session some of the groups started to sing their songs again while exiting the venue. Two students commented while leaving the venue after the contact session by saying:

- "It keeps me awake when I come to class straight from night shift. When the facilitator just talks and talks I fall asleep in class after night shift … you know ... even on day shift. Today I didn't even feel tired."
- "Why didn't you start with this way sooner? It surely will help us to remember the work easily."

When the students arrived on campus the following week, the real impact of this activity was displayed. Two students who were in the same group started to sing their song while dancing up the stairs on their way to the venue. In amazement a student who attends another course/module asked them what they were doing. The one student replied (in singing mode): *Revising for the test that we are going to write.*

After they had written the formative assessment test some of the comments were:
- "I remembered all the facts and didn't even have to study. I just sing the song regularly to make sure that I remember the words."
- "The songs made studying easy."
- "Amazing … I never thought that studying can be so entertaining but at the same time being so effective … and actually easy!"

4.7.2.2   The second sing-along learning activity

The next time that Annelise was contracted to facilitate a course/module, she planned another activity in which the students had to, in a musical way, present the ten categories of customer service that are included in a supply chain.

The way in which the learning activity was presented and managed was similar to the session discussed in the foregoing paragraphs. During the planning process for

the second sing-along learning activity, Annelise considered all the aspects for improvement that were identified during the reflection session that followed the first sing-along learning activity.

Video evidence was collected during the second sing-along learning activity. I unexpectedly could not be present as an informed non-participating observer throughout the complete session. I joined Annelise only for the final presentations of the students. The reason for this was not poor scheduling but it was as a result of the implementation of contingency plans due to the absence of a facilitator of learning of another course/module who had a family crisis earlier that morning. The curriculum content of the affected course/module fits within my area of speciality and therefore I had decided rather to facilitate learning in the affected contact session. I could not have left the students who were attending the other course/module without a facilitator for that day's session. The duration of the contact sessions offered at PMI is six hours and it would have been detrimental for the students to lose so much contact time. One of the other participants of the PDP who attended the session as informed non-participative peer observer offered to do the video recording.

The aspects that are mentioned below were noted when analysing the video evidence that was collected during the second sing-along learning activity; the observations made during the final presentations of the students and the content of the reflection session that took place a week after the evidence were recorded.

- Annelise pre-planned the division of the groups. The same method of division that was used during the first data collection session, namely the allocation of numbers to the students, was used. There were fewer groups with more students per group. This decision was based on the recommendation that was made during the reflection session after the first sing-along learning activity. It was believed that less time would be spent on the presentations of the different groups if there were fewer groups. Annelise expected that having fewer groups would allow her to have more time supporting the different groups with matters relating to the learning outcomes that needed to be achieved. There were three groups with six students per group.

- The larger groups created a situation where Annelise had to be more actively involved with the students during the preparation of the song. She had to spend more time within the groups to prevent some students from becoming passive and that they did not merely sit and watch what the other group members were doing or listen to what the others were saying. Therefore she had less quality time for supporting the students in understanding the outcomes that needed to be reached.

During the contact session that was offered the following week, Annelise asked the students what they thought the cause of this problem might have been. One group leader immediately reacted by saying that during class activities, the students concentrate so much on making sense of the subject matter that is discussed that they actually do not even realise that some of the group members are not participating.

After considering the question for a while another group leader said that the group conversation still continued fluently although only four of the group members were actively involved in the group discussions. Two of the other students that were in this group confirmed this and said that they actually did not even realise that some of the group members were not actively involved.

After several reviews of the video evidence that was collected during the second sing-along learning activity and repetitive reflections done by Annelise and myself we realised that the fixed desk layout in the venue contributed to the situation that not all the students actively took part in the group activities.

The fixed desks caused the situation where not all the students in a group had unobstructed eye contact with all the other group members. They were seated either in groups of four and two at each side of the desk or groups of three and three members at each side of the desk.

Only two students per group had unobstructed eye contact with all the group members. The students at the end of the rows were less involved than the students who had unobstructed eye contact with all the members in the group (Figure 20).
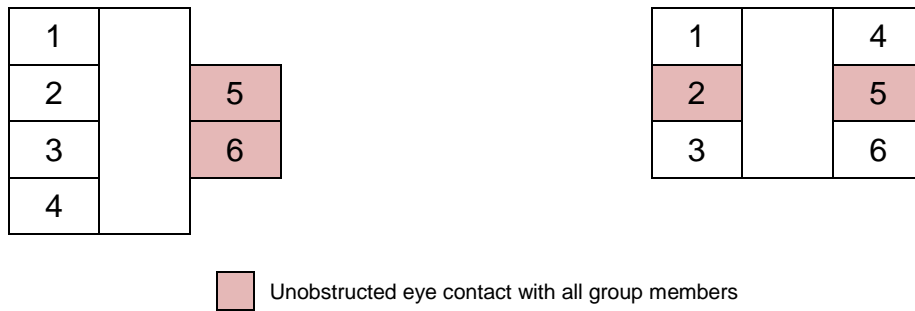
Figure 20: **Two types of fixed desk layout used during group work as part of the second sing-along learning activity.**

The finding that the seating arrangement during the second sing-along learning session had a negative influence on student participation during the learning activity was confirmed by reviewing the video evidence that was collected during the first sing-along learning activity. The students were seated at movable desks and the desks were turned into a circle once the group activity started. Some of the movable desks in the venue where the previous activity took place were wide enough to seat six students around them with enough space for each person to have his or her books on the desk (Figure 21).
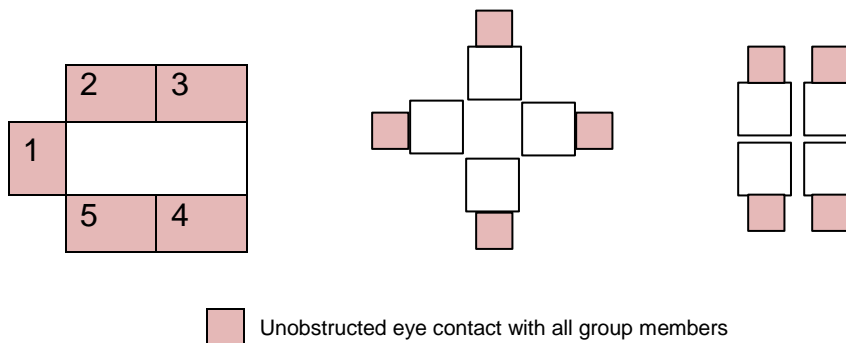
Figure 21: **Three types of movable desk layout used during group work as part of the first sing-along learning activity**

We found that the students sitting opposite one another in the fixed desks experienced a problem to have their notepads in front of them as the desks were too narrow. Our attention was drawn to this as one of the students commented on the fact that the fixed desks create unhealthy ergonomics as they have to sit skew with their books on the desks situated behind them.

Being employed in the industrial manufacturing environment where occupational health and safety (OHS) regulations are very prominent in the students' lives, they sometimes comment on ergonomic factors during contact sessions. The principle of ergonomics is included in the curriculum of some of the courses/modules that form part of the qualification towards which they are studying.

The fixed desk layout also had an impact on the success of group activities in the following ways:

- The fact that some of the group members had to turn around to write in their scripts on the desks behind them resulted in less group participation as even less eye contact was then possible.

- In the groups where the students moved further apart from one another to have space on the desk in front of them the students on the outer seats of the group became close to being completely alienated during the discussions.

- The increase in the sound level during group activities also had a negative effect on the larger groups in the fixed desk seating arrangement. The students in the outer seats of the group could not hear everything that was discussed in the group. This statement is based on a student's reaction when Annelise asked her why she did not take part in the discussions. She stated that she could not hear what the others were saying.

- The rest of the findings correlate with those that were made during the first sing-along session.

An unexpected request came from the students at the end of the second sing-along learning activity for which I was present as informed non-participative observer during the final student presentations. After all the groups had completed their presentations, one student turned to Annelise and me and said: *Now it is your turn – practise what you preach*, while pointing to both of us. The rest of the students reacted in good spirit to the idea and seconded the suggestion aloud.

Without hesitation both Annelise and I agreed to present our version of the same section of the learning content. While the students went on a tea break, Annelise and I prepared our song. After break we presented our version of the theory that had to be discussed (Figure 22). The students responded with a loud cheer.

Figure 22: Taking on the challenge that was set by the learners

After the contact session one of the mature African male students commented that the fact that I was willing to participate in the activity confirmed that I am serious about the improvement of the learning that takes place in PMI. He said that if I had not been willing to take part in a sing along activity myself, it could have been perceived that we just wanted to make fools of them if we expected from them to do something that can be seen as a childish activity.

4.7.2.3 Creating posters as a learning activity

The second innovative method that Annelise used to get the students involved during the contact sessions, that would at the same time allow for learning style flexibility, was the design of posters. This was the first learning activity in which I was not involved. Annelise had grown in confidence that she could work more independently with less support from me. I was also not present during the activities and therefore, what is reported here, is what Annelise told me after the session when she brought the posters for me to see. For this reason the discussions are not as rich as in the previous sections.

The students had to create a poster which would display the complete supply chain cycle of a product. They had to indicate what the criteria were for selecting the specific product of their choice. When presenting the poster, the students had to indicate how the principles that they had used while creating the poster product,

applied in their different working environments.

a)   Order of the activity and the analysis of the theories on which it is based

The students had to create the poster at the beginning of the learning session. The following order for this innovative learning activity was adhered to:

Step 1:   The students had to familiarise themselves with the factual information that is provided in the textbook.

Step 2:   The students were divided into groups.

Step 3:   The rules to be followed when designing the poster were explained.

Step 4:   The students worked in groups to create the posters and plan the presentation.

Step 5:   Students presented the poster.

Figures 23 and 24 display the posters that were created by the learners.

Figure 23: Poster 1
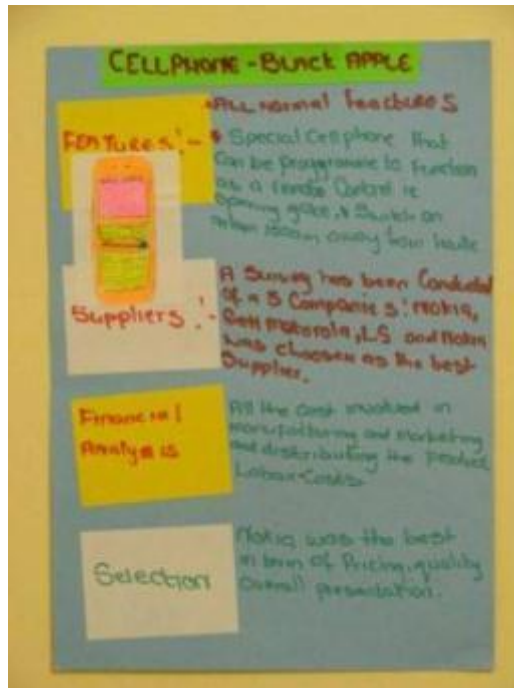
Figure 24: Poster 2

On both posters pictures, text and different colours were used. The students were innovative in the choice of the product that they developed. One group chose a soccer ball to sell as a souvenir of the 2010 Soccer World Cup that was hosted in South Africa (the contact session took place just before the start of the World Cup series). The other group developed a cellular phone that provided the best features of different trademarks.

When planning the activity Annelise used the same structure that we had used to determine which learning and learning style theories would be addressed during the activity. Table 20 displays the order of the activity and the different theories that were addressed.

Table 20:   Order of the activity and the different theories addressed by the activities

Step 1:	The students had to familiarise themselves with the factual information that is provided in the textbook.	
Herrmann	A	The students had to analyse the factual information that appears in the textbook.
	C	Both the students and facilitator of learning were involved as she was present should a question arise.

Gardner	Verbal-linguistic	The students had to read.
	Audible	The students had to listen to what was expected from them.
	Intrapersonal	Understanding must be created by the student himself or herself.
Bloom	Knowledge	Factual information.
	Comprehension	The students had to make sense of the explanations that were provided (also intrapersonal).

Step 2:	The students were divided into groups.	
Herrmann	A	Grouping was done based on numbers allocated to the students.
	B	Students had to group themselves according to the rule as set by the number allocated to each student.
	C	Group work.
Gardner	Logical	Numbers were used in the grouping.
	Interpersonal	Group work.
Bloom	Synthesis	Grouped together according to similar numbers allocated.

Step 3:	The rules to be followed when designing the poster were explained.	
Herrmann	B	The poster had to be created according to rules and the activity had to be completed in a specific sequence.
Gardner	Logic	The activity had to be completed step by step in a specific sequence.
Bloom	Comprehension	Students had to understand the rules.

Step 4:	The students worked in groups to create the posters and plan the presentation.	
Herrmann	A	Facts needed to be included.
	B	Actions done according to rules.
	C	Group work including all members' ideas.
	D	Students had to be creative. Students experienced the activity as being fun.
Gardner	Interpersonal	Group work including all the members' ideas.
	Verbal-linguistic	Students had to explain their ideas to one another.

	Visual/spatial	Considering the layout of the poster and visuals to be used.
Bloom	Knowledge	Factual information needed to be included.
	Comprehension	Understanding the meaning of the concepts in order to provide practical examples.
	Application	Practical examples provided.
	Analysing	Content analysis to identify the concepts that needed to be included.
	Evaluating	Determining the most important concepts to be included.
	Synthesis	Creating the poster.

Step 5:	**Students presented the poster.**	
Herrmann	A	Facts were revised.
	B	The planned sequence of the presentation had to be followed.
	C	All group members were involved.
	D	Students experienced it as being a fun-filled activity.
Gardner	Bodily-kinaesthetic	The students had to stand up and use their hands to point at the different parts under discussion.
	Visual/spatial	The other groups had to observe the poster and the presentation.
	Audible	Students had to listen to the presentation to understand that what was displayed on the poster.
	Interpersonal	All group members were involved.
	Verbal-linguistic	Students had to explain using verbal language.
	Intrapersonal	Some students had to adapt to the situation when feeling uncomfortable with being outside their comfort zones.
Bloom	Knowledge	Facts included in the poster.
	Evaluation	Students evaluated the content and presentation of their own poster against that of the other groups.
	Synthesis	The audience had to link what was said to what was displayed on the poster.

The critical outcomes (CO) and developmental outcomes (DO) that were fulfilled through this learning activity are the same as those fulfilled through the sing-along activities (Section 4.7.2.1 and 4.7.2.2).

b)   Reflecting on creating posters as a learning activity

During a reflection session Annelise provided the following feedback:

- She continuously moved among the different groups to ensure that they understood the theoretical principles correctly. When she noticed a deviation, she asked them questions and each student in the group had to provide his or her view on the topic. In this manner she facilitated the process to develop a deeper understanding of the theory under discussion.
- When she saw that a student was not participating in the group activity, she asked the student questions about his or her understanding of the theoretical principles at hand or prompted the student to provide input about what should be included in the poster.
- The students participated more easily in the poster activity than in the sing-along activities.
- The students enjoyed the learning activity as they laughed all the time while creating the posters.
- There was no hesitance in the groups to present the posters.
- Annelise planned the activity in such a way that not only one student was actively involved and the other students provided ideas and were spectators only. The situation that only one group member is involved is usually created when only one student physically draws the graphics and writes the text on the poster paper.

  In one of the groups all the students wrote a part of the information on a separate piece of paper and each note was then pasted onto the poster card, involving all the group members (Figure 23, p. 238). In the other group one member wrote the words on the poster while others were creating the text that should be displayed. Another member created the headings and graphics on loose paper and yet another one pasted them on designated areas on the poster card while the first member was writing the text (Figure 24, p. 239).
- Writing the information on loose paper that is then later pasted on the poster card made it also more cost effective as the students did not ask for another

piece of poster card if they made a mistake but they used another sheet of A4-format printing paper.

- The loose sheets also allow one to make a final decision regarding the order in which the pages should be pasted while creating the final poster. If they changed their decision while the poster was being designed they could easily change the layout without much effort.

- The physical evidence that was produced on the posters was easily used as a formative assessment task as it did not need any special technology to be captured or to be viewed.

- A disadvantage of a group activity is that not all the students make notes of the ideas that are discussed. Only the scribe of the group has notes and it does not always happen that the other students receive copies of these. The facilitator should remind the students of this situation and urge them all to take notes of that what is said during the group activities.

4.7.3 Reflecting on the successes of Annelise's practice as facilitator of learning

When looking at all the comments that had been made on the observation sheets that were completed while observing Annelise' contact sessions since 2008 and the verbal comments that students made when visiting my office, the most important characteristics that make her so successful as a facilitator of learning can be summarised as follows:

- She is a subject specialist with experience in the industrial manufacturing environment and this allows her to bring practical knowledge to the contact sessions.
- She is well prepared for all the contact sessions.
- All the contact sessions are presented according to a specific plan.
- There is an open and relaxed relationship among her and the students.
- She has a passion for that what she is doing during the contact sessions.
- She motivates the students to excel in everything that they do.

- Students feel free to ask her for advice on issues that can have an effect on their learning.

- Her questioning style has changed from answering the question herself if nobody replies, to a Socratic manner in which she prompts the students to work out the answer themselves.

- Most of the contact sessions are facilitated in a way that respects diversity in any form but especially gender and race issues. This becomes clear as she knows the names of all the students in the class and she ensures to ask direct questions to students of all races and gender.

- She plans activities to allow for learning style flexibility that at the same time fulfil all the aspects of Bloom's taxonomy on which the SAQA level descriptors (SAQA 2010) are based.

- The students participate throughout her contact sessions.

- After the final contact session of a recent course that Annelise facilitated, a student walked into my office saying: "I just want to tell you, no matter whether I will fail or pass the exam, I have learned so much in Annelise's class and you need to know that Annelise is the best facilitator that I ever had in my life". On asking why he said this, his reply was that she allows everyone to participate and if one makes a mistake she helps one to understand. The tasks that they have to do in class create a better understanding of the theory.

When asking Annelise what she thinks the biggest reason for her success is she replied: "Don't expect from others what you yourself are not willing to do." She also said that she experiences that respect goes a far way. If a facilitator of learning has an open relationship with the students they are willing to participate in the activities and they then start taking responsibility for their own learning.

4.7.4   Annelise's practice as assessor of learning

Annelise is not a registered assessor of learning and she has no other experience in the educational environment. She has never been a student in another HE institution as she completed all her studies through PMI. For this reason the only benchmark against which she can measure her practice is that she has experienced as a student in PMI.

For the sake of fairness towards Annelise the following background information is provided for the reader to understand the context in which Annelise operated as an assessor of learning prior to the offering of the PDP.

4.7.4.1 Background information regarding the summative assessment examination standards

Prior to 2009, PMI had no specific guidelines or regulations in place relating to the compiling of examination papers apart from the fact that a total mark allocation of one hundred (100) should be awarded in the examination papers. It was also stipulated that all topics of the curriculum of a course must be included in examination papers. There was no prescribed format relating to the different sections and types of question that must be included or the allowance for a choice of questions to be answered. An explanation of aspects that should be considered during the mark allocation was absent. For example, responses to questions in which examples had to be provided could be allocated two marks if both the fact and the example were correct and applicable.

My biggest concern at that stage was the fact that no mention was made of Bloom's taxonomy although the principles as explained by Bloom formed the basis for all assessments in schools, FETCs and public universities since long before 2009 (Van der Horst and McDonald 1997:37; DoE 1996a; DoE 1996b; DoE 1996c and DoE 1996d). Another concern was created as allowance for learning style flexibility was not mentioned.

The facilitators of learning contracted by PMI therefore compiled examination papers based on what was included in previous examination papers that they received as examples to work from.

After identifying the absence of the principles of Bloom's taxonomy while moderating a variety of examination papers of various courses, I analysed the syllabi of different courses offered by FETCs of which the course content was closely related to the PMI courses. This was done to determine the ratio of marks allocated based on Bloom's taxonomy on different levels of study. The FET syllabi could be used as the

N4 to N6 certificates and the National N-Diplomas are placed on levels 5 and 6 of the NQF, respectively. The different syllabi that were analysed were the following:

- Personnel Management N4, N5 and N6

- Personnel Training N5 and N6

- Labour Relations N5 and N6

- Entrepreneurship and Business Management N4, N5 and N6

- Computer Practice N4, N5 and N6

The principles of Bloom's taxonomy and the mark distribution according to these principles were introduced to the facilitators of learning who were contracted by PMI Gauteng. The information was later distributed to the other branches of PMI (Boshoff 2009). It was then tabled at the next PMI National Academic Committee meeting for approval. At the same time the rule for the inclusion of elective questions in summative assessment examinations and the division of the examination paper into different sections was proposed by both the Gauteng and KZN branches of PMI. This principle was proposed based on the format of the national examinations written in public FETCs and various public university examinations. The PMI National Summative Assessment Format Guidelines (NSAFG) (PMI 2009a) in which the criteria to be followed when compiling examination papers are stipulated, became policy. The information that was distributed regarding the distribution of marks based on Bloom's taxonomy is displayed in Table 21.

Table 21: Prescribed mark distribution according to Bloom's taxonomy

NQF Level	Open or closed book examinations	Knowledge and comprehension	Application	Analysis, synthesis and evaluation
4	Closed	40%	40%	20%
5	Closed	30%	40%	30%
6	Closed	20%	40%	40%
7	Closed	20%	30%	50%

It should be underscored that in some of the FETC syllabi that were analysed it was found that evaluation was not included on the first level of studies after Grade 12

(N4). The examination papers that are discussed below are compiled for examinations on first-year level of studies and therefore the PMI NSAFG do not include evaluation. Figure 25 displays the prescribed mark distribution (weighting) on first-year level which is:

- Knowledge and comprehension: 30%

- Application: 40%

- Analysis and synthesis: 30%
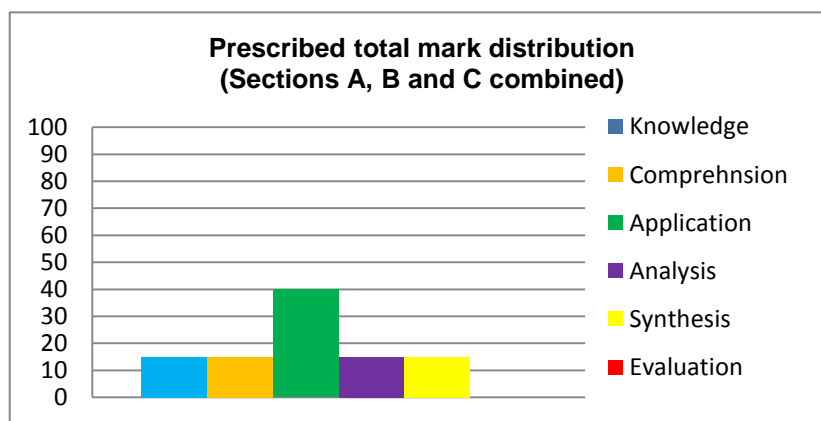
Figure 25: Prescribed total mark distribution according to Bloom's taxonomy

The reason for the large weighting on application is based on PMI's view that the students must be able to apply the theoretical knowledge that they obtain during the contact sessions in a practical manner in the workplace. PMI's learning strategy document specifies that the student must be able to ensure a positive return on investment (ROI) for the employer and this can only be achieved if the student can apply theory in practice.

The examination papers that were analysed as part of Annelise' professional development process were those for the course Logistics Management 1 that is offered on NQF level 5. The instructions relating to the format prescribed for these examinations are displayed in Table 22. All examination papers must consist of three sections:

- Section A must comprise 25 questions with a mark allocation of one mark per question and the questions should cover all/any outcomes; they can be multiple choice test items, fill in the missing word, true/false or matching questions.

- Section B must comprise four questions, each carrying a total mark allocation of fifty marks and they can be a mixture of short and longer (e.g. 12 marks) questions. Students have to complete three out of four questions.

- Section C must be a case study, essay or application type question carrying 25 marks. There must be two questions and students need to complete one question.

Table 22: Prescribed national summative assessment format guidelines (NSAFG) for the course Logistics Management 1 (PMI 2009a:3)

Total mark allocation	200 marks – Closed Book
Number of sections	3
Section A	Questions cover all/any outcomes and are made up of multiple choice test items, fill in the missing word, true/false or matching questions. Mark allocation must be **one mark per question.** (1 x 25)
Section B	This section is made up of 4 questions (each comprising 50 marks and a mix of short and long questions). Learners have to complete 3 out of 4 questions. (3 x 50 = 150)
Section C	This section is a case study or essay/application type question. There should be 2 questions and students need to complete 1. (1 x 25)

4.7.4.2 Summative assessment examination papers compiled before the professional development programme

The information that is provided in this section is partially baseline information that was collected prior to the commencement of the study under discussion. The analyses of the examination papers were done in fulfilment of my task description as being quality assurer of the assessment practices in PMI Gauteng. Analyses were conducted on two written examination papers that were compiled by Annelise before the distribution of the PMI NSAFG and the start of the PDP. The information that was obtained through these analyses was used as benchmark while analysing different other examination papers that were compiled by Annelise. Two examination papers

that were compiled by Annelise during the time that the PDP contact sessions were facilitated and two that she compiled after the completion of the facilitated contact sessions were also analysed.

The repetition of the information represented in the tables and graphs was done on purpose. In order show different brain dominances of the readers of the report (Herrmann International 2009), the same information is represented in different formats.

The tables and graphs below represent the worst case scenarios of the different examination papers that were analysed at different times. The differences that were identified through the analysis of the examination papers were not significant enough to necessitate graphical representations of the outcomes of the analysis of all the individual examination papers.

The first set of analyses that were conducted on the examination papers focused on both the use of the principles of and the mark distribution according to Bloom's taxonomy. The examination papers were later analysed to determine the level of allowance for learning style flexibility based on Herrmann's Whole Brain® theory.

The first examination paper (EP1) was compiled before the distribution of the PMI NSAFG and the facilitation of the contact sessions that were part of the PDP. After determining the areas for improvement I tabled this examination paper (EP1) as one of those that had to be analysed by the participants during the contact sessions of the PDP.

Table 23 displays the mark distribution of the individual questions that were included in a written examination paper for Logistics Management 1 on first year level of study.

Table 23: **Mark distribution of the first analysed summative written examination (EP1) compiled prior to the start of the PDP**

BLOOM																
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Total
Possible marks	15	9	12	7	3	8	4	8	5	5	5	5	5	6	3	%
Knowledge	15		3	7	3	2	2	2	2	3	3		5	6	1	54
Comprehension		5	3			3	2	3		2	2	5			2	27
Application		4	6			3		3								16
Analysis									3							3
Evaluation																0
Synthesis																0
Total	15	9	12	7	3	8	4	8	5	5	5	5	5	6	3	100

HERRMANN																
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Total
Possible marks	15	9	12	7	3	8	4	8	5	5	5	5	5	6	3	100
A	15		3	7	3	2	2	2	5	3	3		5	6	1	57
B		4	6			3		3								16
C		1	1			1		1								4
D		4	2			2	2	2		2	2	5			2	23
Total	15	9	12	7	3	8	4	8	5	5	5	5	5	6	3	100

The highest percentage of questions (81%) assessed only the students' competence in using their two lower level cognitive abilities, namely knowledge and understanding. No questions were included that would assess the students' ability to analyse or synthesise information.

Figure 26 displays the overall mark distribution of EP1 based on Bloom's taxonomy.
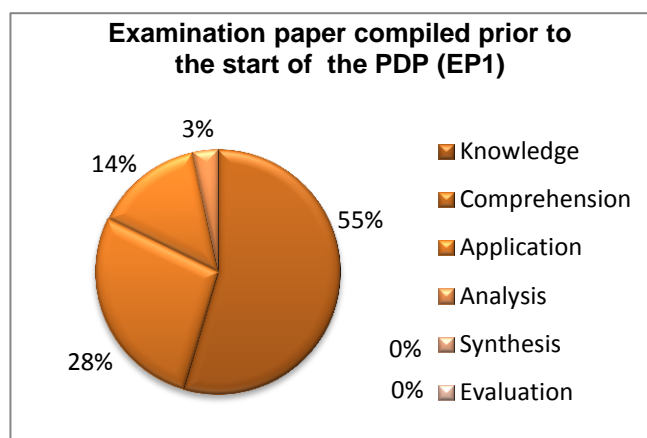
Figure 26: Mark allocation based on Bloom's taxonomy (EP1)

The difference between the actual mark distribution percentages according to Bloom's taxonomy allocated in EP1 and the distribution percentages that were later prescribed is displayed in Table 24.

Table 24: **Difference between the later prescribed and actual mark distribution percentages based on Bloom's taxonomy (EP1)**

	Knowledge and comprehension	Application	Analysis and Synthesis
Prescribed %	30	40	30
Actual %	81	19	0
Deviation	+ 51	- 21	- 30

The main focus of EP1 was on questions that assess *knowledge* and *comprehension* as fifty-one too many marks were allocated to this section. For the section *application* and the section *analysis* and *synthesis* respectively, twenty-one and thirty too few marks were allocated.

When considering the mark distribution relating to Herrmann's Whole Brain® theory, EP1 did not provide the variety of questions needed to allow for an even distribution suiting the possible different learning style preferences of the students.
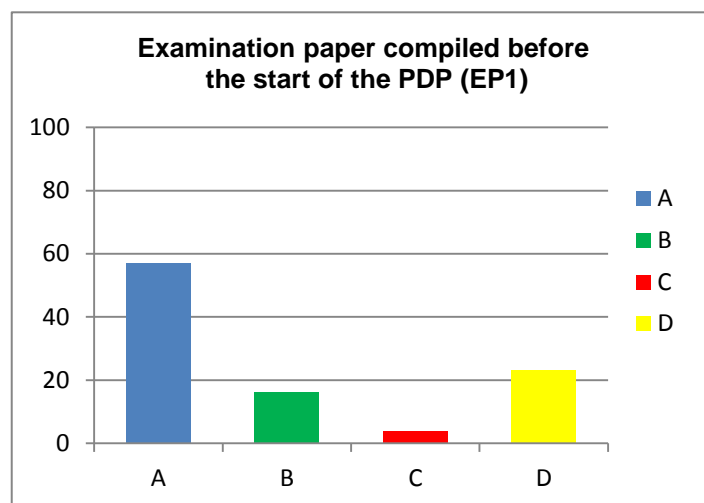
Figure 27: Mark allocation based on the Herrmann Whole Brain® theory (EP1)

Students with A-quadrant dominance were favoured in EP1 as mostly factual information was needed to be recalled from memory. Secondly, the students with D-quadrant dominance and thirdly those with B-quadrant dominance were catered for. The least catered for group were the students with C-quadrant dominance (Figure 27).

While analysing the examination paper to determine the mark distribution according to Bloom's taxonomy and Herrmann's Whole Brain® theory, the following additional concerns were identified:

- All questions were compulsory. This resulted in:
  - the students not having a variety of questions to choose from. Areas of the curriculum that fell in their fields of expertise might have been omitted. This created an unfair advantage for the students whose specialities were included in the examination.
  - a limited range of the curriculum content was included in the examination as the mark allocation should not exceed 100 marks.
- A memory recall margin of 100% was expected. For example, if there were eight principles all eight had to be provided.
- Long introductory paragraphs were used when asking a short question with a mark allocation of three marks of which the answer was based on recall. This resulted in too much time spent on unnecessary reading. The question would have been clear and to the point even if there were no introductory paragraph.
- In some instances the long introductory paragraphs could lead the student to the correct answer.
- The layout of the paper was not consistent and this could frustrate the left brain dominant student. Some mark indications were aligned in the right margin and some were not.
- Different instructions (up to three actions that needed to be taken) were given in one long sentence. These could rather have been divided into sub-questions to make them more organised for the students as they worked against time and might therefore miss some of the instructions that appeared in long sentences.
- The time allocation on the paper was indicated as 08:00 to 11:00 and the true examination times were 09:00 to 12:00.

- An instruction "All questions should be answered with practical examples. If no examples, only 50% will be allocated" appears on the front page of the examination paper. This instruction contradicts the instructions inside the examination paper that instructs the student to name or list concepts. The second sentence in the mentioned instruction is linguistically not correct as it is an incomplete sentence.

- There is no indication in the marking memorandum of how the marks should be allocated in the questions where more than one action was required from the students.

- Unrealistic and inconsistent mark allocation was identified. In all instances where the students had to list or name concepts, one mark was allocated per concept. This is acceptable. Examples of questions of which the mark allocation is unrealistic are provided below.

The table for each question indicates the real marks awarded and the suggested marks that should have been awarded. The suggested marks are based on the amount of information that the students needed to provide according to the guideline answers that were provided in the marking memorandum for the examination paper (Tables 25, 26 and 27).

- **Example 1**: "Name eight […] and explain in detail by using examples from your company what each of the terms means."

The students are instructed to complete three actions but only one mark is allocated per term. Twenty four more marks could have been allocated to this question (Table 26).

Table 25: Example 1 of a question with an unrealistic mark allocation (EP1)

Action	Marks allocated	Suggested mark allocation
Name eight		8
Explain in detail using examples	8	8 x 2 = 16
		8 x 1 = 8
Total marks	8	32
Difference	24	

- **Example 2**: "Name and discuss the four steps of the […] process by using examples from your company to explain your understanding of these steps."

Table 26: Example 2 of a question with an unrealistic mark allocation (EP1)

Action	Marks allocated	Suggested mark allocation
Name four		4
Discuss using examples	8	4 x 2 = 8
		4 x 1 = 4
Total marks	8	16
Difference		8

Inconsistency appears as in this question, although minimal, marks were allocated for discussion and examples (Table 27), whereas there was no allocation for this in the example 1 provided above.

It can, however, be interpreted that the additional four marks could have been allocated for the correct order of the steps. In any context the term 'steps' indicates that a specific order should be followed. There was no indication in the marking memorandum of either a mark allocation for the correct order of the steps in the process or of the way in which the student would be penalised if the steps were not provided in the correct order.

- **Example 3**: "List five differences between […] and […]."

The guideline answers that were provided in the marking memorandum indicated that the student had to know the characteristics of both the concepts. It was not just a case where the one concept comprised something and the other one not. There are distinct differences between the two concepts (Table 28).

Table 27: Example 2 of a question with an unrealistic mark allocation (EP1)

Action	Marks allocated	Suggested mark allocation
List differences	5	5 x 2 = 10
Total marks	5	10
Difference		5

4.7.4.3 Assessment practices during the professional development programme

A part of the curriculum content of the PDP focused on assessment of learning. During one of the contact sessions, the participants of the PDP were introduced to the use of the principles of Bloom's taxonomy and Herrmann's Whole Brain® theory during assessment.

One of the group activities during the specific contact session of the PDP entailed the analysis of previously compiled examination papers in order to determine the level of compliance with the principles of the Bloom and Herrmann theories. During this contact session the group of which Annelise was a member had to analyse the examination paper (EP1), the analysis of which is discussed above. The group findings were very close to the findings that were provided in the discussion above. This displayed that the group members had better insight into the application of the principles of both Bloom's taxonomy and the Herrmann Whole Brain® theory.

a) Annelise's first self-study activity regarding assessment of learning

Additional criteria that should be considered when compiling assessment tasks were only briefly discussed during the contact session. Literature was provided to assist the participants in a self-study activity. Being the mentor for the participating facilitators of learning I arranged a meeting with Annelise. This was done as I was aware that Annelise's HBDI® online test indicated that she is not a reader and due to this, she might possibly never read the literature that was provided during the contact session.

Annelise and I had a general discussion regarding the factors that can have an influence on the quality of assessment tools. The general language errors such as tense errors, spelling errors and semantics were the first to be mentioned. Other criteria such as layout, font size and the mark allocation, to name only a few, were not mentioned at all.

I wanted Annelise to identify the missing criteria herself as I believed that it would be the best way to ensure that she would be able to remember the principles that need to be followed when phrasing questions. Considering the strong correlation between Annelise's and my own preference for Herrmann D-quadrant-based thinking, I realised that there was a strong possibility that she would be able to benefit from the technique that I usually use when trying to improve something. I then explained my actions to her and based my explanation on my own experiences during the professional development of my practice as assessor. I still regularly use the technique when moderating examination papers as part of my role as quality assurer of PMI assessments.

When I want to improve my assessment practice, I "take myself back into time" and imagine myself sitting in an assessment venue, completing a formative assessment task or a summative written examination. I then reflect on the things from the past that have frustrated me most and that created confusion in my mind while completing assessment tasks. I list these frustrations and confusions and after "returning to the present" I analyse the assessment task that I have compiled or the one that needs to be moderated in order to determine whether similar frustrations and confusions are not included in the newly compiled assessment task.

The strongest grounding for my dominant preference for Herrmann C-quadrant-based thinking lies in the hermeneutical principle of "placing oneself in the shoes of others". After compiling an assessment task I try and transpose myself to the knowledge level of the students. I then read and interpret the questions or instructions from the students' point of view, based on the level of knowledge that will be assessed by the specific assessment tool. This practice has often assisted me in identifying ambiguity in assessment questions or instructions.

During our discussion I mentioned to Annelise that some of the areas for improvement are identified while assessing the completed assessment tasks. This was aimed at providing a clue that she should also consider her frustrations as assessor and the aspects that create concerns during the assessment process.

As expected, Annelise could relate to my explanation and I asked her to analyse the

examination paper in order to find whether there were any other areas for improvement.

After a week Annelise reported the following aspects that she could find in the paper:

- The instruction on the front page indicating that all questions should be answered by providing examples contradicts the instruction *Name and list* that are also used in the paper.

- An extra s in the term *total cost* as it is displayed as "*totals cost*".

- Annelise explained in full how the total mark allocation of 100 is not acceptable as one cannot include enough questions to cover the complete curriculum of the course. She also mentioned that it becomes even harder to allocate marks in proportion with what is expected from the student when answering the questions. She mentioned that even less of the curriculum can then be included in an examination paper with a maximum total mark allocation of 100.

Annelise was very relieved to hear that the decision had already been taken by the PMI National Academic Committee to increase the total mark allocation to 200 and that there would be elective sections included in the examination papers.

After she had completed her feedback I mentioned the following aspects that she did not notice that were discussed in the paragraphs above:

- Memory recall margin of 100% that was expected

- Long introductory paragraphs

- Layout of the examination paper

- Time allocation indicated on the front page

- Marking memorandum does not display how the marks should be allocated for questions with multiple instructions.

As I understood Annelise's ability to relate concepts and ideas to various contexts, I then suggested that she regard the examination paper as one of the products that her full-time employer organisation produces. I suggested that she should follow the same steps of total quality assurance as she would follow in order to determine

whether a product is of such standard that it can be expected that there would be no after-sales customer complaints regarding the product.

I then requested that she should analyse the next examination paper that she compiled in the same manner as the EP1 was analysed.

b)   Analysis of the second examination paper (EP2)

The next time that Annelise was contracted to facilitate the contact sessions for the course Logistics Management 1 both Annelise and I analysed the examination paper (EP2) that she had compiled (Table 28). The results that Annelise found by analysing EP2 correlated closely with my findings. This indicated that she had developed a deeper understanding of how to apply the principles of both Bloom's taxonomy and the Herrmann Whole Brain® theory.

Table 28:   Mark distribution of the second analysed summative written examination (EP2), compiled during the PDP

SECTION A (Compulsory – 25 marks)		SECTION B (Choose 3 of the 4 – 50 marks each)				SECTION C (Choose 1 – 25 marks)	
BLOOM		**BLOOM**				**BLOOM**	
	Q1	Q1	Q2	Q3	Q4	Q1	Q2
Knowledge	25	21	41	26	35	17	17
Comprehension		9	6	7			8
Application		14	3	11		8	
Analysis				3			
Synthesis		6		3	15		
Evaluation							
Total	**25**	**50**	**50**	**50**	**50**	**25**	**25**
HERRMANN		**HERRMANN**				**HERRMANN**	
	Q1	Q1	Q2	Q3	Q4	Q1	Q2
A	25	26	41	30	35	17	16
B			15	3	11	8	
C			1	3			
D			8	3	9	15	0	9
Total	**25**	**50**	**50**	**50**	**50**	**25**	**25**
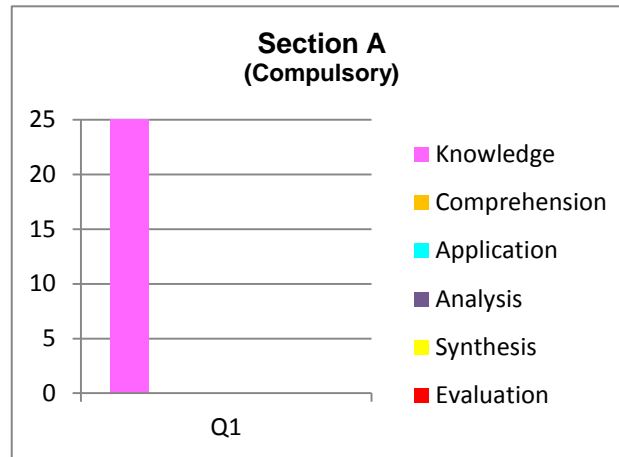
Figure 28: Mark distribution of Section A according to Bloom (EP2)

In section A of the second examination paper that was analysed questions that assess knowledge only were posed (Figure 28) and this correlates with the finding that only Herrmann A-quadrant thinking (Figure 29) was catered for. This is acceptable as it is in line with the PMI NSAFG that stipulates that section A must comprise only short questions to the value of one mark each.
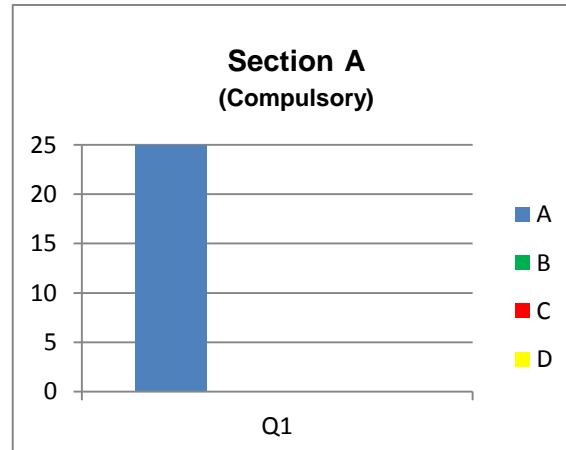
Figure 29: Mark distribution of Section A according to Herrmann (EP2)

The analysis of section B of EP2 (Figure 30) showed the following:

- Section B still focused mainly on knowledge-based recall questions.
- Apart from evaluation (which is not specified in the PMI NSAFG on this level), all the cognitive levels according to Bloom's taxonomy were included in section B of EP2.
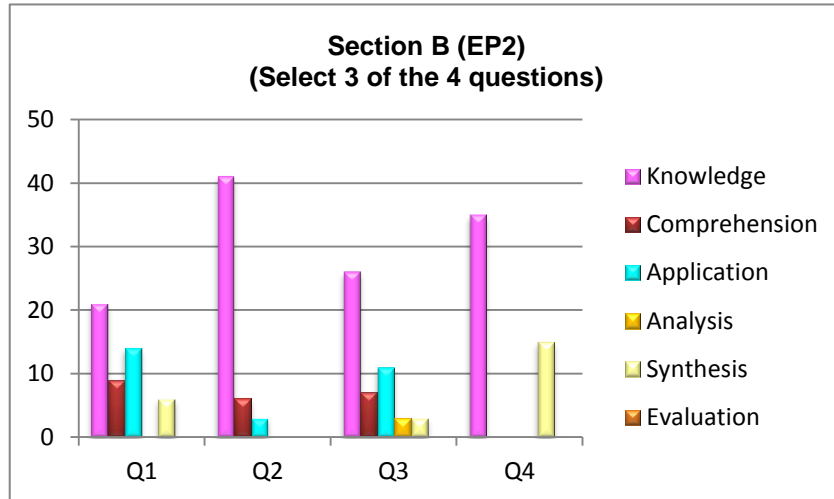
Figure 30: Mark distribution of Section B according to Bloom (EP2)

- The most favourable distribution was found in Question 3 in which all five of the prescribed cognitive skills were assessed. This variety then automatically reduced the number of marks allocated to knowledge-based questions.

- The increased focus on application questions in Questions 1 and 3 also decreased the focus on knowledge questions.

Section C had an equal distribution between the two questions relating to knowledge that was assessed (Figure 31). The large number of marks allocated to knowledge-based questions is unacceptable in section C as the PMI NSAFG stipulates that section C must comprise case studies or essays, which provide excellent opportunity for assessment of the higher level cognitive abilities.
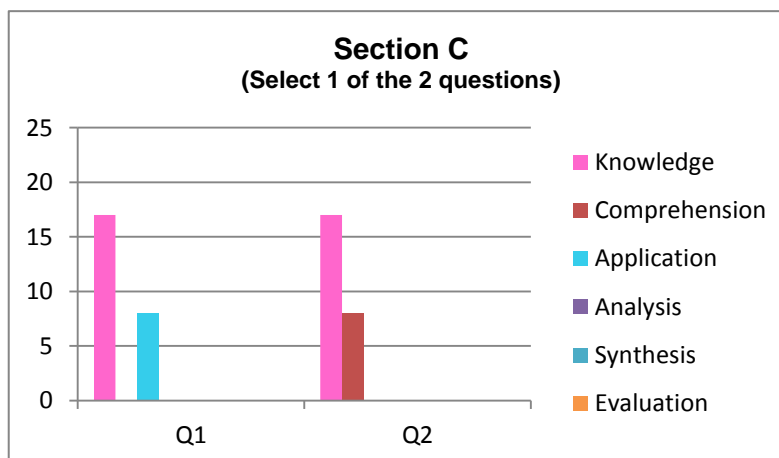
Figure 31: Mark distribution of Section C according to Bloom (EP2)

Comprehension and the ability to apply knowledge were also assessed on an equal level in section C. The cognitive ability that is assessed in section C, apart from knowledge, would depend on the student's selection of the question answered.

More application type questions could have been included in order to fulfil the high target for assessing the students' ability to apply their knowledge in the workplace. The ability to synthesise was included in three of the questions in section B but the prescribed mark distribution was still not reached and the shortfall could have been corrected in this section.

When analysing sections B (Figure 32) and C (Figure 33) of EP2 in relation to Herrmann's Whole Brain® theory it is, as in EP1, the students with a C-quadrant dominance that were challenged the most as hardly any questions allowed for assessment based on quadrant C learning style preferences. As in EP1, students with an A-quadrant dominance were favoured most in EP2.

In contrast to EP1 in which the B-quadrant was the second most represented dominance, the D-quadrant was the second most represented dominance in EP2. This might be the result of the fact that Annelise's highest dominance score lies in the D-quadrant. This could make it easy for her to develop new questions when reflecting on her own most preferred learning style.
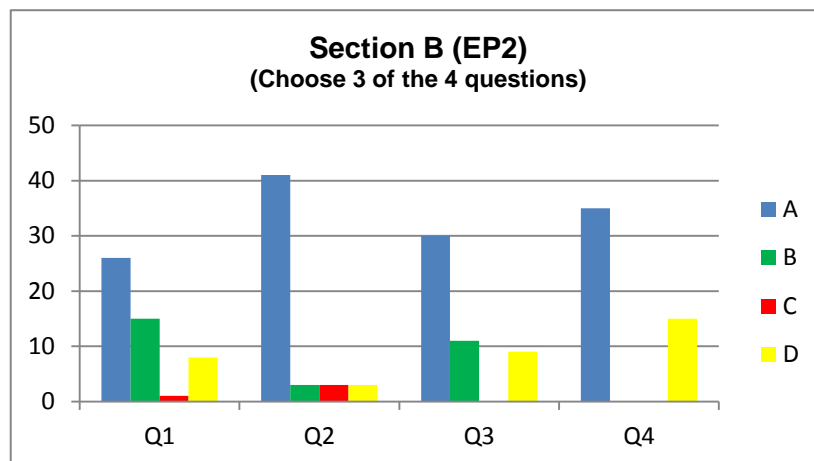
Figure 32: Mark distribution of Section B according to Herrmann (EP2)
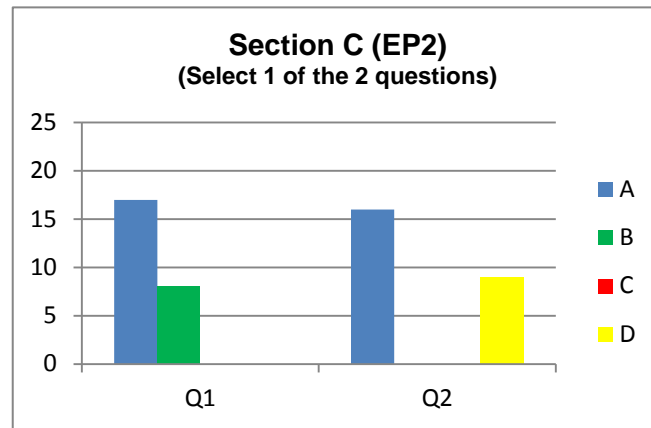
Figure 33: Mark distribution of Section C according to Herrmann.

Annelise had successfully done the mark distribution analysis on her own but I had planned to do the rest of the analysis with her. This was decided while I was reflecting on the experiences of the first analysis of the examination paper that Annelise had to set and my experiences while being a mentor for educators who previously completed a similar PDP that was offered at my previous place of employment. During my previous mentoring process I found that some of my colleagues who hold formal qualifications as educators could not identify the areas of improvement such as layout errors and incomplete phrases used when posing the questions. I realised that it would be a waste of time to ask Annelise to search for other areas for improvement on her own. The simple reason for this was the principle of *if you do not know what you are looking for, you will never find it*.

Although I do not have a high score for the A-quadrant, I find the analysis of examination papers and other assessment tasks enjoyable and I even feel passionate about it. I also experience some of the principles that I have indicated as areas of improvement in the previous paper as logical in the educational environment and cannot understand why others, who are educators by profession, cannot identify the factors.

Both Annelise and I prefer face to face verbal communication. She also prefers to be able to ask the questions that come to mind immediately during the discussions and she wants detailed information regarding the topics under discussion. In face to face discussions she can ask obvious questions, for example *why, how, who* and *how*

types of question and share her thoughts, viewpoints and feelings until she is satisfied that she understands or knows what she needs to understand or know. Face to face discussions also allow immediate feedback, which suits both Annelise' and my personalities. We are curious to find answers immediately and we do not enjoy delayed feedback on communication. Both of us believe that talking is faster than typing and more can be said and done in the same time as it would take to type, for example, an e-mail.

During our analysis of examination paper EP2 we found the following aspects that can create frustration or confusion for the students when completing the written summative examination.

Section A:

- Only true or false questions are used. This does not really assess the students' knowledge as there is a 50% probability that the students can get the answer correct by simply taking a guess.
- Questions 1.6 and 1.8 are identical. This should have been detected by the moderator.
- The following examples serve to indicate the errors that can easily be made by an assessor who is not aware of the fact that compiling short questions is actually a science and an art and not something that can be taken lightly. In order to create valid short questions, there are many aspects to be considered when compiling, for example, multiple choice test items, true or false, completion and matching questions.

The most obvious errors that appeared in EP2 are mentioned below. There were other errors in the questions but the students would have been able to understand the questions in the context of the course content that they had to study.

- The question "The supply chain is the next level of business and has many benefits" is not a valid question as there is no indication of what the previous level is. This was copied verbatim from the learning material and was now placed in the paper without creating context.

- "The two main functions of purchasing are: continuous supply and lowest cost at highest quality." The last phrase in the question as it stands is not a function. It can be regarded as aims of the purchasing function in an organisation. Therefore the answer can be "False". However, the marking memorandum indicated the answer as "True". The term *function* indicates that an action should be taken to attain a goal and therefore a verb should have been inserted. The statement could have read: "The two main functions of purchasing are **ensuring** continuous supply and **attaining** lowest cost at highest quality".

Section B and C:

The following improvements were found:

- A memory recall margin of 100% was not expected anymore. A recall margin of 80% was now expected.
- Long introductory paragraphs that have no purpose were omitted.
- The instruction "All questions should be answered with practical examples. If no examples, only 50% will be allocated" that contradicts instructions such as name and list was omitted.
- The mark allocation for the different questions suited the amount and level of knowledge and cognitive abilities that the students had to display.
- Questions that comprise different actions to be taken were divided into sub-questions.
- The number of allocated marks was indicated by aligning the numbers in the right-hand margin in line with the specific question.
- Question numbers were printed in bold print and therefore made it easy for the student to find the beginning of a question.

New areas for improvement were identified that were related mostly to the physical layout of the examination paper.

- Different font styles were used in different questions. This clearly indicated actions of cut and paste from previous examination papers. They disturb the reading flow and may disturb the students' level of concentration.

- In section C one of the questions runs over to the next page in the middle of a sentence. It is also a question in which various pieces of information are provided to be used to be able to answer the question. The student therefore had to turn back and forth between the pages all the time while answering the question. Apart from disturbing the flow of thought it created additional noise in the venue that might upset some of the students.

Through many years of being an assessor and moderator I have realised that assessors and moderators tend to concentrate mainly on curriculum content and questioning style when compiling or moderating examination papers. Aspects relating to the layout are sometimes not considered at all. It can be argued that curriculum and questioning style are in fact the most important aspects to consider but there is another side to it. Looking at an examination paper from the basis of total quality management principles and from a whole brain perspective, one realises that there are other aspects that are just as important. An assessor should ensure that the students can use all their thinking power to answer the questions during the examinations.

I do not have a high score for B-quadrant thinking but since my school days, layout errors in the examination papers have created huge irritations and frustrations in the examinations that I have had to write. When combining this with my strong C-quadrant dominance I become extremely pedantic about layout in the examination papers as I think that others might also be irritated by the errors and I want to prevent any disturbance in the flow of thought during the examination.

I prefer all paragraphs to be indented in a consistent manner at an equal distance from the margin; line spacing should be used purposively and in a consistent manner and the mark allocation should be aligned in the right margin. The numbers indicating the mark allocation should be right-aligned in accounting style where the ones are below the ones, the tens below the tens and so forth. The beginning and the end of the different sections in an examination paper should be clearly indicated.

A possible reason for the continuation of this strong preference for perfect layout might derive from my eleven years of experience as a Computer Practice lecturer in

a FET college. This course comprises the use of the MSWord and MS Excel application software and document formatting; layout and accuracy are the main focus areas that are assessed. After so many years of assessing document layout I can immediately identify, for example, the slightest changes in character and line spacing, margin sizes, document style and font changes.

My high score in the D-quadrant and my most dominant descriptor being holistic that falls in the D-quadrant might explain the following behaviour. Since I can remember I have copied the information that flows over to a next page in a textbook or a script, but that belongs with the information on the previous page and then pasted it to the bottom of the page where the first part of the information is situated. The reason for this is my preference to see all the information at a glance. Everything must be together in one piece and I do not like to receive bits of information. This is the main reason for my never watching series-based television programmes and my preference for reading short stories and not novels, as I cannot finish reading a novel in one sitting. Short stories in magazines also frustrate me as it becomes a "find the next part" game as small sections are printed on different non-consecutive pages.

In order to ensure that Annelise would not forget about the importance of layout factors in an examination paper, I shared these ideas with her in a fun and humorous way. I realised that it will have a positive effect on Annelise's acceptance of the principles as humour and fun fits in with her strong D-quadrant preference. She can easily imagine things and therefore I could use the way described below to share the information with her. At the same time, it could also enhance her understanding of the principles of the Herrmann Whole Brain® theory.

In a relaxed conversational manner I told her to, from a whole brain perspective, imagine the possible student reactions to the font changes and the continuous turning over of the pages. We imagined that the different dominances may cause the following reactions:

Quadrant A: "Now really, do they not know that this is irritating? It is common knowledge and everybody knows that turning back and forth is irritating."

Quadrant B: "This turning back and forth is wasting my time! They must organise the layout of the paper to be more productive! They teach us learning principles but they do not implement them themselves."

Quadrant C: "Oh, shame! The person who typed this paper does not know how to use the formatting functions in MSWord. I must find out who it is so that I can show him or her how to use the different functions. It will make life easier for everybody."

Quadrant D: "Now how can I solve this irritation? Hm?! Okay, if I fold the page like … this … I can see all the information as a whole as if on one page."

For a left brain dominant reader it might seem to be a silly way of explaining the principles to an adult, but Annelise' reaction was: "*Wow! I never thought of this before!*"

c)   Analysis of the third examination paper (EP3)

The third examination paper (EP3) that was compiled by Annelise is discussed in this section.

Based on the fact that the PMI NSAFG still provided the same criteria that needed to be followed when compiling examination papers, section A of EP3 still focused only on knowledge-based questions and therefore catered for A-quadrant brain dominant students only. The graphical representations for section A have been have omitted in this section as they are exactly the same as those for EP2 (Figures 28 and 29).

Table 29 displays the mark distribution of all sections based on Bloom's taxonomy and the Herrmann Whole Brain® theory.

Table 29: Mark distribution of the third summative written examination (EP3), compiled 18 months after the start of the PDP

	SECTION A		SECTION B (Choose 3 of the 4 – 50 marks each)					SECTION C (Choose 1 – 25 marks)	
	BLOOM		BLOOM					BLOOM	
	Q1		Q1	Q2	Q3	Q4		Q1	Q2
Knowledge	25		15	34	27	25		9	13
Comprehension			11	13	15	20		8	12
Application			11	2	3	5		8	
Analysis					5				
Evaluation			8	1					
Synthesis			5						
Total	**25**		**50**	**50**	**50**	**50**		**25**	**25**

	HERRMANN		HERRMANN					HERRMANN	
	Q1		Q1	Q2	Q3	Q4		Q1	Q2
A	25		15	34	31	25		9	13
B			11	2	3	4		8	
C			6	3	1	1			
D			18	11	15	20		8	12
Total	**25**		**50**	**50**	**50**	**50**		**25**	**25**

When analysing section B of EP3 to determine the mark distribution based on Bloom's taxonomy (Figure 34) we found that Annelise succeeded in posing questions that do not only assess fact-based knowledge but the other cognitive abilities as well.
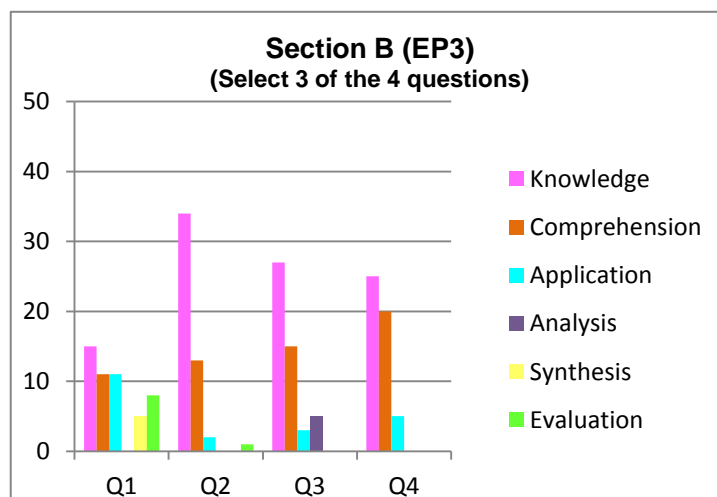
Figure 34: Mark distribution of Section B according to Bloom (EP3)

Assessment to determine the students' comprehension skills received a much higher focus than in both EP1 and EP2. However, the main focus of section B should be on assessing the students' ability to apply their newly constructed knowledge in a practical manner in the workplace. Although all four questions in section B assess practical application skills, the target number of marks was still not achieved.

Hardly any questions were included that would assess the students' ability to analyse data. This becomes a critical concern as this means that CO 4: *Collect, analyse, organise and critically evaluate information* (SAQA 2000:18) was not assessed to the expected standard prescribed in the PMI NSAFG.

Another area that was neglected in EP3 is the assessment of the students' ability to synthesise information and to relate the knowledge to other concepts and contexts.

Although the assessment of the cognitive ability of the students to evaluate something is not prescribed on this level, a few marks were allocated to evaluation type questions. The number of marks allocated to assess this ability is very small in relation to the total mark allocation for EP3 and therefore it does not create any concerns. Evaluation questions were included in elective questions and the students could then elect not to answer Question 1 of section B that carries the greatest weight for evaluation questions.

The question in section B of EP3 that shows the best distribution is Question 1. The inclusion of a question that asked the students to analyse information could have balanced the question to get even closer to the prescribed mark distribution.

A better distribution is found in section C of EP3 (Figure 35) than what the case was in EP2. Unfortunately apart from knowledge-based questions that should actually not have been included in section C, comprehension was the largest focus. The shortage of marks towards assessment of the cognitive abilities analysis and synthesis could have been corrected in this section.
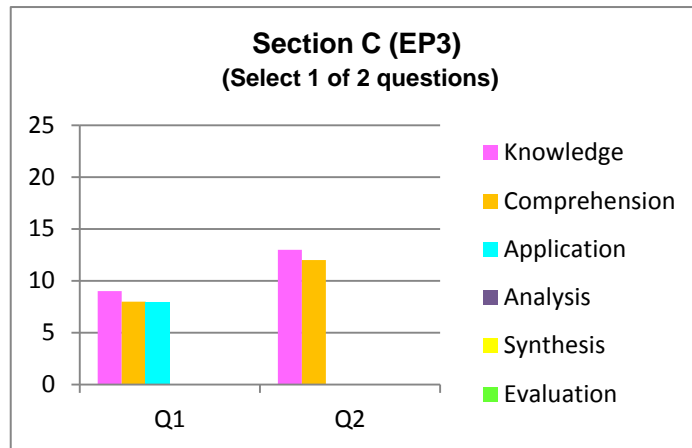
Figure 35: Mark distribution of Section C according to Bloom (EP3)

Section B of EP3 contained the best mark distribution according to the Herrmann brain dominance model (Figure 36). Questions based on all four quadrants were included in all the questions of section B of EP3. Therefore it can be said that of the three examination papers that were analysed, EP3 accommodated learning style flexibility best.
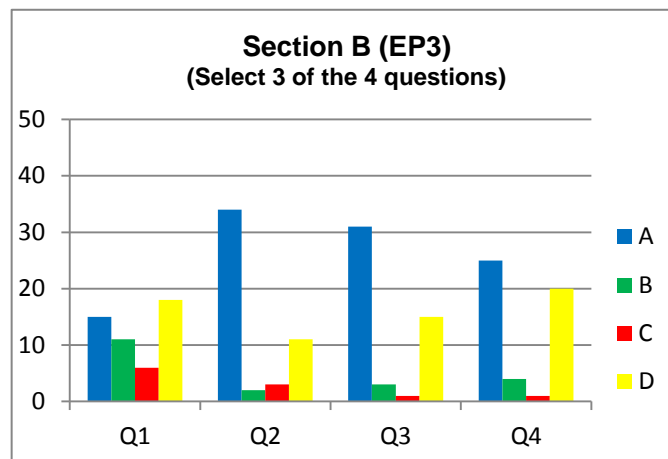
Figure 36: Mark distribution of Section B according to Herrmann (EP3)

Although the distribution is still very skew, with the order of accommodating learning style flexibility being A (105), D (64), B (20), C (11), the students would have been challenged to use all four the metaphorical quadrants of their brains.

As in EP2, the questions in Section C of EP3 (Figure 37) did not allow for the use of C-quadrant brain dominance thinking. Question 1 in this section showed a nearly

equal distribution for the other three quadrants. Of all the examination papers that were analysed, this was the only question in which such a close distribution was used.
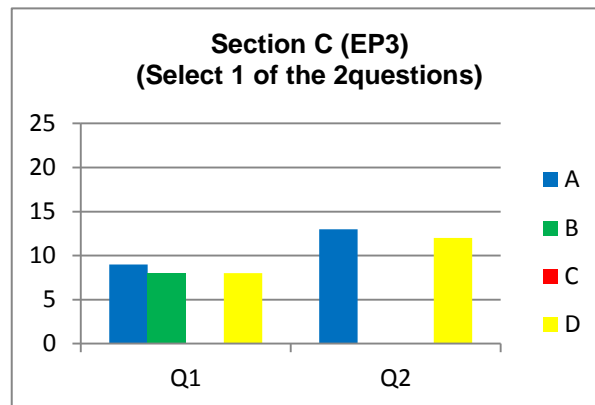
Figure 37: Mark distribution of Section C according to Herrmann (EP3)

When analysing EP3 to determine the general quality relating to, for example ambiguity, layout and language, it was found that the layout was very neat. The questions in sections B and C were divided into sub-questions and the mark allocation numbers were aligned in the right-hand margin in accounting style. Graphics were included in the examination paper and these were also neat and clear.

Two errors were found in the examination paper:

- Section A, question 1.1: The statement does not make sense the first time that one reads it. As a true or false question, the statement was posed as: "Logistics adds value when inventory if placed correctly to facilitate sales."

At first glance it seems as if commas would correct the statement. I have tried to add the commas as shown below. This did not work as the word 'to' should then also be deleted. It still would not have been an easy sentence to interpret.

"Logistics adds value when inventory [comma] if placed correctly [comma] to [delete] facilitate sales."

Only after the fourth time that I read the statement did I realise that the error lies in the word "if" that should have been "is". The statement would then read:

"Logistics adds value when inventory [is] placed correctly to facilitate sales."

It might seem to be an unrealistic concern as the mark allocation is only one mark. However, My C-quadrant dominance urged me to be more concerned about the psychological effect that the error could have on students. As the first question in the examination paper, it wasted the students' time right from the onset of the examination. A student who was very nervous or who was not well prepared for whatever reason, might have thought that he or she could just as well give up as he or she could not even understand the first question in the examination paper.

- The next error appeared in section B. The introductory sentence of the question which was supposed to create context for the students read:

"To achieve this value added goal transportation must meet three fundamental factors [.]" The students then had to name and explain the factors and they had to provide examples of how these factors can be applied in their own work place. The use of the phrase "this value added goal" is not acceptable as there might have been different value added goals. The statement should have been specific about which goal it is referring to.

Another concern that was raised by these errors is the quality of the moderation that takes place. However, by reflecting on my own practice while I was still a full-time facilitator of learning, I realised that one reads something against a given context if one facilitates a course. I have read this statement without knowing the curriculum content and the moderator read it while knowing the curriculum content. The moderators are not educators by profession and therefore they will not be able to identify these errors in examination papers.

This realisation made me aware of the need to include moderation skills in the curriculum of a PDP offered to the facilitators of learning.

4.7.4.4   Summary of and reflection on the examination paper analysis

When consolidating the information obtained during the separate analyses discussed above, one can create a clearer picture of the mark distribution in the analysed examination papers, based on Bloom's taxonomy (Figure 38) and the Herrmann Whole Brain® theory (Figure 39).

It is clear that the examination papers assess mostly knowledge, secondly comprehension and only in the third instance the application abilities of the students. According to the prescribed mark distribution which is stipulated in the PMI NSAFG, the main focus of the examination papers on first-year level should be on assessing the students' ability to apply their newly constructed knowledge in the workplace. Analysing and synthesising abilities are hardly ever assessed during written summative assessments.
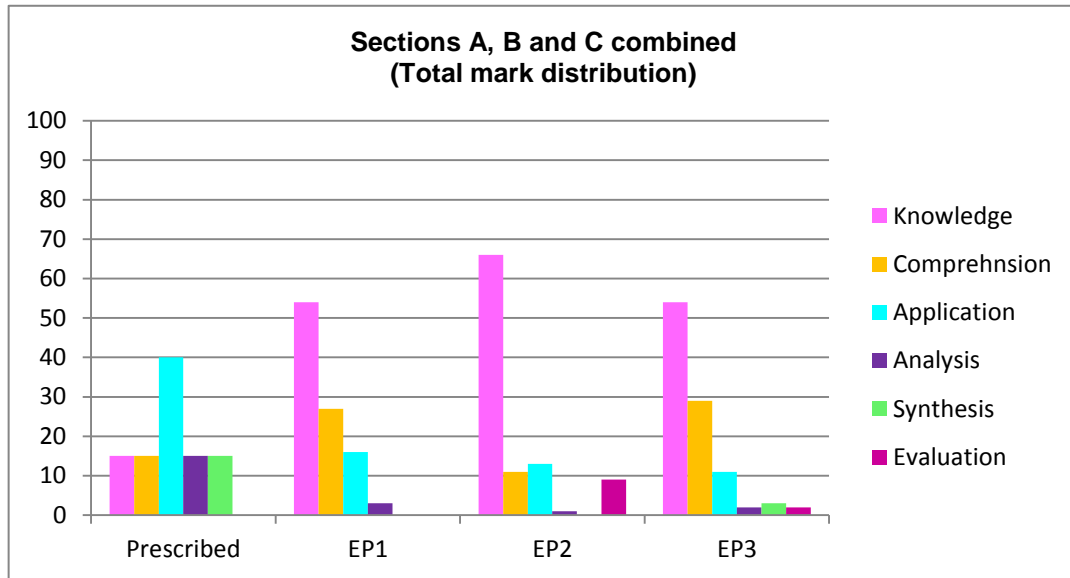
Figure 38:   Mark distribution of all sections combined according to Bloom (EP1, EP2 and EP3)
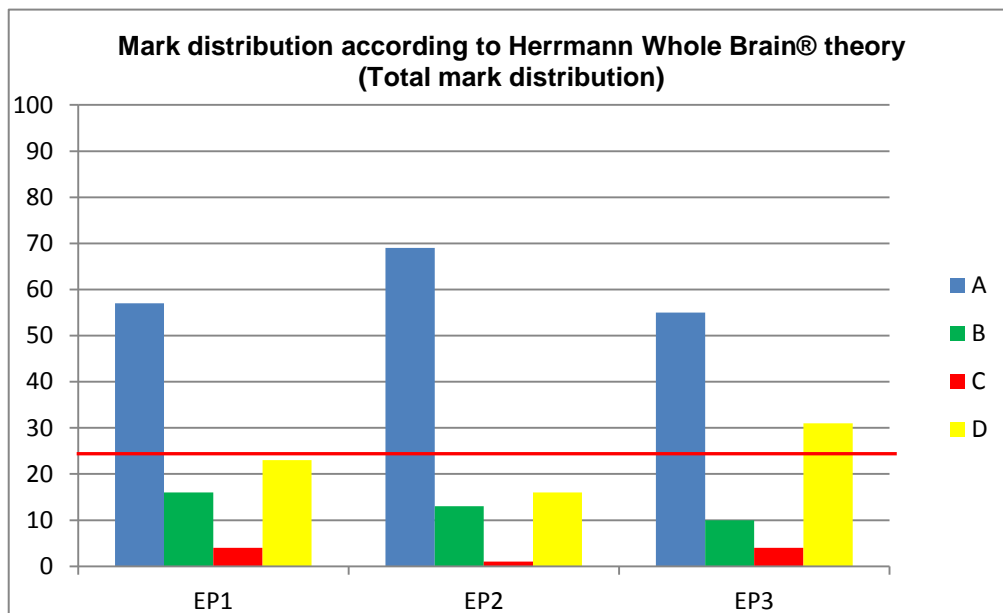
Figure 39: Mark distribution of all sections combined according to Herrmann (EP1, EP2 and EP3)

It becomes clear that there is a direct relation between the principles of Bloom's taxonomy and the Herrmann Whole Brain® theory. This can be stated as the same levels of variation are observed in the specific examination papers that were analysed. EP2 and EP3 show the same pattern of change in the mark distribution according to Bloom's taxonomy as displayed when analysing the mark distribution in relation to the Herrmann Whole Brain® theory. In both cases EP3 moves back to a similar pattern as displayed for EP1.

An equal distribution of 25% is the aim when considering the mark distribution according to Herrmann (indicated by the red horizontal gridline in Figure 39). This indicates a perfectly equal accommodation of learning style flexibility. Annelise and I discussed the trend that knowledge is still assessed mostly in the examination papers and the following ideas crystallised:

- EP1 was compiled at a time before the development of the criteria that are specified in the PMI NSAFG. Therefore Annelise compiled questions that she thought would be appropriate to assess the students' knowledge and understanding (comprehension) of the curriculum content.

Annelise still believes that the students should know the theory by heart as they need to know the principles when continuing onto the second year of studies. The theoretical knowledge obtained at first year level is used as the basis for further development of the subject-related theories on second and third year of study.

- EP2 was the first examination paper that Annelise compiled after the PMI NSAFG was distributed.

She commented that she had tried to focus less on assessing the students' comprehension abilities and tried to include more questions that would assess their higher level cognitive abilities. This becomes evident when observing the higher focus on questions that require application. A small margin of questions that assess the ability to analyse and evaluate information was also included in EP2.

On asking Annelise why the focus moved so much more to the assessment of knowledge, she mentioned something that the members of the PMI National Academic Committee, while compiling the PMI NSAFG, did not anticipate to happen.

The 25 one-mark questions that are stipulated to be included in section A of the examination papers assess knowledge. This means that 12,5% of the prescribed 15% has then already been used. For section B it is stipulated that short questions can also be included and therefore even more space for the assessment of knowledge is created.

The members of the PMI National Academic Committee are all aware of the fact that short questions can be used to assess higher cognitive abilities. Therefore it was believed that the short questions that could be included in section B would focus on assessing at least comprehension abilities, to which 15% of the total mark allocation was allotted. We have lost sight of the fact that the facilitators of learning who are contracted by PMI are not educators by profession and therefore they will find it hard to create short questions that would assess the higher cognitive abilities of the students.

Another aspect that crystallised was that the term *short questions* is used when describing the type of question that can be used in section B. This immediately creates the perception that it also refers to one-mark questions. The description should rather refer to shorter types of question and example verbs, such as *describe* and *explain* should be provided.

Annelise's remarks made it clear that the deeper meaning of the principles of Bloom's taxonomy and their application, when compiling assessment questions, should be introduced to the facilitators of learning in a formally facilitated manner. Therefore they must also be included in the curriculum of the PDP that is offered to facilitators of learning, especially if they are not educators by profession.

- When looking at the overall mark distribution of EP3 it was found that the mark distribution was very similar to the distribution in EP1. Annelise mentioned that

she had tried to include more questions that assess comprehension abilities in order to reduce the mark allocation towards knowledge-based questions.

Annelise then, very hesitantly, mentioned something that is a concern for many of the facilitators of learning and that is mentioned regularly when the Academic Co-ordinator requests the submission of the examination papers for the courses facilitated at that time. She explained how time has an influence on the quality of the examination papers. She mentioned aspects such as the time that it takes to prepare for the contact sessions, to compile examination papers and tests, the short timespan in which the courses are offered at PMI Gauteng in relation to the number of formative assessments done and the good practice of using formative assessment results as a diagnostic tool to determine areas in which remediation is needed. These matters are discussed more comprehensively in Section 4.12.1.1. as part of the discussion on the constraints that were experienced during the study.

4.7.4.5   Formative assessment tasks

When I found that the summative assessment papers focus mostly on the assessment of knowledge and the ability to comprehend the concepts included in the curriculum, I decided to try and determine whether the formative assessment tasks are on the same level.

An in-depth analysis of the formative assessment tasks, such as the examination papers, was not conducted. An analysis on the same level as that undertaken by a moderator produced evidence that the formative assessment class tests focus mainly on knowledge. A large number of questions, are however, included in the tests that can assess the students' ability to apply the newly constructed knowledge in the workplace.

The assignments are very practically-orientated. Some of the tasks are based on case studies that Annelise sourced from the textbook of the course or from an alternative subject-related book. Some of the case studies are based on real-life situations that were narrated by students during the contact sessions of the previous time that the course was offered.

Learning style flexibility is also catered for. An example of a whole brain assignment that was used as a formative assessment task included the following:

- Analyse the facts in the case study (A-quadrant).
- Draw the proposed new layout of the business in the case study to improve the logistical processes (D-quadrant).
- Develop an implementation plan (B-quadrant) for the change process.
- Consider how change can influence client satisfaction (C-quadrant).

I was satisfied that the assignments definitely filled the gap in assessing the higher cognitive abilities of the students.

I suggested that Annelise include some of the questions that are posed in the assignments in section C of the next examination paper that she compiled.

4.7.4.6 Score distribution of the individual students

After the student results of the second examination paper (EP2) that was analysed and discussed in Section 4.7.4.3 were published, the score distribution was compared with the student scores of the first examination paper (EP1). The same was done after the third examination paper (EP3) was written and the results were published.

The scatter graphs (Figures 40, 41 and 42) display the results of the following:

- The formative assessment tasks that were completed during the course (2 tests and 2 assignments).
- The formative average score is calculated based on an equal distribution of 25% each of the total score for the two formative assessment tests and two formative assessment assignments.
- The examination score is the score that was obtained by completing the summative written examination.
- The pass line indicates a pass if the student scored greater than or equal to ($\geq$) 50%.

- The distinction line indicates a distinction if the student scored greater than or equal to (≥) 75%.

For the sake of ease during comparison, the scatter graphs displaying the results of all the score analyses have been placed on one sheet.

a) Student results in Course 1

EP1 was written prior to the distribution of the PMI NSAFG and the start of the PDP referred to in this study. The contact sessions of the course were offered by using the traditional lecturing style. The lecturers (sic) were not aware of the principles of Bloom's taxonomy and/or learning style flexibility.

When analysing the scatter graph of C1 (Figure 40) the following was found:

- Seventeen students attended the course;
- By looking at the scatter graph of C1 the immediate visual impression that is created is that the scores are widely scattered.
- There is a significant variance between test 1 (T1) and test 2 (T2):
  - The difference between the averages for T1 and T2 is 14.94%.
  - T1 shows 3 distinctions, 12 passes and 2 failures.
  - T2 shows 13 distinctions, 3 passes and 1 failure.

This appearance creates the impression that T2 was set at a lower standard than T1. There is no correlation between the results of T2 and any other results that are included in the chart.
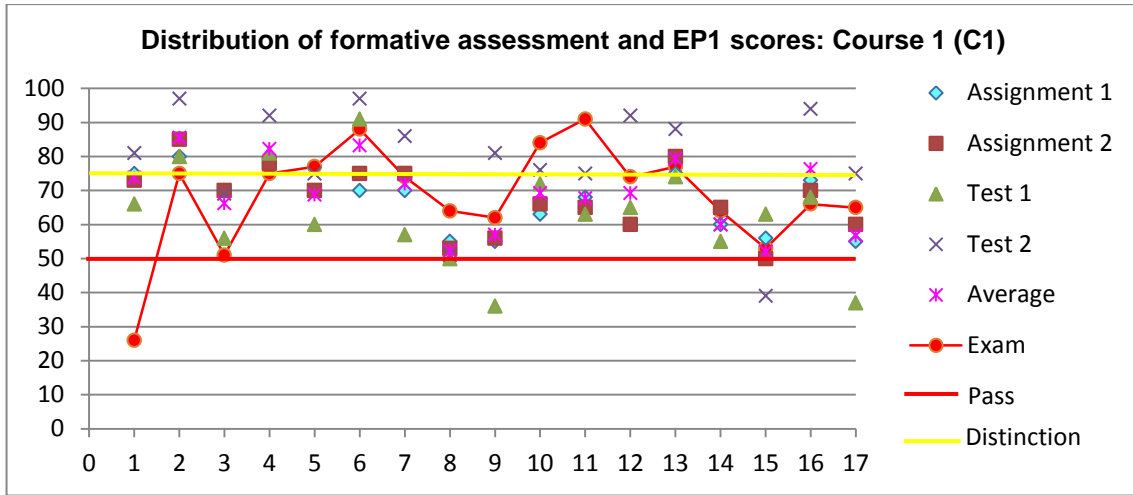
Figure 40: Distribution of student scores: Formative assessments and 1st examination paper (EP1)
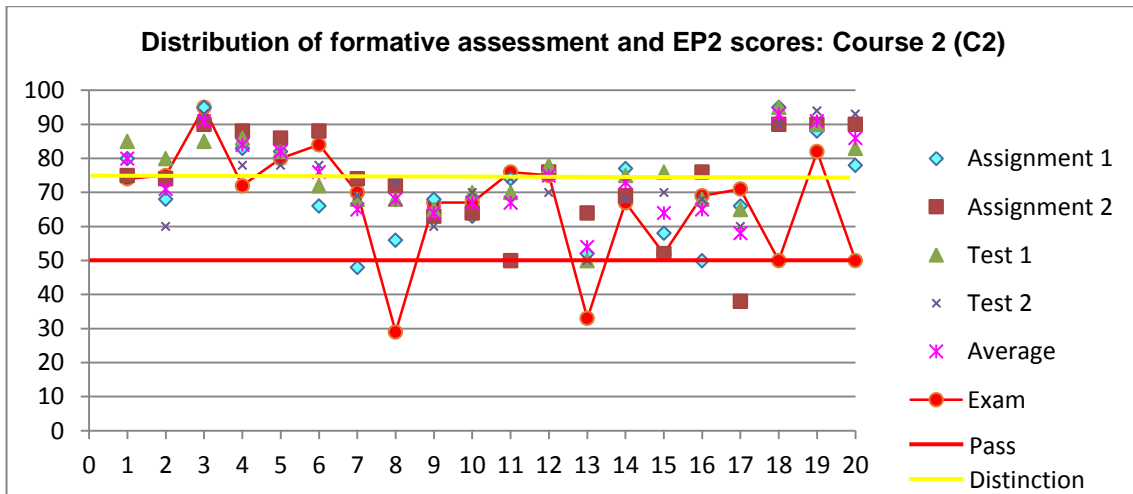
Figure 41: Distribution of student scores: Formative assessments and 2nd examination paper (EP2)
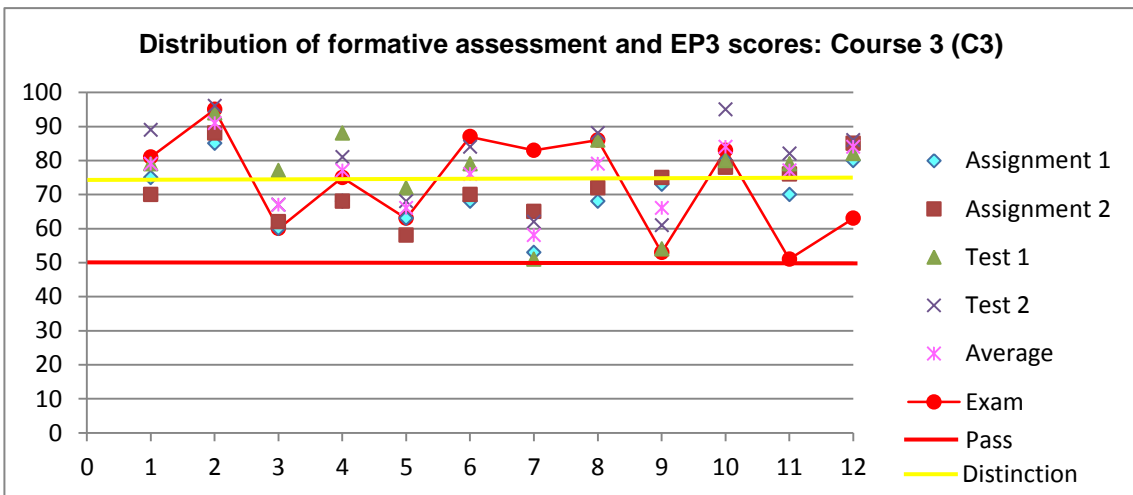
Figure 42: Distribution of learner scores: Formative assessments and 3rd examination paper (EP3)

- The difference between assignment 1 (A1) and assignment 2 (A2) is not significant.
  - There is a difference of only 1,06% between the average scores of the two assignments.
  - Only one student has a difference of 6%; six students have a difference of 5% and 10 students had a difference of less than or equal to 3%.
- In only some instances is the difference between the average score (AS) and the examination score (ES) significant.
  - 11 students performed better in the examination than their AS.
  - The most significant improvement was 23%.
  - Six students scored lower in the examination than their AS.
  - The most significant decrease in performance was 48%. The student had an AS of 74% with two distinctions in the formative assessments and then scored 26 % in the examination. There was no indication in the student file of any mitigating circumstances that were reported by the student or the student's employer.
  - Seven students obtained distinctions in EP1 and all seven obtained distinctions in one or more of the formative assessments.

b) Student results in Course 2
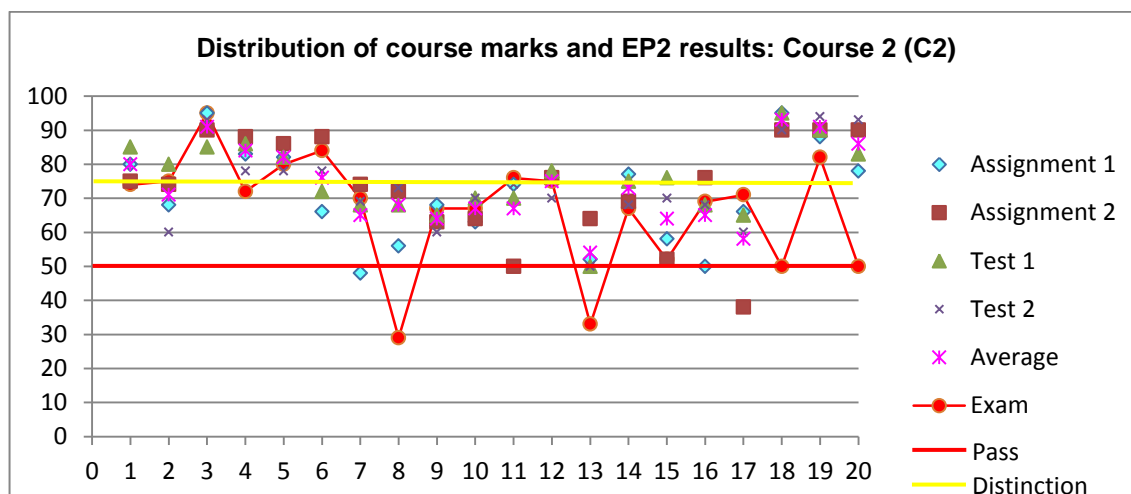
Figure 43: Distribution of student results: Course scores and 2nd examination paper (EP2) (Copy of Figure 41 for easy reference)

EP2 was written after the distribution of the PMI NSAFG and after the commencement of the PDP referred to in this study. The contact sessions of the course were offered by using a more learning orientated approach in which the lecturer becomes a facilitator of learning. Annelise was also more aware of the principles of Bloom's taxonomy and the value of allowing learning style flexibility.

Annelise had improved her questioning style during the running of the second course and she also facilitated a sing-along learning session and a poster designing learning session.

When analysing the scatter graph of C2 (Figure 43) the following was found:

- 20 students attended the course;
- The immediate visual impression that is created by the scatter graph of C2 is that the scores are not as widely scattered as in the case during C1.
- There is not a significant difference between the results of T1 and T2:

    - Only student 2 displayed poorer performance in T2 by scoring 20% less in T2 than in T1.

This can be interpreted as evidence that the two tests were set at the same level of difficulty.

- The difference between A1 and A2 is not significant.
    - There is a difference of only 2,03% between the average scores obtained in the two assignments.
    - Students 7, 8, and 16 scored less in A1 than in the rest of the formative assessment tasks. Student 7 failed A1 although the other scores were distributed in close range.
    - The students scored well in A2 except for students 11 and 17 who experienced a drop of 24% and 28% respectively from what their scores for A1 were. Student 17 failed A2.

- Only in some instances is the difference between the average score (AS) and the examination score (ES) significant.

  - 8 students performed better in EP2 than their AS. The most significant improvement was 13%.

  - 11 students scored less in the examination than their AS. This can be regarded as normal as the amount of work that has to be studied for the examination is much more than the amount that needs to be studied for summative assessment tests. The assignments are completed in the students' own time and they do not need to complete questions that test higher cognitive abilities in a fixed time allowance as in the examination.

  - The most significant decrease in performance was experienced by students 8, 13, 18 and 20. The decreases were 39%, 21%, 43% and 36% respectively.

  - Student 8 and 13 failed EP2.

    - The reason for the drop in performance by student 8 is not known.

    - Student 13 was on the border of failure in all the formative assessments except for A2. During formative assessment tests the amount of work that has to be studied is much less than for the examination. If a student does not perform well in the class tests it usually results in poor performance during the examination.

    - The decrease in performance of student 18 fits in with the trend or history throughout the student's studies. The student had completed three previously scheduled courses in which a high average formative assessment score was obtained but the examinations were failed. In one examination the student's score was just high enough to allow the student to sit for a supplementary examination.

      This student does not work in the industrial manufacturing environment and therefore finds it hard to apply the newly constructed knowledge in examples that are based in the workplace. The focus area of PMI's HE qualifications is industrial manufacturing and therefore the questions in the examination papers are based

mostly on scenarios in this environment. The student has decided to deregister.

- The 36% decrease in the results of student 20 might be work-related. The administrative staff indicated that the student regularly complained about fatigue that was created due to overtime and nightshift work.

- Seven students obtained distinctions in EP2 of whom six obtained distinctions in one or more of the formative assessments.

- Student 11 did poorly in A2 but just missed the distinctions in the other formative assessment tasks. However, the student improved the performance in the examination and obtained a distinction for the summative written examination.

c) Student results in Course 3
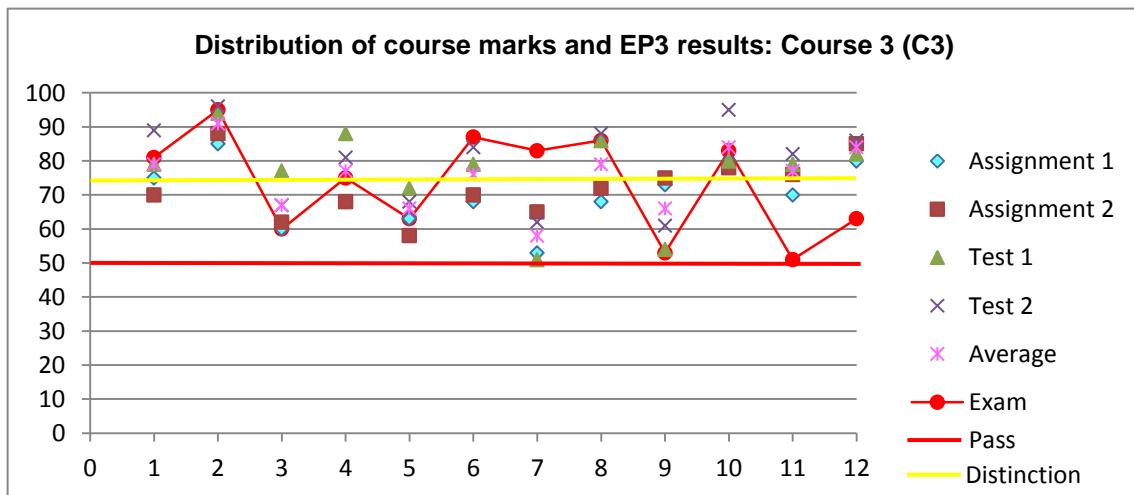
Figure 44: Distribution of learner results: Course marks and 3rd examination paper (EP3) (Copy of Figure 42 for easy reference)

EP3 was the written summative assessment examination that the students, who were in the second group that Annelise facilitated in an innovative manner, had to complete. There were no changes in the PMI NSAFG. The contact sessions of the course were offered by using more learning-orientated learning activities than those used during course 2 (C2).

Annelise improved her questioning style further during the running of the third

course. She again included a sing-along learning session and a poster designing learning session. She planned more group activities that were problem-based and the students had to present their findings to the rest of the group. The group members could decide among themselves how they wanted to present the findings to the other groups. It could, for example, be in poster format, a song or a debate on the topic staged by the group members.

When analysing the scatter graph of C3 (Figure 44) the following was found:

- 12 students attended the course.
- All the students passed all assessments.
- The visual impression that is created by the scatter graph of C3 is that the scores are even less scattered than those of the students attending C2.

- There is not a significant difference between the results of T1 and T2:
    - In most of the cases the difference in the students' scores in the two tests were less than or equal to ($\leq$) 10. Only two students' scores displayed differences of 11% and 15%.

This can be interpreted as evidence that the two tests were set at the same level of difficulty.

- The difference between A1 and A2 is not significant.
    - There is a difference of only 2% between the average scores of the two assignments.
    - Only one student showed a difference of 12% between the scores of A1 and A2. The rest of the students all had a difference of less or equal to ($\leq$) 6.

This can be interpreted as evidence that the two assignments were set at the same level of difficulty.

- Only in some instances is the difference between the average formative assessment score (AS) and the examination score (ES) significant.

- 5 students performed better in EP3 than their AS. The most significant improvement was 25%. This student attended a "Learn how to learn" session that was scheduled two weeks before the date on which EP3 was completed. I facilitate these sessions on a quarterly basis on campus as part of my initiative to fulfil the part of my task description that relates to student support. All the enrolled students in the HE division of PMI are invited to attend these sessions on a voluntary basis.
- 7 students scored less in the examination than their AS.
- The most significant decrease in performance was experienced by students 11 and 20. The decreases were 26% and 21% respectively. The reasons for the decrease in performance are not known.

- Although the range of the scores of the formative assessments of C3 are not as narrow as that experienced in C1, the average score range of the whole group is more consistent than in C1 and C2.

- The obvious zigzag pattern created in this scatter graph might be interpreted as a developed outcome for window dressing purposes. A false impression of such nature will have a negative effect on the validity and credibility of the information provided.

In order to validate the information that is displayed in the chart the following was done:

- It was confirmed that the dataset was organised in ascending alphabetical order according to the students' surnames.
- In order to ensure that the dataset was not corrupted due to a MS Excel function, such as the sort function that was used incorrectly, the following was done:
  - The examination scripts were drawn from the archive and the correctness of the capturing of the results was verified.
  - Electronically scanned copies of all formative assessments conducted in the HE division of PMI Gauteng are stored on the main server in PDF format that cannot be changed. As the size of the group was

small, the correctness of the capturing of all the formative assessment scores was verified.

d)   Comparing the ranges of student scores of all three courses

When calculating the ranges of the assessment scores based on all the formative as well as the summative assessment tasks, the following was found:

Table 30: Calculated score range information

Course	Average range	Median range	Number of Outliers (Narrow Range)	Number of Outliers (Wide Range)
C1	25.9	24	1	3
C2	21.5	19.3	4	4
C3	20.4	19	0	2

Fewer small range outliers were created when a smaller focus was placed on the assessment of the student's cognitive ability of answering questions that are knowledge-based. This interpretation is based on the correlation between the smaller focus on knowledge-based questions that were included in the assessments of C1 and C3 (Figure 47, p. 288) and the fewer small range outliers that were experienced in the C1 and C3 assessments (Table 30).

The student preparation for the tests usually involves mostly rote learning as the main focus of the tests is the assessment of the lower level cognitive abilities, namely knowledge retrieval and comprehension. The assignments are practically orientated and assess the students' higher level cognitive abilities, namely the ability to apply, analyse and evaluate the information that is provided in the curriculum content and in the assessment tasks.

When one considers that the formative tests assess mostly lower level cognitive abilities, it can be expected that the students will achieve higher scores in the tests than in the assignments that assess higher level cognitive abilities. One can then understand why a wider range of results appears when the range is calculated by including all assessment tasks.

The analysis of EP2 showed that only the four lower levels of cognitive ability described by Bloom were assessed. The same might have been the case with the formative assessment tasks. As mentioned in paragraph 4.7.4.5, an in-depth study of the formative assessment tasks has not been done. Annelise mentioned that her formative assessment tasks are usually on the same level as the examination paper in order to prepare the students for the type of questions that can be posed during the summative written examination. This can be the reason for the increase in the small ranges of score distribution that were experienced in C2.

Similar to the narrow range outliers, fewer wide range outliers were experienced in C1 and C3. It is believed that the outlier wide ranges of close to 35, 40 and 55 that are displayed in C1 are partially the result of the unrealistic difference between the results of T1 and T2 (Figure 47).

In order to be able to get a broad overview of the results of all the summative examinations papers that were analysed at a glance, all the graphs are grouped together on page 279.

Total mark distribution according to Bloom's taxonomy

- Knowledge
- Comprehnsion
- Application
- Analysis
- Synthesis
- Evaluation
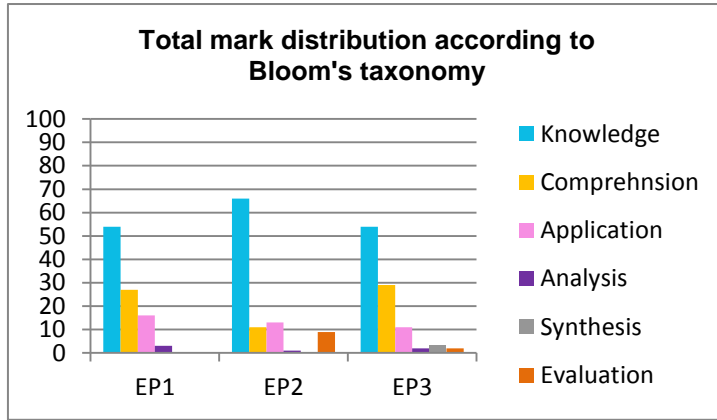
Figure 45: Total mark distribution awarded in summative examination papers according to Bloom's taxonomy (all courses)

Total mark distribution according to Herrmann Whole Brain® theory

- A
- B
- C
- D
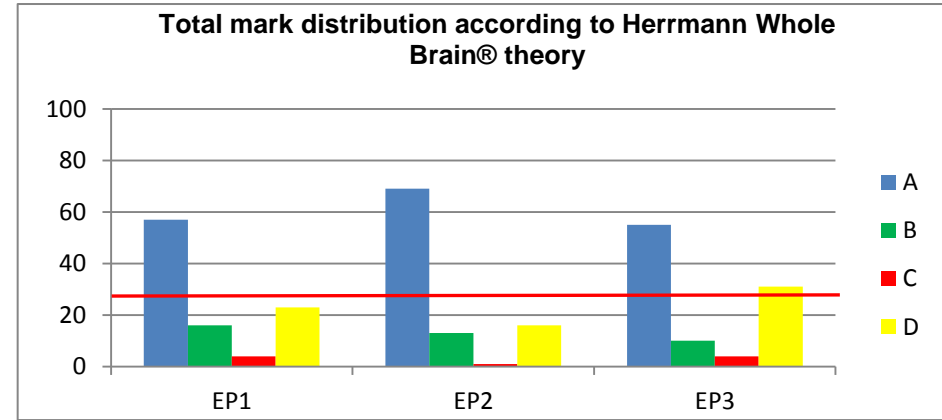
Figure 46: Total mark distribution awarded in summative examination papers according to the Herrmann Whole Brain® theory (all courses)

Range of scores Course 1 (C1)

Range of scores Course 2 (C2)

Range of scores Course 3 (C3)
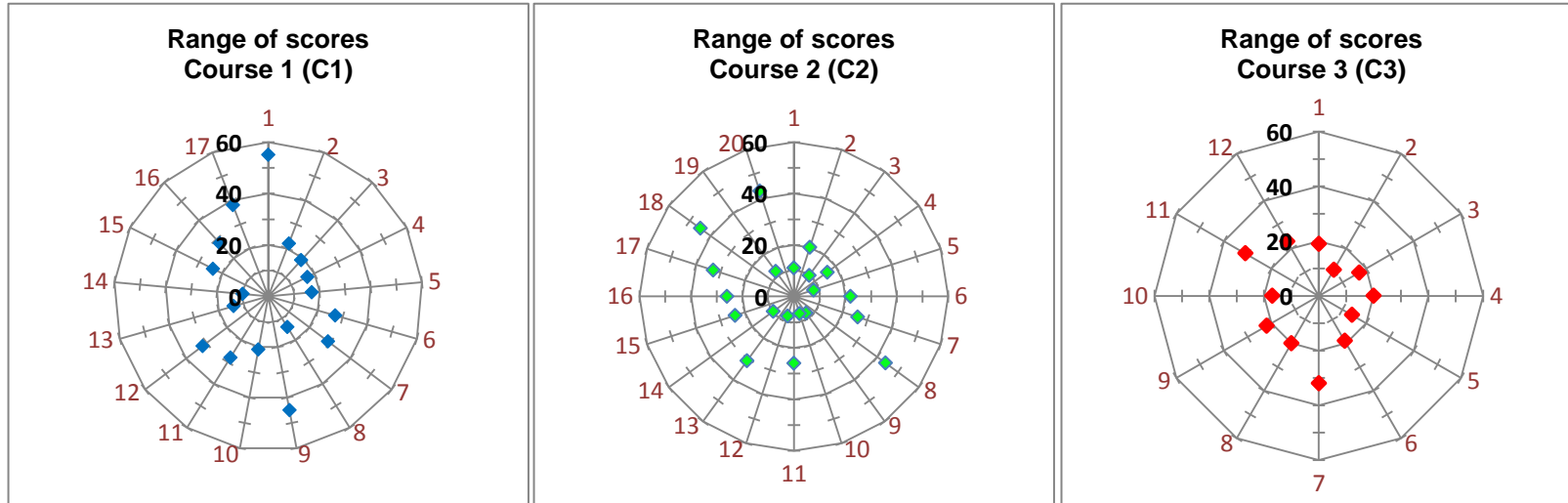
Figure 47: Ranges of deviation of scores obtained in formative and summative assessments

e)   Comparing the group average formative assessment scores and group average examination scores

The average formative tests and assignments scores of the groups of students and the average scores obtained in the written examinations are displayed in Table 31 and Figure 48.

Table 31:   Difference between the group average formative assessment scores and the group average examination scores (all courses)

	C1	C2	C3
Group average formative assessment score	68.91	73.49	74.79
Group average examination score	68.59	66.90	73.33
Difference	0.32	6.59	1.46
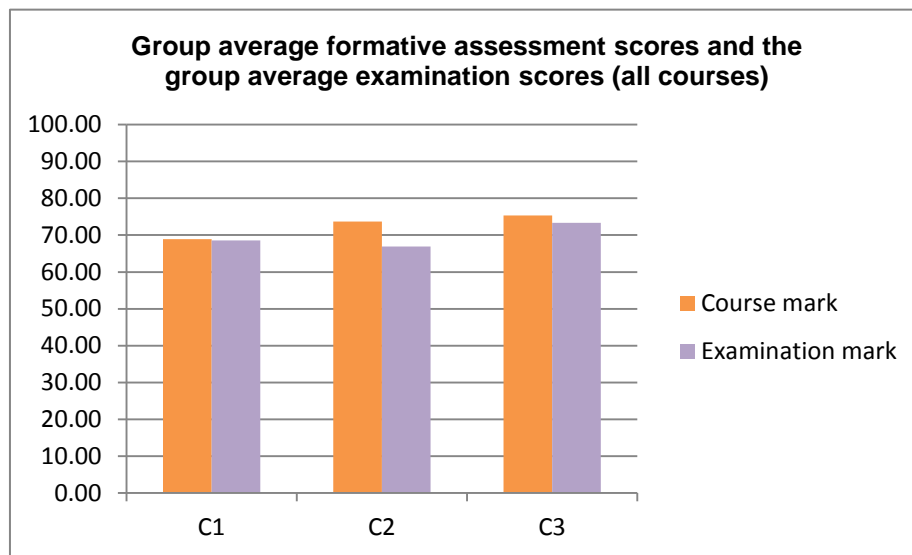
Figure 48:   Graphical representation of the difference between the group average formative assessment scores and the group average examination scores (all courses)

It was found that the largest difference (6.59%) between the group average formative assessment scores and the average examination score in the same course was in C2 of which the assessment tasks focused mainly on the assessment of knowledge and comprehension.

Smaller differences of 0.32% and 1.46% were found in C1 and C3 respectively, of

which the assessments focused less on the lower level cognitive abilities.

When analysing the scores that the students had obtained for the formative assessment tasks and the summative written examination paper, it was found that both the highest average total formative assessment score and the highest average examination score appear in C3. The summative examination paper (EP3) that was written by the students who had attended C3 comprised questions that assessed the cognitive abilities on all levels of Bloom's taxonomy.

The first question that was raised was why this increase in the assessment results of C3 appeared when the general idea is that students find it hard to answer questions that assess the higher cognitive abilities as described by Bloom. The first explanation that came to mind was that the group size of C3 was the smallest of the three courses that were analysed (C1 = 17, C2 = 20 and C3 = 12). However, it was felt that the difference of five students in C1 and C3 could not be regarded as significant enough to have an impact on the performance of the students. This view was based on the fact that all the groups were small enough to allow all students to receive personal attention.

In order to validate our viewpoint that the class size could not have had a significant influence in the case of C3, we returned to literature. Adeyemi (2008:10) did research on the quality output of students in secondary schools in Nigeria. He found that there is no significant difference between the quality output of students in classes with 35 or fewer students and classes with more than 35 students. We had to resort to school-based research as we could not find information of research that was done on the effect of class size in the HE environment where the groups consist of as few as 12 to 20 students in a group.

I later found that Schiming (2012) states that in the HE environment in the United States, a class consisting of 70 students was traditionally regarded as a small class. He states that recently classes with between 28 and 44 students have been regarded as small classes.

My many years of experience in the FET environment have proved that small

classes, consisting of seven to ten students are ideal when skills training such as computer literacy is facilitated. In the case where more theoretical curriculum content is facilitated, I have experienced that larger class sizes of up to 35 students are more effective. Classes with 15 and more students provide better opportunities for the students to benefit from the principles of social constructivism, as they are exposed to a wider range of knowledge and ideas to consider.

The next idea that was considered was that the only variable that changed was the fact that Annelise used to be a lecturer whereas she currently facilitates the learning process during contact sessions. As the students are exposed to learning-orientated activities that entail the use of higher cognitive skills, they are able to use a more critical way of thinking while completing the formative and summative assessment tasks.

The principle of bottom-up planning of learning activities was introduced to the participants of the PDP. This entails that the facilitator of learning firstly determines how the students' abilities will be assessed to suit the objectives of the learning process as stipulated in the syllabus. The learning activities are then designed in a way that will ensure that the students are prepared to be able to fulfil the stipulated objectives (Jacobsen et al. 2002:102).

Annelise uses this bottom-up principle when she plans the learning activities that will be used during the contact sessions. An example of this is that if the students have to be able to provide practical examples of a certain concept, Annelise plans the learning activities in such a way that the students have to provide practical examples of the concept under discussion.

The bottom-up practice can easily be mistaken for examination training. For this reason Annelise always ensures that the scenarios that are used during the contact sessions are different from those that are used in the assessment sessions.

Another reason for the students' ability to obtain high scores in the assessment tasks that assess their ability to use higher cognitive skills is the fact that all the students who are enrolled at PMI are already employed in industry. When enrolling

for the first time at PMI, the students already have a wide range of embedded knowledge relating to the curriculum content that is discussed in the contact sessions. The students obtain the knowledge through real-life experiences in the workplace. This idea once again reminds of Confucius' words: *I do and I understand*. This implies that when the students arrive at the contact sessions they have previously mastered the skills to understand and apply some of the theories, principles and philosophies that are included in the curriculum of the qualification towards which they are studying.

The interaction with students from different industries provides a wider perspective of the theories under discussion. The students are therefore, from the onset of the contact sessions, able to use their higher cognitive skills to analyse and evaluate the practices that appear in the industries of their peers. If they find the practices of other industries to be of value, they can create new structures, processes and procedures in their workplace based on what they have learned from their peers. The students have then used all the cognitive levels that are included in Bloom's Taxonomy.

In retrospect we can say that facilitators of learning tend to think that they assist the students to obtain higher scores in the tests and examinations if the focus is mainly on assessing the lower cognitive abilities, such as knowledge and comprehension. In actual fact, only the students who are left brain-orientated (A- and B-quadrants) are favoured by this practice as they find it easy to memorise and retrieve factual information. The right brain-orientated (C- and D-quadrants) students are then discriminated against as they prefer not to memorise information. They prefer to, for example, explain concepts in their own words, use examples from their own experience to illustrate their views and provide graphical representations of the concepts included in their answers to the questions.

When studying for the formative assessment tests only limited parts of the curriculum need to be memorised and therefore the students can obtain high scores when answering knowledge based questions. The amount of information that needs to be memorised for summative examinations is much larger and the students then find it hard to memorise all the information contained in the curriculum. The

students then obtain lower scores in the examination if they cannot recall all the information that they have tried to memorise.

4.7.5   Time to reflect

The paragraphs that follow allow the readers the opportunity to share the ideas that Annelise and I have shared during a final reflective session, which can be seen as the closure of her involvement as being a respondent in the study under discussion. It will indicate the growth that she has experienced while being a participant of the PDP. The discussions are in no specific order. The different aspects are mentioned as they came to mind during the reflection session.

The first matter that Annelise mentioned was that she had experienced the involvement in the development programme as a life-enriching experience. She experienced the formal sessions that were offered at the onset of the PDP as interesting, exciting, informative and life-changing. She refers to the knowledge that she has gained about her own thinking style preferences as one of the highlights of her life.

On the first day of the development programme, feedback was provided to the participants after completing the HBDI[®] online. Annelise experienced this session as enjoyable and it made her understand how humans can differ and how our own views of life are based on our thinking style preferences. She realised that it is the basis on which our life philosophies are grounded and that our ways of thinking can influence our relationship with others and even the relationship with ourselves.

The first ideas that were discussed were based on Annelise's role as facilitator of learning or learning mediator (Du Toit 2009:3). Before the PDP started Annelise used to look at what one of her peer facilitators of learning was doing while facilitating learning. She had always wondered why she could not do the same things as that her peer was doing when facilitating learning. The students were very fond of her peer-based "different" way in which the contact sessions were facilitated.

Ironically, the peer against whom she benchmarked her practice was also not a

trained educator. The peer was one of the participants in the PDP but did not complete the action research project due to workload.

The "different" way of facilitating learning referred to in the previous paragraph refers to the use of PowerPoint slideshows that include photo-graphic evidence of the topics under discussion and the specific facilitator of learning summarised the curriculum content for the students and the summaries were included in the PowerPoint slides. The students then copied these summaries during the contact sessions.

Baseline information that was available at the onset of the PDP included student comments that were made during contact session visits that I had conducted as part of my duties as quality assurer of the teaching (sic) that takes place in PMI. Students commented that they want more "lecturers" like Annelise's peer who is mentioned above as they can "just sit and listen, watch and write down the summaries and enjoy the session as everything has been summarised for them and they do not have to work too hard".

Annelise was not aware of the student comments stated above and I asked her whether she thinks her peer's way of facilitating learning allows for the full development of the students' knowledge and understanding of the curriculum content. She commented that the students might rely only on the summaries prepared by the facilitator of learning. This may result in the students not reading the content of the learner guides and textbooks and they then have just a limited view of the content; they probably do not have full understanding of the concepts at hand. She now realises that the students have to be responsible for their own learning process and that they should summarise the content themselves.

After the first session that was offered during the PDP, in which the focus was on facilitating learning based on the Whole Brain® theory of Ned Herrmann, she realised that all humans have different thinking style preferences and that there is not only one correct way of looking at the world that we live in. After learning how our thinking styles influence the way in which we learn she realised that it is

important for a facilitator of learning to cater for the thinking styles of all the students in order to provide everyone an opportunity to excel in his or her own way.

She had not been aware of the different learning theories and a new world opened for her once she learned about the different theories. She could see that there is a relationship between the Herrmann whole brain theory and Gardner's multiple intelligence theory that was also included in the curriculum of the PDP.

Prior to her involvement in the PDP Annelise was not aware of the principles of Bloom's taxonomy. She was surprised to hear that Bloom's taxonomy forms the basis of the SAQA level descriptors which is the national prescribed standard for the level of cognitive abilities to be achieved while studying towards all qualifications in South Africa. She was relieved to hear that only a few of the facilitators of learning contracted by PMI were aware of this fact. The facilitators of learning that were aware of Bloom's principles were the trained educators who are employed at schools, FET colleges or public universities.

Annelise now considers the different theories that are included in the curriculum of the PDP while planning the learning sessions. Even when designing assessment tasks she tries to include questions and tasks in the formative assessment practice that will suit the different thinking and learning style preferences of the students. She commented that it is unfortunate that it is not always possible to assess the students in a way that allows for learning style flexibility as the summative assessment examinations are still based on written examinations. Annelise has learned that fair assessment practices entail that the formative assessment tasks should have the same style and design as the summative assessment ones. This provides the students the opportunity to determine whether they understand how to approach the different types of question that are posed in the examination paper. If the formative assessment tasks cover the complete curriculum of the specific course/module it allows the student the opportunity to determine the areas of the curriculum in which he or she needs to spend more time in preparation for the summative assessment examinations.

When reflecting on Annelise' level of fulfilment of the different roles that a facilitator

of learning should fulfil, we came to the conclusion that Annelise fulfils all the roles as stipulated by the DoE (2000:13-14 and du Toit 2009:3) in the policy document, *Norms and Standards for Educators*. The following provides evidence for this statement:

- **Learning mediator**: Annelise allows for learning style flexibility and develops learning activities that ensure equal opportunities and challenges for all the students in the class. A high level of mutual respect exists between Annelise and the students who attend the contact sessions that she facilitates. Her new innovative learning-orientated approach allows all the students to develop a deep understanding of the subject knowledge that needs to be mastered.

- **Interpreter and designer of learning programmes and materials**: Annelise is always well prepared for the contact sessions and she sometimes provides additional hand-outs to the students if she feels that the content of the learner guides is not explanatory enough.

- **Leader, administrator and manager**: Annelise's administrative tasks as stipulated by PMI's standard operating procedures are always up to date. There is always order during her contact sessions and she can easily persuade the students to participate actively during the contact sessions.

- **Scholar, researcher and lifelong learner:** Annelise is the only participant of the PDP that was actively involved throughout the running of the PDP and until the end of the study under discussion. She indicated that she had experienced the PDP as a life-changing experience. During the reporting stage of the study under discussion she still had regular discussions with me regarding new ideas that she had implemented in her contact sessions.

- **Community citizenship and pastoral role:** Annelise always walks the extra mile in assisting students who have been absent due to illness and death in the family. She has tutorial sessions with these students to ensure that they have received all the information that the other students have received. There was one case during the time of the study under discussion when the student wanted to quit her studies as she could not cope with her workload; Annelise inspired her to keep faith and she successfully completed all the courses that she had enrolled for.

- **Assessor:** Enough evidence of fulfilling this role is provided in this chapter.

- **Learning area/subject/discipline specialist:** Annelise is employed in the manufacturing industry and is therefore up to date with the latest technology in this field. She regularly includes updated information to the discussions during the contact sessions that she facilitates and she suggests changes that need to be made to the content of the PMI learner guides of the courses/modules that she facilitates.

The final comment made by Annelise was that her experiences during the PDP indicated what, according to her view, the most important aspects are that should be considered in the HE environment. Her experiences as action researcher and the way in which she had to optimise the limited time available for her part-time role as facilitator of learning highlighted the limited time that part-time students have to spend on their studies. For this reason it is of the utmost importance that contact sessions are facilitated in such a way that all the students are able to make sense of the learning content in their own way, in the shortest time available. This can only be achieved by accommodating learning style flexibility and the development of learning-orientated learning activities.

A summary of the aspects that were identified during Annelise's action research project and that are included in the curriculum of a PDP for academic staff members who are employed in private HE, is provided in Chapter 5.

4.8   INTRODUCING PARTICIPANT B (PB)

PB is employed on a full-time basis at top management level as a manager overseeing quality systems and engineering at an organisation that manufactures components for both national and international markets. He facilitates learning on both pre-graduate and post-graduate level. The focus during the study was on PB's practice as facilitator of learning on post-graduate level. Only a few aspects of his development as facilitator of learning of pre-graduate level will be mentioned.

Table 32 shows attributes of PB that are necessary to be included as contextual information to be considered when analysing his practice as facilitator of learning.

Table 32: PB's attributes

Race	Gender	Highest qualification	HE experience other than in PMI		Education qualification		Registered assessor	
			Yes	No	Yes	No	Yes	No
White	Male	Master of Science: Industrial Technology and Management	✓			✓		✓

4.8.1 Herrmann Whole Brain® comparison of PB and myself

In order for me to plan a successful mentor-mentee relationship with PB, I had to understand the differences between PB's and my own HBDI® profile. I had also reflected on our work relationship in the period prior to the onset of the research study under discussion.

Figure 49 displays the combined graphical representations and Figure 50 the Statistical HBDI® results of the HBDI® online tests completed by PB and me.
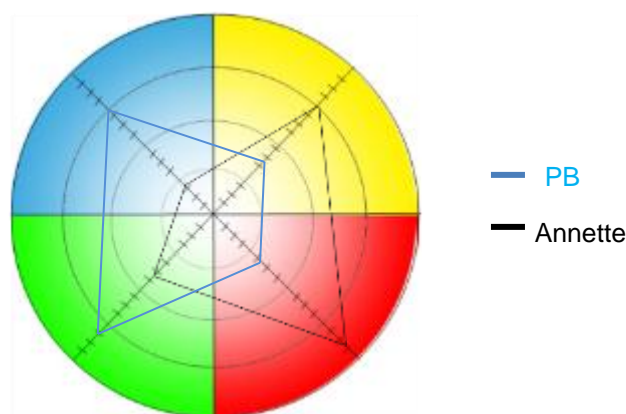
Figure 49: Graphical representation of HBDI® results of PB and myself

4.8.1.1 Considering possible influences on our mentor/mentee relationship based on the Herrmann Whole Brain® theory

Figure 49 clearly shows that PB and I can be regarded as complete opposites. PB predominantly uses the left hemisphere of his brain and my preference is the use of the right hemisphere. In everyday life humans tend to interpret a difference in thinking styles as a sign of possible conflict. However, considered from a whole

brain perspective, different thinking styles can be seen as an advantage in a work relationship. The combined ideas of the partners in the relationship can ensure that perspectives of all four quadrants contribute to the success of a project undertaken by team members who think differently.

		Blue (A)	Green (B)	Red (C)	Yellow (D)
Profile scores	**PB**	99	111	44	47
	Annette	30	57	125	101

| **Key descriptors** (∗ most descriptive) | **PB** | Factual x / Quantitative / Critical x / Rational / Mathematical / Logical x / Analytical x | Conservative x / Controlled x / Sequential / Detailed ∗ / Dominant / Speaker / Reader x | Emotional / Musical / Spiritual / Symbolic / Intuitive / Talker / Reader x | Imaginative / Artistic / Intuitive / Holistic / Synthesiser / Simultaneous / Spatial |
| | **Annette** | Factual / Quantitative / Critical / Rational / Mathematical / Logical / Analytical | Conservative / Controlled / Sequential / Detailed / Dominant / Speaker x / Reader x | Emotional x / Musical / Spiritual / Symbolic x / Intuitive x / Talker x / Reader x | Imaginative / Artistic / Intuitive x / Holistic ∗ / Synthesiser x / Simultaneous / Spatial x |

| **Work elements** | **PB** | Analytical 4 / Technical 5 / Problem solving 4 / Financial 5 | Organisation 3 / Planning 5 / Administrative 2 / Implementation 2 | Teaching 3 / Writing 4 / Expressing 3 / Interpersonal 2 | Integration 4 / Conceptualising 5 / Creative 2 / Innovating 3 |
| | **Annette** | Analytical 2 / Technical 3 / Problem solving 3 / Financial 2 | Organisation 2 / Planning 2 / Administrative 4 / Implementation 4 | Teaching 5 / Writing 5 / Expressing 5 / Interpersonal 4 | Integration 5 / Conceptualising 3 / Creative 3 |

Introverted   Extroverted

Introverted/ extroverted	**PB**					x				
	Annette								x	

Figure 50: Statistical HBDI® results of PB and myself

To be aware of the ways in which I can best communicate with PB I had to identify aspects that may have had an influence on our mentor-mentee relationship.

A)   A-quadrant

I have no descriptors that fall in the A-quadrant and PB has four, namely *factual,*

critical, logical and analytical. This created the situation where I had to move outside my comfort zone to become more analytical about the ideas that I would suggest to PB. I had to explain my ideas to him in such a way that he could see that the ideas were critically analysed and evaluated before they were put forward as suggestions. I had to ensure that mostly factual information was included when suggestions were formulated.

B) B-quadrant

PB's descriptors of being *conservative* and *controlled* fitted in with my experience of him. His tone of voice is always very controlled and displays professionalism, fitting the level of management on which he is employed at his full-time workplace. Although he asked questions during the contact sessions to allow student participation, he still mostly used the traditional lecturing style during the contact sessions. Although PB has a score of only two for the work element *administrative* he is in perfect control of his time and therefore he always completes the administration tasks before the submission deadlines.

The most dominant descriptor of being *detailed*, in combination with his descriptors *factual* and *analytical* in the A-quadrant, necessitated that I provide feedback in such a way that it clearly showed that I had analysed and summarised the information prior to the conversation. The information that was conveyed during discussions and feedback sessions, which formed part of my assessment of his practice as facilitator of learning, had to be detailed. At the same time I had to be very careful not to provide too much information or that I repeat information during our conversations. His descriptor *logical* (A-quadrant) would allow him to understand what was said easily. Too much information shared in the conversations would bore and frustrate him.

For *planning* PB has a score of five whereas I have a score of two. This meant that I had to be prepared for each meeting and I could not suggest some actions on the spur of the moment. The fact that PB is controlled would not allow me to be present in his contact session as an informed observer and then suggest something to be done on the spot. That would have created an irritation as he might have felt that I

wanted to take over control of the session.

C)   C-quadrant

The C-quadrant is my most dominant quadrant and PB's least preferred quadrant with scores of 125 and 44 respectively. PB indicated only one descriptor in the C-quadrant, namely being a *reader*. Although PB did not indicate *talker* or *speaker* in either the C- or the B-quadrants, my experience is that he would easily sit down and discuss important issues at hand. Due to a very busy schedule PB hardly ever has long discussions. Since the time that PB was employed as a part-time facilitator of learning he has come to my office for short visits before the start of the contact session or during the breaks if he needs to discuss a matter with me.

D)   D-quadrant

The D-quadrant is my second most preferred quadrant and PB's second least preferred quadrant with scores of 111 and 47 respectively. PB has no descriptors in the D-quadrant and I have four descriptors, including my most dominant descriptor, namely *holistic*.

Through experience I have noticed that I cannot think as fast as others think when factual information has to be considered. When reflecting on the reasons for this, I believe that I try to consider all aspects that can result from the decision taken and I want to think of all possible results. I think of ways in which a situation can influence for example, people, resources and systems. At the same time I follow the "if this, then that" approach and I try and evaluate whether the result of the action will have a positive or negative influence on the people, resources and systems. Others also consider the consequences of a decision but sometimes follow the approach of "we will cross the bridge when we get there". I have not yet developed the skill of being comfortable to enter into a situation without trying to identify all possible aspects that can have an influence on the result of the action. I need to pre-empt as many as possible aspects in order to take a calculated risk. This characteristic necessitates that I pre-empt topics that might appear during my discussions with PB and I had to think of the topics beforehand, not to bore PB during our discussions.

Reflecting on all the possible influences that were identified when considering the Herrmann scores, I realised that I would not have to adapt my approach in my mentor-mentee relationship with PB. The way in which PB and I communicate in our work relationship displays spontaneous consideration of the different aspects mentioned above. Our discussions around facilitating learning and assessment of learning have not yet created any friction between us.

4.9 PB'S PRACTICE AS LECTURER PRIOR TO THE IMPLEMENTATION OF THE PROFESSIONAL DEVELOPMENT PROGRAMME

PB completed his Master of Science studies at PMI and has also studied on a Management Development Programme at a public university. Although both the qualifications entail practical application of theory, in both instances the dominant traditional lecturing style was utilised. Therefore PB has never had any exposure to the use of innovation in the classroom such as the use of, for example, music and drawings as part of the learning process.

The paragraphs below contain information derived from qualitative baseline data that was collected while fulfilling my task as quality assurer of the teaching (sic) and learning (CHE 2004(b):11, 18) that takes place in PMI. While attending the contact sessions that was facilitated by PB the following criteria for evaluation were used: subject knowledge; the management and control of the contact sessions; student participation; the questioning style used; the use of media and the way in which PB created an atmosphere that is conducive to learning.

- **Subject knowledge**

PB is a subject matter expert with a wide range of experience in the industrial manufacturing environment. He also has the ability to apply his knowledge and experience in different contexts. During the session he regularly provides examples that could fit in the diverse working environments of the students attending the contact sessions that he facilitates. He shares a wider range of knowledge with the students than is needed to reach the stipulated learning outcomes of the specific course/module. This provides the students with the opportunity to identify areas that

they can research while completing the formative assessment assignments.

- **Managing his practice**

PB always reaches all the expected learning outcomes of the courses/modules for which he facilitates the learning in the given time and he plans the sessions in such a way that the final contact session planned for the course/module is dedicated to revision. He ensures that the printing and/or copying of documentation such as the additional hand-outs and formative assessment tasks are done the day before the start of the session in which it will be distributed. All the necessary formative assessment tasks are completed in the specified time as per the PMI standard operating procedures.

- **Student participation**

The confidence levels of the students who study on post-graduate level is much higher than those of the students studying on the lower study levels such as first and second year of study. The higher confidence levels of the students result in the situation that students do not simply accept everything that is said on face value. The students state their viewpoints and substantiate their views by referring to knowledge that they have created through their own experiences in the workplace. Therefore the levels of participation are normally higher on this level of study. However, as it commonly happens during interactive learning activities, only some of the students participate actively and respond to questions posed. Usually the same students participate in the activities while the other students do not participate and are merely spectators of the activities that take place during the contact sessions. PB poses probing questions to stimulate student participation but if they still do not participate he just moves on.

- **Questioning style**

The questions that PB poses while facilitating the sessions aim mainly at getting the students to participate in the sessions. He asks the students to provide examples from the workplace of how the topic under discussion is used in their working environment.

- **Use of media**

PB uses the whiteboard, the learner guide and the textbook. In some of his sessions he uses PowerPoint slides that mainly display a summary of the topics under discussion. He sometimes distributes additional hand-outs that mainly comprise alternative, more descriptive definitions of the concepts under discussion.

- **Creating an atmosphere conducive to learning**

PB has a very calm and controlled, yet authoritative way of talking. The immediate impression that is created, as commented by a student during a tea break is that *this man knows what he is talking about and you have to listen. If you don't listen you will lose out*. Although the first impression is that of authority, most of the students can freely communicate with PB.

While reflecting on observations that were done during one of the contact sessions that was facilitated by PB, I remembered a narration of Paulo Freire and student comments that were made during learning sessions that I had facilitated at my previous workplace. The students did not want to take part in the discussions as they felt that the facilitator of learning should be the one that is talking as he *knows things and* […they…] *don't* (Freire 2004:36-38) and the students *don't want to sound stupid* if they make mistakes during discussions (Boshoff 2007:93, 106, 114 and 126).

I then realised that the students who took part in the discussions during the contact session were mostly the students who are employed on management level in their workplaces. The students who are employed on the lower levels of the organisational structures of their employing organisations are the ones who do not take part in the discussions. This realisation highlighted the fact that I had to include student participation as one of the main focus areas when evaluating the development of PB's practice during the PDP.

4.10   PB'S PROFESSIONAL TRANSFORMATION

My involvement in the professional development of PB was not as intense as it was with Annelise. The main reason for this is that the approaches that are used when facilitating learning on pre-graduate level differ from the approaches that are used when facilitating learning on post-graduate level. On pre-graduate level there is a large focus on subject-related theory and therefore the facilitator of learning is much more actively involved in the learning process. On post-graduate level the students have to accept a higher level of responsibility for their own learning. The focus of the contact sessions moves more to stimulating the higher cognitive skills of the students, such as critical thinking and argumentation.

While reflecting on observations that were made during the running of the PDP that is referred to in the study under discussion, the following aspects can be considered as important to be mentioned about PB's participation in the activities of the PDP:

- PB volunteered to be part of the PDP without hesitation. True to his characteristics of being organised and planned he completed the online HBDI® assessment the moment that the access code was forwarded to him. He displayed interest in the outcome of the assessment and freely participated in the activities that were included in the information session that was facilitated by a certified HBDI® practitioner.

- PB had a low score for the C-quadrant and no interpersonal descriptors were indicated. In combination with his midway score between introvert and extrovert, it could be expected that PB would not easily take part in group activities. This, however, was not the case. He fully participated in all the activities, whether solo or group activities. He also took part in the discussions and provided valuable input.

- Although PB does not have a high score and therefore a low preference for the D-quadrant, which allows one to synthesise and conceptualise ideas in a holistic manner, he could identify the similarities and differences between the HBDI® and other similar assessments which he had completed in the past.

- PB's HBDI® profile indicated a preference for analytical tasks. This preference resulted in PB having a higher level of participation in the activities that entailed analysis of documents such as examination papers than in the activities that necessitated creativity, such as when the participants had to create a metaphor.

PB's voluntary active participation in the learning activities was the main reason for my decision to allow him space to manage his development in his own fashion. I realised that I had to respect his preference for being in control and that I should allow him to determine the order and areas in which he wanted to develop his practice.

4.10.1   Learning media

The first evidence of PB's increased awareness of learning style flexibility was his increased use of visual media while facilitating learning. He started developing more MS PowerPoint slideshows that included graphical aspects to be used during his contact sessions. He also distributed hand-outs that had many graphics on them to be used in conjunction with the learner guide. This allowed flexibility for the students who were more visually-orientated and who would therefore prefer to receive the facts in graphical format rather than in written format. In some instances the students had to develop flipchart presentations to be used during their feedback sessions after a learning activity.

4.10.2   Student participation

In order to improve student participation during the contact sessions PB started using activities that would allow the students to be actively involved during the contact sessions. Informed observation was conducted during the contact sessions that are discussed below.

4.10.3   Group work

The main purpose of the first contact session in which PB was observed was to identify the critical influences that a supplier of raw materials can have on the

innovative processes in an organisation. While working in groups, the students had to choose a specific industry, suggest possible innovative changes that can be implemented and they then had to identify possible influences that the changes can have on its suppliers.

4.10.3.1   Activities that were included in the contact session

PB started the session with conveying the theoretical aspects and the students then had to complete a group activity. The students had to present their findings to the other groups and they had to utilise flipcharts during the presentation. Table 33 shows the order that was followed during the contact session. The different aspects of the educational theories that were utilised through the activities included in the session are also indicated.

Table 33: Order of the activity and the different theories addressed by the activities

Step 1:	The theoretical facts were explained by PB.	
THEORY	**SUBDIVISION**	**SUBSTANTIATION**
Herrmann	A	• Theoretical facts were discussed.
	B	• The discussion was planned to last only a certain time. • A specific content range was determined prior to the session.
	C	• Students had to listen to another person who was sharing information (interpersonal).
Gardner	Verbal-linguistic	• PB used verbal language in combination with the written language that is used in the learner guide.
	Interpersonal	• The students had to listen to another person.
	Intrapersonal	• Understanding must be created by the student himself or herself.
Bloom	Knowledge	• Factual information was conveyed.
	Comprehension	• The students had to make sense of the explanations.

	Synthesis	• The students had to relate the new facts to the facts that they had learned during the lower levels of their studies.
Step 2:	The students worked in groups to discuss the issue at hand and they had to create a flipchart to be used during their feedback session.	
Herrmann	A	• Facts needed to be included in the presentations. • Only key words on flipcharts.
	B	• Students had to organise themselves into groups. • Tasks had to be completed in a specific time.
	C	• Group work, sharing ideas, including all members' ideas.
	D	• Comprehensive supplier scan had to be done (holistic) • Flipchart layout had to be designed.
Gardner	Interpersonal	• Group work, sharing ideas, including all members' ideas.
	Logical-mathematical	• Timekeeping during the activity.
	Verbal-linguistic	• Students had to communicate with one another. • Flipcharts were compiled by using words. • Students had to summarise their thoughts and identify keywords to be placed on the flipcharts.
	Visual	• Flipcharts to support verbal presentations.
	Naturalistic	• The impact on the natural environment had to be included in the discussions.
	Spatial	• Develop layout of flipchart. • Considered size of characters for visibility to suit the distance from the audience.
Bloom	Knowledge	• Factual information was included in the presentations.
	Comprehension	• Understanding the meaning of the concepts in order to be able to explain them to their peers.
	Application	• Practical examples provided during the presentations to substantiate the arguments.
	Analysis	• Students had to analyse the characteristics of the suggested changes in order to identify the possible influences that the implementation thereof can have on the chosen industry and the suppliers.
	Evaluation	• Students had to rank the level of impact that each of the changes can have on the business.
	Synthesis	• Students had to develop a vision of the business' future in a global dynamic environment. • Students had to suggest a strategy that will fulfil the vision.
Step 3:	Students presented their viewpoints that were developed while doing the supplier analysis.	
Herrmann	A	• Theoretical facts were revised.
	B	• The planned sequence of the presentation had to be followed. • A time limit was placed on the presentation.

	C	• All group members had to support the presenter by answering some of the questions that were posed by the other students after the presentation (interpersonal).
	D	• Students had to evaluate the impact of the proposed changes on the chosen industry as a whole by considering all aspects of the environment in which it operates as well as the impact that it will have on its suppliers.
Gardner	Bodily-kinaesthetic	• The body language of the students was evaluated during the presentations.
	Spatial	• The presenters had to consider the size of the venue to ensure that they speak loud enough that all present could hear them clearly.
	Interpersonal	• All group members were involved.
	Verbal-linguistic	• The presentations and flipcharts may not have included language errors.
	Intrapersonal	• Some students had to adapt to the situation when feeling uncomfortable with being outside their comfort zones while presenting in front of their peers.
Bloom	Knowledge	• Theoretical facts were included in the presentations.
	Evaluation	• Students evaluated the content and style of the presentations of the different groups.

The analysis above shows that all aspects of the Herrmann whole brain theory and Bloom's taxonomy were addressed through this learning activity. The only aspect of Gardner's multiple intelligence theory that did not receive attention is musical intelligence.

It was planned that the following critical outcomes (COs) (SAQA 2000:18, 19) would be fulfilled through this learning activity:

CO 2. Work effectively with others as members of a team, group, organisation and community.

The students had to work in groups.

CO 3. Organise and manage themselves and their activities responsibly and effectively.

Group activities had to be completed in a certain time span and the students had to divide themselves into different groups.

CO 4. Collect, analyse, organise and critically evaluate information.

The different suggestions had to be ranked according to the level of impact that they would have in the chosen industry.

CO 5. Communicate effectively using visual, symbolic and/or language skills in various modes.

The students had to provide feedback to the other groups through a verbal presentation and they had to use a flipchart during the presentation.

CO 6. Use science and technology effectively and critically, showing responsibility towards the environment and the health of others.

The impact that the suggested technological changes could have on the chosen industry had to be measured against the criteria used during a complete PESTEL (political, economic, social, technological, natural environmental and legislative) analysis of an industry.

CO 7. Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.

The complete PESTEL environment of the chosen industry had to be considered.

CO 8. Identify and solve problems and make decisions using critical and creative thinking.

The current products, raw materials and processes of the chosen industry had to be analysed and critically evaluated against the criteria for innovation in that industry. Creative thinking had to be applied to suggest new processes and technological equipment to be used in the chosen industry.

The following developmental outcomes (DOs) (SAQA 2000:18, 19) were reached through this learning activity:

DO 2. Participating as a responsible citizen in the life of local, national and global communities.

The complete PESTEL environment of the chosen industry had to be considered. The proposed innovation could not have a negative effect on the chosen industry's PESTEL environment.

DO 3. Being culturally and aesthetically sensitive across a range of social contexts.

The PESTEL analysis includes the consideration of the social environment in which an industry operates.

DO 4. Exploring education and career opportunities.

A change in technology will necessitate education and training of the workforce in order to ensure the effective use of the improved technology. New career paths can be developed inside the organisation due to innovative technological changes. Depending on the type of innovation, new study fields might be created.

4.10.3.2   Reflecting on the learning activity

PB was not deeply involved in the analysis of the learning activity as he has an extremely busy work schedule. He considered the principles of Bloom's Taxonomy and the Herrmann Whole Brain® theory when planning the learning activities to be used during the contact sessions, but he did not have time to spend on any activities other than what he was required to deliver as a facilitator of learning. For this reason I had to analyse the learning activity and then provided feedback to him regarding my findings.

In order to evaluate the success of the learning activity, I analysed the field notes that were made during the observation session. I had decided to concentrate on two main aspects when reflecting on the session, namely to identify what worked well during the learning activity and to identify areas for improvement if such an activity is repeated with another group of students. The student comments made during the session were also considered.

The following aspects can be considered as being successful during the learning session:
- PB communicated the rules for the activity effectively as the students immediately started working on the task without any confusion.
- All the group members had to suggest a type of industry that should be used in

the activity and the final selection was based on consensus.

- While observing the groups all the time, PB allowed the students to work on their own for a while before starting to move among the groups.

- There was a good balance between the time spent on the theory and the student activities as the larger part of the session consisted of the student activities.

- The size of the groups was four members per group. This allowed the members to be positioned in such a way that all group members could have direct eye contact with all other group members without any obstruction.

- The group members respected one another's viewpoints. The different options tabled were thoroughly debated in a respectful manner before consensus was reached about what to include in the presentation.

- Although only one group member could present the group's findings, all the members had to be involved in the answering of the questions that followed the presentation.

The following areas for improvement were identified while observing the activities:

- It is general practice that students seat themselves close to the students with whom they mostly communicate during breaks. If there is no rule set for the forming of the groups, it is a natural reaction for the students to group with those seated close to them with whom they already have a comfortable relationship. This method of grouping does not cater for group diversity such as, inter alia, race and gender.

  During the learning session under discussion the students grouped with those seated close to them resulted in the forming of groups with members from the same race. There were no female students attending the course/module at the time when the observation was done.

  As English is the third language for most of the African students, this type of grouping prevents the African students from having the benefit of improving their English proficiency levels by communicating with students who use

English as their first language.

- All group members can be allocated certain parts of the presentation to allow all the members to improve their presentation skills and to overcome the anxiety experienced during a presentation. This will also ensure participation of all group members during discussions as they will be able to link their discussions to the information conveyed by the group members who presented before them.

4.10.3.3   Student feedback

The following comments were made by the students during and after the contact session:

- The students found the session to be challenging as not all the students were familiar with the industry under discussion. In one group it was experienced as being positive that the industry under discussion was that in which a group member is employed. They could ask this member questions if they were not sure about certain concepts and procedures in that specific industry. Using an industry that is not familiar to all the group members allowed the students the opportunity to display understanding through application "in unfamiliar and variable contexts" as stipulated by the SAQA level descriptors (SAQA 2010:6) relating to post-graduate studies.
- The different areas of specialisation, e.g. quality management and production control, in which the group members are employed in industry, provided a wider perspective during the PESTEL analysis.
- In one of the groups a group member was employed in real life by the supplier of raw materials and parts of the chosen business under discussion. This resulted in the situation where the learning was applied immediately as the group session turned into a customer-supplier meeting and the information could be conveyed immediately. The other group members then acted as consultants who provided wider perspectives to be considered during the discussions. One group member commented that the session had highlighted the importance of direct communication between the supplier and the customer

as he had obtained information in this session that he had never been aware of.

- One student commented that the debates that took place provided him an opportunity to evaluate and critically reflect on his own viewpoints. In one instance he had to defend his viewpoint and was then convinced by the other group members that his viewpoint was outdated in the majority of industries. He then learned about new perspectives that he could introduce in his workplace.

When considering all the comments made by the students, one realises that every comment relates to the theory of social constructivism. In each of the comments there is an indication of how the students had learned from one another.

In a short discussion with PB after the contact session PB indicated that he was satisfied that all the planned learning outcomes for the session had been reached. He also said that a wider range of outcomes was reached than what would have been the case if this part of the curriculum had to be presented by using the traditional lecturing style.

4.11   TIME TO REFLECT

PB and I never had long reflection sessions during the data collection period of the study under discussion. His busy schedule at his full-time employer never allowed time for him to come to campus for meetings during the week. On Saturdays when he was on campus we had to have quick discussions during his 15 minutes breaks or in the 30 minute break between the morning and the afternoon sessions.   During the week he would sometimes just enter my office when on campus for short periods for administrative requirements. He would then show me new hand-outs that he had found and would very briefly explain why the hand-out could be of value when used with the specific curriculum content and learning outcomes to be reached.

As a result of time constraints PB never compiled a formal action research report. The evidence of his professional growth was captured through diary entries and observation field notes.

The different roles that a facilitator of learning should fulfil (DoE 2000:13-14 and Toit 2009:3) were used as the basis for reflecting on PB's professional development. The discussions are in random order.

The roles that a facilitator of learning should fulfil are:

- **Learning mediator**

PB allows for learning style flexibility and develops learning activities that will ensure equal opportunities and challenges for all the students in the class. In answer to a question whether he considers the Herrmann Whole Brain® theory when planning learning activities he replied in the affirmative.

PB mentioned that he had completed many personality profiles in the past as part of the professional management development programmes that were offered by his full-time employer. Through these experiences he had always been aware of the differences between the thinking styles of humans but he never considered the differences when developing learning activities. Currently he plans the activities with the Herrmann Whole Brain® theory in mind. He tries to include activities that will allow for as many as possible preferred learning styles in each session. He has found that it is not always possible to cater for all the learning styles in one session but he ensures that all the learning styles are catered for during the complete running of the course.

PB's new approach of developing learning-orientated activities such as student presentations allows all the students to develop a deep understanding of the subject knowledge that needs to be mastered. Although he does not really consider the multiple intelligence theory of Gardner, the consideration of the Herrmann model caters for the accommodation of most of the intelligences referred to in Gardner's theory. This view is based on the outcome of a learning activity during the contact sessions that were offered at the onset of the PDP. The activity entailed the analysis of the different theories in order to identify the correlations that exist between the different theories that were included in the curriculum of the PDP.

One of the most important prerequisites for being a successful learning mediator is the ability to create an atmosphere of mutual respect between oneself as the facilitator of learning and the students. A high level of mutual respect exists between PB and the students who attend the contact sessions that he facilitates. This has always been the case and he needed no development in this area.

This natural presence of respect from the students' stems from PB's specialised knowledge in the field in which he facilitates learning (specialist power), the respect that he displays for the students and his willingness to support them with their studies (charismatic power) and his natural stature that fits the level of management on which he is employed by his full-time employer (position power).

- **Interpreter and designer of learning programmes and materials**

Sometimes PB provides additional hand-outs to the students if he feels that the content of the learner guides is not explanatory enough. He currently also tries to find or develop hand-outs that accommodates the student who prefers more visual presentations. This is catered for by the use of concept charts and pictures (Figure 51).

Figure 51 shows the use of an example that is familiar to all to explain another concept. It is general knowledge that some humans have a natural talent for mathematics and understand the principles easily. Others find it very hard to conceptualise the principles and therefore cannot see the value of it and are negative towards the subject. This idea was used to explain that during a change process some employees find it easier to understand the reasons for change and adapt easily as they can see the positive results that the change can have for the future. Other employees find it hard to understand the reasons for the change and cannot see the value of the change for the future and they might then resist the change.
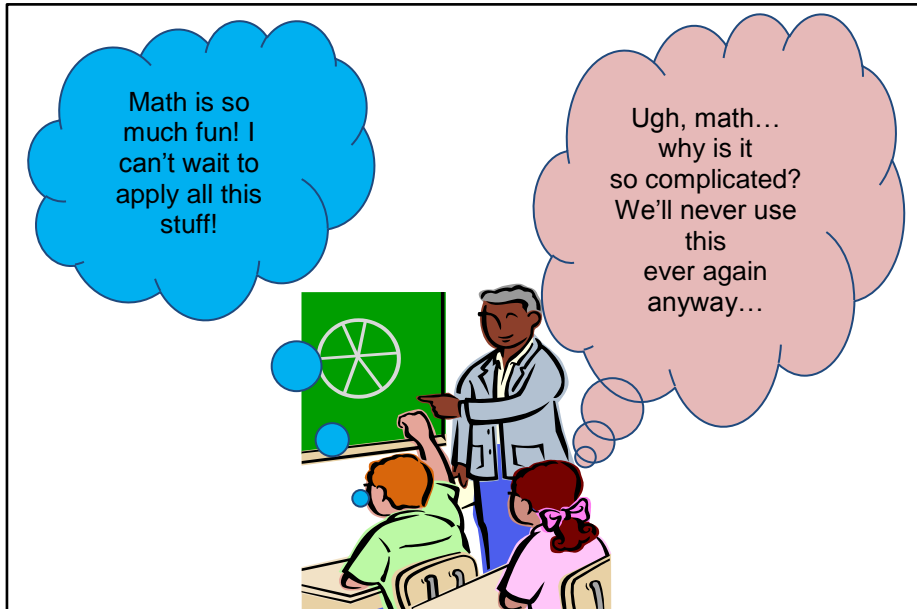
Figure 51: **Picture used to display the different mind sets that can have an influence on the management of change**

- **Leader, administrator and manager**

PB's administrative tasks as stipulated by PMI's standard operating procedures are always up to date. There is always order in the contact sessions that PB facilitates and the students submit their assignments on time. PB needed no development relating to this role.

- **Scholar, researcher and lifelong learner**

The industry in which PB is employed on a full-time base necessitates that he stays abreast of all the development and innovation in the specific industry. For this reason his employer continuously offers development programmes and training interventions for its staff members.

While mentoring PB during the data collection period of the study under discussion, it once again became evident that time constraints prevent the part-time facilitators of learning to become involved in their professional development as educators in a scholarly manner. The amount of time spent on preparation and assessment outside contact session hours (Table 34, Section 4.12.1.1) does not allow time for them to do research on their practices as facilitators of learning.

- **Community citizenship and pastoral role**

Although PB is introverted and will not become involved in the students' personal life problems, he is always willing to accommodate any student with special needs. He will provide additional attention or make special arrangements for writing tests if a student can provide evidence of a substantive reason for not being able to follow the planned course schedule.

In an environment where the students are adults who are in some instances the same age as the facilitator of learning, it will not easily happen that the facilitator of learning will have to adopt a pastoral role. The timespan of only five weeks in which the facilitator of learning is involved with the students also prevents a close relationship to be formed.

PB's tendency to be introverted and the natural respect that the students have for him might also prevent them from expecting of him to adopt a pastoral role. Although a large part of the respect that the students have for PB is nested in his specialised knowledge, the students do not experience him as being "estranged […] in the ego edifice of teacher-as-master and [therefore he became] a fortress" (Taubman in Pinar and Reynolds 1992:229). This can be stated with confidence based on the comments made by students on the student feedback forms and during discussions with the staff members of PMI.

- **Assessor**

An in-depth study was not done on PB's practice as assessor. There was no significant change in the results that the students achieved before and after PB's involvement in the PDP.

As part of an inter-campus internal quality assurance audit, which was conducted during the data collection period of the study under discussion, a sample of the post-graduate formative and summative assessment activities that were compiled by PB was analysed. The following was found:

- When comparing the level of the questions that were posed to the SAQA level descriptors (SAQA 2010:6) it was found that the questions posed are on the correct level as they correspond to the level of studies on which the students are studying.

- Only the students' ability to use their higher level cognitive abilities as per Bloom's taxonomy, namely analysis, synthesis and evaluation, were assessed in the post-graduate formative assessment tasks and examinations.

- PB provides feedback to the students during the session that follows the one in which the formative assessment task has been completed.

- As co-supervisor for the dissertations of limited scope I have regular access to the feedback given to the students after submitting draft copies of their research reports. PB always provides ideas in the form of additional aspects for consideration in their research as part of the feedback. In some instances he informs them about newer information that is available if they suggest outdated methods or processes to be included in their research projects.

- **Learning area/subject/discipline specialist**

As mentioned before, PB is employed full-time in industry and therefore he needs to be up to date with the latest industrial technological developments. His full-time employer regularly arranges training and development interventions to keep employees abreast of changes in industry and PB's students benefit from this as he always shares the newer information with them.

4.11.1 What have I learned about learning while interacting with PB?

The most significant result of my involvement with PB was that I received confirmation of some of my views about facilitating learning practices. These ideas can be summarised in the following manner:

- There is a place and a time for the use of a traditional lecturing style. It can be used as the introduction to a learning session in order to convey the theoretical knowledge that must be used as point of departure for the learning orientated activities that will be used later during the session.

- I still believe that a traditional lecturing style should not be used as the only method of instruction (traditional terminology used on purpose) during a learning session. It should always be used in conjunction with more learning orientated activities such as debates, problem solving activities and case studies, to name only a few possibilities. If the amount of theory that needs to be transferred to the students (traditional terminology used on purpose) is so much that it will not allow time for practical learning activities, the theory should be divided into smaller parts that can then be facilitated in a few sessions to allow time for student participation during each session.

- When facilitators of learning plan the learning activities to be used during a contact session the focus should always be to fulfil the purpose and objective statements suiting the specific part of the course content. An activity should not be developed simply to have fun. Fun activities can be used only if the purpose and objectives of a session will be fulfilled.

- Innovative facilitating of learning is not a skill that is developed overnight. Facilitators of learning who have a strong preference for using the left brain A- and B-quadrants as per the Herrmann Whole Brain® theory usually find it very hard to develop and facilitate innovative learning activities. The facilitators of learning with a strong preference for the use of the right brain C- and mostly the D-quadrants as described by Herrmann find it easier to develop innovative learning activities.

- The aspects that were identified during my involvement with PB that need to be included in the curriculum of a PDP for academic staff who are employed in the PHE environment are listed in Chapter 5.

It is with a sad feeling that I realise that there is no more time left to report on any of the other activities undertaken by Annelise and PB as part of their, or rather our, professional development. While looking back on the road to see how far we have come, it is natural to recall the hurdles that we had to overcome on our journey.

4.12 CONSTRAINTS EXPERIENCED DURING THE STUDY

It may at first seem to be inappropriate to discuss the constraints that were experienced during the study in the reflective section of the report. However, I have found that by reflecting on the constraints at the end of the data collection period, I created new and deeper understanding of the reasons for some of the constraints. By reflecting on the constraints that I had experienced, I constructed new understanding of my situational constraints and found valuable information that can be used in my own personal and professional development and/or transformation.

The rationale for the extensive discussions is to provide information on the causes of the constraints and how they can influence the success of a PDP and the sustainability of continuously offering similar PDPs with new groups of participants. The information can be used by the sampler institution to review its organisational structure in order to ensure equal compliance with all the accreditation criteria as set by the CHE and to make ultimate use of the skills, competencies and virtues of the individual members of the academic management structure, to the benefit of the Institute. Other PHEIs that are in a growing phase can learn from the experiences and can use the information when revising their organisational structures to accommodate the additional workload that is the natural result of growth in an organisation.

4.12.1 Time

The most significant constraints that were experienced during the study were time-related. It was a combination of a lack of time for both the participants and me and the long timespan between the times that the participants were contracted to facilitate learning.

The fact that the participants are part-time employed facilitators of learning resulted in the situation that none of the participants could compile a formal AR report or a portfolio of professional development. When considering the large amount of time that facilitators of learning spend outside the classroom on preparing learning

activities, compiling formative and summative assessment instruments and marking formative tests and assignments one can understand why this statement is true.

4.12.1.1   A time analysis done to determine the workload of a facilitator of learning

Time is a very significant factor in the process of compiling examination papers and formative assessment test and assignments. The most important factors that were mentioned during the discussion with Annelise are summarised below. Baseline information was continuously collected during my quality assurance discussions with all the facilitators of learning as part of my task description since I was employed at PMI is incorporated in the summary.

- **Course duration:** The courses in PMI Gauteng are offered over a period of five weeks and the examinations are written in the sixth week. The contact sessions take place on a Saturday between 08:00 and 14:00.

- **Prescribed number of assessment opportunities:** According to PMI policy the students have to, within the first four weeks, complete two assignments and write two tests. This means that four assessments within a period of three weeks have to be completed as an assessment cannot be scheduled for the first day of the contact sessions. The students have to receive their examination entry permits during the fifth and final contact session of the course.

- **Submission timelines:** It is expected of the facilitators of learning to submit the examination paper not later than the end of the second week of the scheduled contact sessions.

- **Assessment feedback good practice:** It is good practice to, during the following contact session, provide feedback to the students about the results that they have achieved in the formative assessment tasks completed the previous week as this will indicate where remediation is needed. Therefore the facilitators of learning have to ensure that all the formative assessment tasks

are assessed within one week after submission.

- **Developing new formative assessment tasks**: New formative assessment tasks have to be developed each time that a course is offered. Many of the students are employed by the same employers. The handing down of formative assessment tests takes place and the students prepare only the questions that are included in the previous formative assessment tests. Even assignments have to be changed every time as a result of the same situation. If one of the students has failed and is repeating the course he or she will also have the tests and assignments and will study only what had been asked before.

- **Prescribed weighting in line with Bloom's taxonomy:** It takes much time and effort to analyse the different questions against Bloom's taxonomy when not doing it regularly. One has to refer to the notes every time that an analysis is done to be reminded of the principles to be considered.

- **Preparation for contact sessions:** In order to facilitate a contact session that can really add value, a facilitator of learning has to spend time on preparation and research in order to find up to date information that can be used as examples or for benchmarking during the contact sessions.

This might seem to be the normal workload for a facilitator of learning. However, the following factors should be kept in mind:

- **Part-time employment:** The facilitators of learning who are contracted by PMI are part-time employees of PMI. They are all full-time employees in the industrial manufacturing environment. This is necessary, as explained in Chapter 1, as all the students of PMI are employed in industry. The facilitators of learning must be able to, through their experience in their workplaces, add value and new knowledge which the students have not yet learned.

- **Working overtime**: This is not a rare experience in the industrial manufacturing environment; it is a given.

- **Age:** Most of the facilitators of learning are of the age where they still have

children at school. They have to attend sporting events and support their children with their homework.

- **Fatigue:** They have to get the necessary hours of rest as they work mostly with industrial manufacturing technology. Fatigue can create a loss of concentration that can lead to life-threatening injuries on duty. My previous experience of being a debtor clerk specialising in injury on duty cases at a radiology practice can confirm this statement.

- **Family responsibilities:** They have to spend quality time with their families to ensure a stable home environment and need to attend religious services on a Sunday.

The main reason provided by the facilitators of learning for the late submission of the examination papers and other administrative documentation was time constraints. Through experience of being a facilitator of learning for more than a decade already, I am quite aware of the amount of time and effort that needs to be added outside the lecture hall and could therefore understand the situation. It needs to be mentioned that the majority of the facilitators of learning who are contracted by PMI are not driven by the remuneration that they receive. Many of them completed their studies at the Institute and value the learning that took place so much that they want to share what they have gained with others as a way to return something to the Institute as a token of appreciation. Some of the facilitators of learning state that they know that the world can be changed through knowledge and therefore they want to contribute to making the world a better place to live in. It can therefore be said that their work at PMI is passion-driven.

As the most significant constraint in the study is time-related, I have decided to include baseline information that I collected shortly after I had been employed at PMI in an attempt to make all parties in the Institute understand and appreciate the workload of the facilitators of learning. My strong hermeneutic orientation (C-quadrant dominance) that entails that one "places oneself in the shoes of others" allowed me to understand the situation of the facilitators of learning as I could strongly identify with them being driven through passion. The time analysis that I had done was an attempt to get all parties to realise that there is a limit to what can reasonably be expected from a part-time employed facilitator of learning, who is

employed on a full-time base in industry and who does not necessarily facilitate learning for the remuneration that he or she receives.

A part of my task description is to facilitate learning in areas that fall inside my area of speciality if and as needed by PMI. However, the administrative workload of the position never allows me time to facilitate learning in any of the courses. Although the position of Academic Manager was at that stage fulfilling in the sense that I could ensure that the learning and assessment that takes place in PMI is happening to the standard prescribed in the accreditation criteria as set by the HEQC, I still felt a huge void in my life. My passion lies in the facilitation and assessment of learning that can make a difference in the lives of my students. I believe I have received a gift for facilitating learning and I experience this as my calling and have made it my life mission to uplift others through providing them opportunities to experience true learning.

According to policy our class sizes may not exceed twenty five students per class. Three days before the commencement of a new course it was found that the class size of the third year course that had been scheduled to start exceeded the limit and it was decided to split the class. Another course would be offered to some of the students due to the availability of qualified facilitators of learning for third year level of studies in the subject area of the class that had to be split.

As a result of the short notice before the course started it was not possible to find a facilitator of learning; therefore it was decided that I would have to facilitate the course Human Resources Strategy on the third-year level. It was legitimate for me to facilitate the course as I had completed a human resources management qualification prior to becoming involved in education and I had many years of experience in the human resources function of the organisations where I had been employed before. Therefore, in this instance, logistics and passion were the driving forces to accept the decision.

I realised that by facilitating the Human Resources Strategy course myself I would be able to experience the impact that the administrative processes and procedures in PMI have on the facilitators of learning. I then requested to receive exactly the

same treatment from the operations department as would any other facilitator of learning contracted by PMI. I completed the work that was related to facilitating the course after hours as if I was a full-time employee at another employer.

It should be kept in mind that it was the first time that I facilitated the course and therefore I had to compile all the formative assessment tasks and the summative examination paper from scratch. I did not want to use the existing assessments as I wanted the assessment tasks to be in line with the prescribed guidelines (PMI NSAFG).

The timespan of the course was not standard as there were two long weekends in the period which actually allowed me more time between the contact sessions. As is the case with the facilitators of learning who have to work overtime at a full-time workplace, I was out of office for nine days to do work at a PMI client during this same period. I was in another province as co-facilitator of a PDP (similar to the one under discussion) that was offered to sixty-eight academics from a public university. I had to coordinate the printing and packing of the student packs, had to prepare for some class activities that I facilitated and had to print hand-outs for the different sessions.

Although I was out of office on behalf of PMI, I still had to keep up with the day to day activities of the office and spent my evenings by replying to e-mails and delegating tasks via e-mail or cellular phone. At the same time I had to co-ordinate the preparations and train the PMI staff members for an internal academic audit which was based on the same principles as a full scale HEQC on-site audit.

Table 34 provides a summary of the results of the time analysis that I conducted during the running of the Human Resources Strategy course (Boshoff 2010).

Table 34: Hours spent by facilitators of learning in addition to contact hours

ACTION	TIME SPENT	TOTAL TIME
Preparation for five contact sessions	1. 3 hrs. – got overview of content and created a case study. 2. 2 hrs. – compiled and typed the figures to be used in case scenario and calculated to ensure correctness and to have a memorandum for the activity. 3. 1 hr. – used case study from previous facilitation experience. (2 years prior in FETC). 4. 2 hrs. – prepared typed questions based on video. 5. 3 hrs. – created different case scenarios for complete curriculum (revision).	11 hrs.
Test 1 and memorandum compiled	2 hrs. 30 min.	2 hrs. 30 min.
Test 1 marked	12 x 15 = 3 hrs.	3 hrs.
Test 2 and memorandum compiled	Case study-based = 3 hrs.	3 hrs.
Test 2 marked	11 x 18 min = 3 hrs. 19 min.	3 hrs. 19 min.
Assignment 1 and memorandum compiled	3 hrs. – Case study-based	3 hrs.
Assignment 1 marked	11 x 15 min. = 2 hrs. 45 min.	2 hrs. 45 min.
Assignment 2 and memorandum compiled	3 hrs. – Case study-based	3 hrs.
Assignment 2 marked	11 x 20 min = 3 hrs. 40 min.	3 hrs. 40 min.
Examination paper compiled	10 hrs.	10 hrs.
Examination memorandum compiled	3 hrs. 30 min.	3 hrs. 30 min.
Time spent in addition to contact hours (without additional remuneration)		**53 hrs. 44 min.**
Marking of examination papers (remunerated per script)	11 x 35 = 6 hrs. 25 min.	6 hrs. 25 min.
TOTAL TIME SPENT IN ADDITION TO CONTACT HOURS		**60 hrs. 09 min.**
Note: One (1) student discontinued his studies		

An additional 12 hours and 44 minutes (without remuneration) and six hours and 25 minutes (remunerated per script) can be added to the total time for a facilitator of learning who has a full class size of 25 students.

When looking at the result of the analysis, the first reaction is that less time will be spent from the second time that a facilitator of learning facilitates a course. It could be argued that the preparation has already been done and that the formative assessment tasks have been compiled. This is, however, not the case, especially in PMI where new groups of students who come from the same workplace are enrolled every year.

The students who have previously completed a course usually hand the formative assessment tasks down to their newly enrolled colleagues. If the assignments are not changed the newly enrolled students can just copy and improve the previously assessed assignments of their colleagues. This can also result in plagiarism claims against the students. When the tests are handed down the students only study the answers to questions that were previously posed and they do not study the complete curriculum. A student who repeats the course will have open access to the tests and assignments if they are not changed.

During preparation for facilitation of the contact sessions, the facilitators of learning must ensure that they include any possible changes that have appeared in the industrial environment related to their areas of expertise. This is especially true in the case of the courses related to information technology. Another reason for using different ways of facilitating the same content is that a student who is repeating the course will become bored if the same learning tasks are used in the learning process. One should also consider the fact that the student might not have been able to understand the work in the way that it was presented previously. Another way of facilitating the content might better fit the student's preferred learning style and will allow the student to understand the content better.

By following the hermeneutical approach of placing oneself in the shoes of others and comparing the scenarios explained above with one's own life, it becomes easy to understand why examination papers are not on a standard that would be acceptable according to normal academic standards expected from full-time facilitators of learning.

In order to be able to complete all the administrative tasks in time, it becomes easy

to compile straightforward questions that will not necessitate deep thinking to answer them correctly. Other time intensive activities are the typing of multiple choice test items in section A or compiling case studies in Section C of the examination papers. Shorter answers are assessed (marked) faster than answers that provide explanations and viewpoints that need to be substantiated.

4.12.1.2   Compensating for the lack of time on the participants' side

In order to get the study completed within the allowed timeframe I had to compensate for the lack of time experienced by the participants. In order to prevent the study relating to Annelise's practice from coming to a complete standstill during the times that she was not contracted, I analysed various summative examination papers (Section 4.7.4.3) that she had compiled. After analysing the examination papers I forwarded the results to her. We then discussed the findings during mentoring discussion sessions once she was contracted again to facilitate learning.

As a result of the time constraints experienced by the participants they never compiled formal AR reports or professional portfolios. I had to find alternatives ways of collecting the data that would be included in the participants' professional portfolios. This resulted in my being intensively involved as a primary data collection instrument (Smit 2001:66) in the study. I had to collect all the data during scheduled mentoring sessions or through being an observer during the contact sessions that the participants facilitated. I also used data that was obtained when Annelise shared her experiences with me in spontaneous discussions during lunch breaks relating to something that had happened during a contact session. Data that was obtained through overhearing comments made by the students while observing the reported events was also considered. The data was then immediately captured in report format and I regularly provided copies of the reports to Annelise and PB to take note of what had been said.

In some instances data was collected in unexpected ways, such as observing student behaviour on campus and overhearing conversations that relate to what had happened during a specific contact session. Valuable information would have been

lost had I not been present on campus during the running times of the contact sessions.

Students sometimes comment on the quality of the facilitators of learning while being in the administration office. The administrative members of staff then convey what was said and it happens regularly that I am present when the comment is made. I regularly convey the information to the facilitators of learning for motivational purposes and this can be verified by the administrative members of staff.

4.12.1.3   Time constraints that I experienced during the study

If I had to name the biggest constraint that I had ever experienced throughout all my studies since 1996 it is without any doubt the lack of time that I experienced during my doctoral studies. When trying to determine why time became such a huge constraint I reflected on my time as an employee at the exemplar institution and the situational influences that caused the time constraint. The circumstances and situations that were identified are the following:

- **Absence of academic recesses:** PHEIs are run as businesses and therefore the needs of the clients and a sustaining distribution of income throughout the year dictate the organisational arrangements. For this reason some PHEIs, as is the case in PMI, never close for academic recess during the year and therefore there is no dedicated time to be spent on research. In the school, FET and public HE environments researchers can use the academic recess to focus on their studies.

- **Leave policy:** In the public HE environment and in some PHEIs research leave is granted to academic members of staff. This is not the case in PMI. Three days per annum study leave is granted on the principle that an employee has to sit for written examinations as part of formal studies and there is no additional grant for research-based studies. Policy clearly states that additional leave for research-based studies is awarded as either leave without pay or normal annual leave which in my case is twenty working days per

annum. Being the sole breadwinner I could not afford to opt for leave without pay.

- **Generalised job structure:** The position in which I am employed is structured in a generalised way. It entails the administrative tasks relating to the fulfilment of all the legalities for accreditation such as OHS compliance and the annual report and surveys that need to be submitted to the DHET. Although the Institute's administrator in another region does the submissions I have to ensure OHS compliance for the region and that all the necessary information and documentation relating to the Gauteng branch is forwarded to the administrator on time. Moreover, I am responsible for submissions of student records to the NLRD.

   The focus of the job description of the Academic Managers in PMI is mainly that of an academic administrator who ensures legal compliance in order to keep the full accreditation status of the Institute. Quality assurance of the teaching (term used by CHE) and learning and student support are only some of the many areas of responsibility.

- **On-demand regional and national duties:** I have various national duties within the Institute which cannot always be included in a formal work plan as it must be completed as and when the need arises.
   - I am the certification officer for all the regions in which the Institute operates. The graduation ceremonies of the different regions happen throughout the year and the needs in the different regions are considered when scheduling the ceremonies. With flexibility being one of the competitive advantages of the Institute, changes in the graduation schedules are sometimes made on short notice. Certificates for short courses are requested throughout the year and therefore certification is a continuous responsibility.
   - Having the records of all certificates issued resulted in my being the point of contact for the businesses that specialise in the verification of qualifications such as when a person applies for a position.
   - In the 1970s the head office of PMI was situated in Gauteng and therefore I am the first point of contact for any queries or requests relating to historic

student results. For integrity purposes PMI prefers that all qualification and result-related verifications are done on an academic management level.

- In order to ensure standardisation throughout the Institute all RPL and advancing of credits (AoC) applications from all the regions are forwarded to me for a final evaluation after the applications have been evaluated by the different regions. RPL and AoC applications appear regularly in PMI as a large number of our students completed some studies elsewhere as the average age of the students is 33 years. Our flexible enrolment schedule results in receiving applications throughout the year.

- **New qualification development:** PMI is fast-growing and very successful and in combination with the changes in the HEQSF we have been constantly busy with the development of new qualifications since 2010. As a member of the National Academic Committee (NAC) additional duties stem from these developmental processes.

- **Scheduling of contact sessions:** PMI does not have the traditional full-time student. As mentioned previously, our students are all employed in industry on a full-time basis and they are part-time students. The classes at the Gauteng branch are offered mainly on Saturdays between 08:00 and 15:00. Quality assurance of the teaching (facilitating learning), learning and assessment and student support are my responsibilities. The need to do contact session visits to evaluate the quality of the facilitating of learning, maintaining a positive relationship with the facilitators of learning and being on campus when the students are on campus result in working a full day on Saturdays which does not allow for much study time during the weekends.

- **Fulfilling CHE accreditation criteria:** When analysing the accreditation criteria for programme and institutional accreditation as stipulated by the CHE regarding the functions of student support, facilitating and assessing of learning and the quality assurance thereof and staff development, I realised that the Institute does not have a large enough focus on these areas. With these functions being my fields of speciality and absolute passion, I became my own worst enemy by following my passion. This has resulted in my working

every Saturday to help individual students with learning problems and offering "learn how to learn" sessions for the students. I also facilitate developmental sessions as part of an on-going PDP for the facilitators of learning. Although the arrangement was made that I have Mondays off for working on Saturdays, it never materialised as I was not able to keep up with all the deadlines of a full week's working hours. With Monday being the busiest day of the week in the Institute, I have become the bottleneck in the flow of a normal five-day workweek when I am not available when information or documentation is needed immediately.

After identifying the need to improve the standard of the research conducted by the Honours level students, I started to supervise the research done by the students while searching for a facilitator of learning who has excellent research skills to take over this task. One of PMI's competitive advantages is our flexibility that sometimes results in having students on campus after hours during the week for research support as they are working during the day and attending classes on Saturdays.

Although it can be said that it was my own decision to follow my passion, confirmation that what I have been doing on Saturdays is to the benefit of the Institute was found in a recent CHE on-site audit. The auditors expressed satisfaction with the student and academic staff support provided, the staff development activities that are offered and the quest to improve the research output of the students. Acknowledgement was also given to the fact that I spend time to present my research activities at conferences and to provide the students the opportunity to experience conference presentations by allowing them to co-present with me where the student's research relates to the conference theme.

- **Generating additional income for the Institute:** Since 2010 I have been annually involved in large profit-creating projects at clients (in some instances contracts with a seven figure turnover value) based on my fields of speciality and certification as a Herrmann Whole Brain® practitioner. Client involvement necessitates that I travel extensively and that I am sometimes hardly ever in

the office for many weeks per annum. I then have to run my office remotely during the evenings which does not allow any study time.

- **Part-time employment arrangements of the participants:** As all the facilitators of learning at PMI are employed in industry on a full-time basis and are therefore working during the day, it has created the situation that they do not have much time in which they can compile a professional portfolio. I have to wait for them to complete their portfolios of professional development which is one of my main sources of information.

  In order to collect enough information I had to, in some instances, collect data over a period of three years about the practices of one facilitator. This happened as some facilitators of learning are contracted once or twice a year for a period of five weeks at a time, based on the frequency of the offering of their fields of speciality.

When reflecting on the list of additional activities that have been added to my task list, it becomes clear that the time constraints were not created due to a lack of dedication or poor time management. They were mostly the result of trying to fill the voids that I had identified in the task description of my position as Academic Manager in relation to the accountability for retaining the accreditation status that is associated with the position.

4.12.2 Fixed mind-sets

Morgan and Herrmann-Nehdi (2007:3-4) state that "a mind-set is the way we see things, the way we think about the world. […] Mind-sets are part of our 'cognitive unconsciousness' where we have already formed mental maps that become our point of reference as we look at the world." They continue by saying that mind-sets are developed at a young age and that humans are most of the time unaware of the impact that mind-sets have on their lives. Most human beings stick to their set mind-sets for most of their lives, even though they might be given a large number of facts about why they should change their mind-sets.

On reflecting on the comments that were made by the participants after they had been informed about the PDP (Table 35), it becomes clear that the different preferred thinking styles of the participants, as described by Herrmann (Section 2.3.5.1), can be related to the reasons for the resistance to change. The different reasons for resistance that were anticipated correspond with the different thinking styles that are described in Herrmann's Whole Brain® theory. I also found that the right brain dominant participants were less fixed in their mind-sets and it was not hard to convince them to become involved in the PDP.

Table 35: Comments made by the facilitators of learning that can be seen as possible reasons for resistance to change

A-quadrant (Logical thinking)	**Low tolerance for change resulting in irritation** "If the PMI pass rates were acceptable in the past and the employers were 100% happy with the development of their employees, why do we need to change the approach? It will only create irritation for us and the students." **Pessimism** "All the male students in our classes are real men and don't have time for fun and games when coming to class. It will not work." "There is no way that you can teach Financial Management in any other way than through normal talk and chalk teaching." "Mathematics is Mathematics – you can calculate it or you can't – it is no game!"
B-quadrant (Organised and security)	**Fear of inability to develop new skills and behaviours** "When I now come to class I have planned every action to the end; I don't think I will be able to work in such an unorganised manner and what then?" **Uncertainty (insecurity) about what the future might bring** "At least now I can be sure of what I am doing and I am sure that I will be contracted by PMI. How can we be sure that you will not leave us out if we can't adapt to the new way of doing things?'

C-quadrant (Emotional)	**Lack of interest** "The way in which I do things has up to now always resulted in good student results … so … I don't know …?" **The fear of the loss of benefits** "Well okay, count me in … I need the additional income and have to be contracted again."
D-quadrant (Holistic and willing to take risks)	**Not resisting, more collection of additional information before buy-in.** "Will I be able to use the principles in all the subjects that I facilitate?" "That sounds exciting; will PMI provide the material that we need for the innovative learning activities?" **Immediate buy-in, not seriously worried about the possible constraints** "Count me in … we will worry about the troubles as they come."

Two participants withdrew from the PDP as a result of, among other possible influences, being fixed in their mind-sets. This can be linked to the fact that these two individuals displayed behaviour that can be regarded as pessimism (Section 2.5.2.2). Participant C (PC) withdrew from the PDP as PC could not be convinced that the specific subject fields lectured (term used on purpose) by PC can be facilitated in any other way than through "normal talk and chalk teaching". Although I suggested that I would develop and facilitate a Whole Brain® learning activity during one of PC's contact sessions, PC replied that there is hardly enough time to "get through the syllabus" as it is and that I was just going to waste more time by trying to facilitate learning in that subject field in any other way.

I tried to retain PC as part of the PDP by not insisting on providing any additional help after considering PC's Herrmann Whole Brain® profile. PC has high left brain scores (A-quadrant: 101 and B-quadrant: 93) and low right brain scores (C-quadrant: 32 and D-quadrant: 35). PC's Herrmann Whole Brain® profile also

indicates that PC tends to move more to the B-quadrant (organised and controlled) when placed under pressure.

I had considered the actions to be taken as suggested by Morgan and Herrmann-Nehdi (2007:9 and Section 2.3.5.1) to manage resistance to change and implemented the principles. To fulfil the A-quadrant needs, I provided factual information relating to the Herrmann Whole Brain® theory in the form of printed copies of documents that are available on the Herrmann International webpage and factual information regarding the lack of student participation that was found during the quality assurance visits to the contact sessions of various facilitators of learning. To fulfil the B-quadrant needs I offered myself as a resource by offering to help him to develop a Whole Brain® learning activity and I reminded him that he could just inform the administrative team of the resources that he needed and they would provide them. The reward that he would receive for participation was in the form of recognition as he would receive a certificate stating that he attended a PDP relating to innovative facilitating and assessing of learning. The thought that PC would realise the value of learning style flexibility as the PDP progressed and after considering the information comprised in the printed documents that I had provided did not materialise. PC withdrew immediately after the final contact session that was offered at the start of the PDP.

Participant D (PD) attended all the contact sessions but it was clear that attendance was purely because of courtesy as PMI carried the cost for contracting the external facilitator. PD has a similar Herrmann Whole Brain® profile as PC with high left brain scores (A-quadrant: 92 and B-quadrant: 92) and lower right brain scores (C-quadrant: 38 and D-quadrant: 66). PD also tends to move more to the B-quadrant (organised and controlled) when placed under pressure and holds the same perception that innovative learning activities cannot be used to facilitate all the subject fields.

Throughout the contact sessions, body language, facial expressions and remarks made indicated that there was no change in PD's mind-set. In the PD's situation the term *mind-set* can be related to attitude. The openly displayed disregard for what was happening and said during the contact sessions also created a tense

environment for the other participants. The effectiveness of group work in the groups where PD was involved was less obvious than in the other groups. Although I regularly reminded the participants that they could withdraw at any stage, without providing a reason, PD never used the chance to opt out. PD's openly displayed resistance was later mentioned as one of the aspects that were identified as being less pleasant during the run of the PDP contact sessions. I tried to retain PD as participant in the PDP in the same ways as in the case of PC but I also failed.

My experiences of trying to manage the resistance to the change in the practices of PC and PD made me realise the truth in the statement of Morgan and Herrmann-Nehdi (2007:10) that it is a myth that facts drive change. They indicate that it is not necessarily true as facts that do not fit individuals' mind-sets are rejected.

I reflected on my inability to convince these two participants to continue participation in the PDP in order to find additional ways that can be used in future to reduce resistance to change. Apart from my attempts to convince the participants not to quit participation by referring to the motivational concept of recognition, I could have tried to use the principles of self-actualisation as described by Maslow (Grobler, Wärnich, Carrell, Elbert & Hatfield 217:218). Chapman (2012) and McLeod (2007) discuss additional levels that were added to Maslow's motivational hierarchy in the 1970s and 1990s by various individuals, whose identity I could not trace. After the additional levels had been added in the 1990s the needs in the hierarchy changed as is displayed in Figure 52. Although the additional levels that were added by other individuals were never formally accepted by Maslow they still provide a wider range of aspects to consider when thinking of ways to motivate people.

I reflected on my conversations with PC and PD during the run of the contact sessions at the start of the PDP and the conversations when trying to convince them to continue participating in the PDP. This was done in an attempt to consider whether the additional levels in Maslow's hierarchy could have been used successfully to convince PC and PD to continue participation in the PDP. The ideas that came to mind are discussed below.
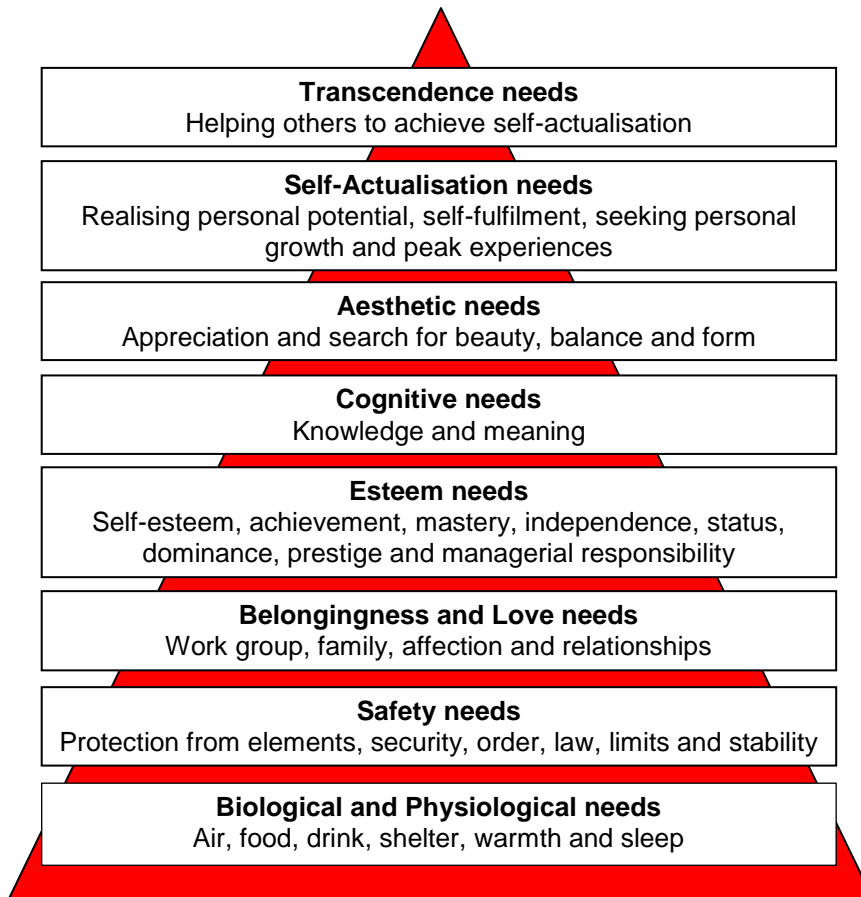
Figure 52: Maslow's hierarchy with 8 levels. (Adapted from Chapman (2012) and McLeod (2007)

- **Cognitive needs: knowledge and meaning**

Both PC and PD are highly educated in their fields of speciality. They would therefore not learn anything more relating to their subject fields while facilitating learning. They regularly attend conferences and developmental courses that relate to their field of speciality. The knowledge that they have gained in their fields of speciality fulfils their cognitive needs. To learn about learning is also not of any significance to them as the students who attend the contact sessions that they facilitate achieve high final results.

In a discussion with PC he said that it is logical that however he lectures (sic) in his subject field it can be said that it is effective as the students would have failed if his lecturing style had not been effective. Referring to logic is a natural A-quadrant way of thinking. PC also indicated that the only way that students will remember the steps and processes that should be provided in the examination is through allowing

them to complete repetitive exercises (B-quadrant thinking). PC never referred to understanding the processes or the practical application thereof in the student's life and/or working environment.

- **Aesthetic needs: Appreciation and search for beauty, balance and form**

In the context of the study it can be said that this motivator could not be used as a successful way to manage resistance to change in the cases of PC and PD. Aesthetic needs fit into right-brain oriented thinking. The strong left-brain preference of the participants would therefore result in left-brain orientated motivational factors being more successful. A possible way in which PC and PD may be motivated through aesthetic needs relates to balance and form. They may experience the mark distribution received by the students as balanced as it forms a normal distribution curve. If a skew curve were produced, they might have been motivated to try another way of lecturing (sic) resulting in a normal curve.

- **Self-Actualisation needs: Realising personal potential, self-fulfilment, seeking personal growth and peak experiences**

This need is fulfilled in the respondents' fulltime places of employment rather than in an environment in which they only work, in some instances, for five weeks in a year. Both PC and PD are employed in managerial positions at their fulltime workplaces and would therefore receive the opportunity to reach full potential through a process of performance appraisals that would result in obtaining promotional positions. Areas for professional development will be identified as part of the personal development plans that are created during formal performance appraisal processes.

- **Transcendence needs: Helping others to achieve self-actualisation**

This need has already been fulfilled for PC and PD through their part-time employment as facilitators of learning at the exemplar institution. Both of them are involved in the development of their subordinates at their fulltime places of employment in order to ensure successful implementation of the succession planning in the divisions that they manage.

When considering the high level of fulfilment of the self-actualisation needs at the participants' fulltime places of employment, it can be said that there is a significant difference between the ways in which part-time and fulltime appointed facilitators of learning can be motivated. In the case of fulltime facilitators of learning the aspects of self-actualisation are applicable and are managed more easily. The part-time appointed facilitators of learning enter into a contractual relationship for many reasons other than to fulfil self-actualisation needs. The most appropriate reasons in the context of the study are to improve their financial situation, to keep themselves occupied after formal retirement from industry or to give back to PMI what they have gained from being students at PMI.

I have realised that during the offering of future PDPs, formal research can be done on the differences between the ways in which fulltime and part-time employed facilitators of learning can be motivated.

4.12.3 High fallout rate

A large number of participants ended their participation in the PDP. From a population of 25 only 11 facilitators of learning opted to be part of the study. Only two of the participants' practices could be studied. The following are reasons for ending of participation:

- One participant has a special talent to facilitate learning on the lower level of studies and facilitated learning only in the bridging courses which is below HE level and therefore her practice was not formally studied.
- Two participants moved to another province and ended their relationship with the Institute.
- Three participants ended their relationships with PMI shortly after the start of the PDP due to personal reasons and commitments.
- One participant is full-time employed at a public HEI and was not available during the times that we wanted to contract him due to international conference attendance and research activities in his full-time place of employment.
- Two participants ended their participation without providing a reason as per the original agreement for participation.

The high fallout rate of nearly seventy three percent (73%), with only three of the original 11 participants still actively involved with facilitating learning in the Institute, resulted in the situation that the success of the PDP could not be measured over a larger number of practices that were observed. Although the validity and trustworthiness of qualitative findings do not rely on sample size, in an institution where the studies mostly relate to quantitative research environments and in which management has a tendency to believe the outcomes of quantitative research only, it would have been an advantage if a larger number of facilitator of learning practices could have been studied.

The high fallout rate could also result in reluctance by the Institute to make another monetary investment in formalised staff development. If the participants are requested to contribute to the cost of the PDP, the number of facilitators of learning willing to participate will be much lower than when the Institute is willing to carry the cost.

Although I will be facilitating the PDP contact sessions, the HBDI$^®$ online assessment which needs to be completed by all participants to ensure ultimate success of the PDP is the main cost-creating component of the PDP. It would also add value if an external facilitator of learning is contracted to facilitate some of the sessions in order to provide more credibility to the PDP. The participants will then realise that the curriculum content of the PDP is not based only on PMI rules and preferences but that the principles that are used and propagated are based on formal theories and standard practices in the broader public and PHE environments.

4.12.4 Ethical constraints

It has been experienced that the ethical arrangements of the study created constraints in the study. The arrangement was that participants could end their participation without providing a reason for their decision. In a general discussion after the end of the data collection period of the study, one of the participants acknowledged that he ended his participation as he was and not willing to engage in the writing of a research report or the compiling of a professional portfolio. He felt that, at his age, he did not need these activities in his career anymore. If this had

been known when he ended his participation he could have been informed that he could still participate and gain the experience without having to compile the research report or professional portfolio.

In some instances I could have provided significant information which I had discovered through my own experiences as research supervisor during the time of the study. According to the arrangements set out in the ethical agreement between UP and myself, I may not have been directly involved with the students for the purpose of the study and could therefore not report on these findings. All the students of PMI are over twenty-one years of age and are therefore able to enforce their constitutional rights themselves. The students are also protected from exploitation by their employers, trade unions and the policies of PMI. Albeit all these ways of protecting students from being exploited mentioned in my initial application for ethical clearance, it seemed that the basic rules to be followed when doing research in schools where minors are involved were still the underpinning guidelines used when considering my application for ethical clearance.

By experiencing the different constraints and reflecting on them, recommendations can be made to ensure the success of future PDPs. It also allowed me to have a wider perspective from which I can draw information to consider when answering my ontological questions. Conclusions regarding the constraints that were experienced during the study and recommendations to prevent it in future appear in Chapter 5.

4.13   SUMMARY OF THE CHAPTER

The part of the journey described in Chapter 4 was a tedious but exciting experience. The participants and I experienced the value of being part of a learning community in which all parties are lifelong learners, facilitators of learning and mentors. Not only could the participants and I learn from one another, but we also learned through the knowledge, skills, competencies, values and virtues that the students brought to the contact sessions.

The next chapter allows us to look back on our experiences in order to draw final conclusions and to decide which new roads we will travel on in our quest for professional development.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND FINAL REFLECTIONS

5.1   INTRODUCTION

You are invited to join me in looking back on the road on which the participants and I have travelled. De Bono (2007) says that "you can analyse the past but you have to design the future". This suggests that one has to reflect on the past to learn from one's experiences in order to take decisions on actions to be taken in the future in a constructivist manner. The purpose of reflecting on the journey is to determine whether I have to return to some of the places where I have been or whether I can move on to new places and experiences. I may have to take a few steps back as I perhaps may not have observed adequately at some of the places visited during the reflective journey.

By continuously reflecting on my experiences during the journey, I could identify aspects that can be used in future journeys and the obstacles that need to be avoided in future could be identified. In AR one continuously creates recommendations in order to know how to plan the next action to be taken based on that what was concluded during a previous action.
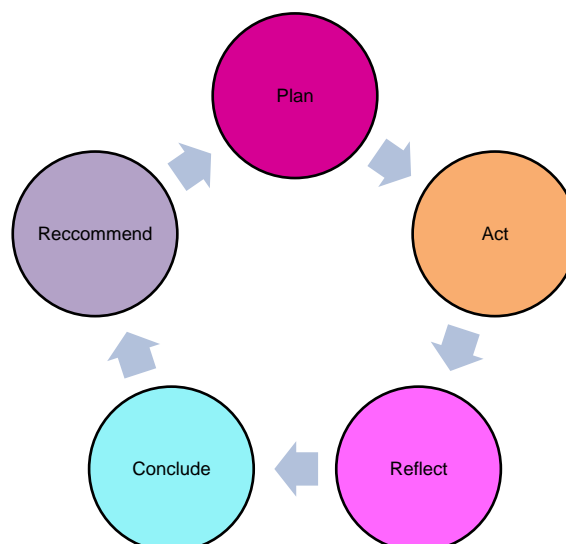

Figure 53: Conclusions and recommendations as part of the AR cycle

Therefore the conclusions and recommendations have already been provided as part of the discussions in the different sections, through the notions of reflecting after action and reflecting before action. The cyclic AR process can therefore be indicated as plan → act → reflect → conclude → recommend → (Figure 53).

The sections in this chapter that refer to the constraints experienced during the study and the proposed curriculum for a PDP comprise summaries of the conclusions that were drawn and recommendations that were made by the participants throughout the study. The IRs provided some conclusions and recommendations based on their experiences while studying towards the benchmarked qualifications or their experiences as managers of institutions of which the academic staff members are studying towards these qualifications. The IRs' recommendations were in some instances used as point of departure during the PDP. The conclusions and recommendations that were made by the participants when reflecting on their experiences during the PDP are included in the different sections. My contributions are based on these experiences in my life:

- Student since childhood;
- facilitator of learning in the FET and HE environment for the past 15 years;
- mentee of a colleague who had completed the DHETP which is one of the benchmarked qualifications;
- peer mentor for colleagues who studied with me towards the DHETP;
- mentor for colleagues in the FET environment who were participants of a PDP that was based on the PGCHE that is offered by UP;
- mentor for the participants of the PDP that are part of the study.

As the main focus of my AR is my professional development as mentor for the participants of the PDP, I use a reflective approach to determine, firstly the level of success of the AR process that I followed, and secondly the level of my professional development that resulted from the study. The overall significance of the study and suggestions for future research are discussed. At the end of the chapter I take a final decision on the extent to which I can answer my ontological question.

5.2 CONCLUSIONS AND RECOMMENDATIONS BASED ON EXPERIENCES DURING THE STUDY

The discussions that follow are not in any specific order as all the aspects that are mentioned are equally significant for the success of the implementation of a PDP such as the one that forms part of the study.

5.2.1 Time constraints

The most significant constraints that were experienced are time-related. The conclusions that were drawn based on the discussions in Section 4.12.1 are summarised below.

5.2.1.1 Time constraints experienced by the participants

In the context of the facilitators of learning who participated in the PDP the following can be concluded:

- Participants of a PDP who are contracted on a part-time basis for short periods of time only are not always willing to compile an AR report or a professional development portfolio as a compulsory part of a PDP. One of the IRs stated that in his organisation it was experienced that if participants do not receive additional remuneration for the time spent on the PDP activities, while they are not contracted to facilitate learning, they cannot be pressurised to be actively involved in the AR project or the compiling of a professional portfolio. Participants regard the additional remuneration as an incentive for spending their time on being part of the PDP.

- The long time lapse that sometimes occurs between the times that the participants are contracted to facilitate learning causes them to lose focus of the PDP activities. Therefore the five weeks in which the courses are offered at PMI Gauteng sometimes merely act as a refresher period for what the participants had implemented and experienced during the previous contract time and no additional professional development takes place.

- The short times in which the participants are contracted does not allow time for all the value adding activities that could have taken place, such as the analysis of examination papers to determine the level of compliance with Bloom's taxonomy and the accommodation of learning style flexibility based on the Herrmann Whole Brain® theory. These activities then have to be carried out by the mentor just to have the information available in order to make the participants aware of the information that was obtained during the analysis. The analysis of the examination papers that has to be done by the mentor then creates an additional load on the mentor, which ultimately leads to an infringement on personal time.

- In contradiction to the above conclusions it was found that the more the participants are contracted to facilitate learning the less time they have to spend on formally compiling an AR report or a professional development portfolio as part of a PDP. This is the result of tight administrative deadlines that have to be met in the short contract periods.

5.2.1.2 Recommendations regarding time constraints experienced by the participants

The recommendations that appear below are applicable to the context where facilitators of learning are employed on an irregular part-time contractual basis while being employed in industry on a full-time basis and where the participants are supported by a mentor who is employed on a full-time basis by the institution in which the PDP is offered.

- It should not be expected from participants of a PDP to compile a research report or professional portfolio formally as a compulsory outcome of a PDP. Participants should, however, be supported if they want to compile a research report or a professional portfolio as an optional outcome of the PDP.

- The measuring of the success of the PDP should not be reliant only on a formal research report or a professional portfolio. Success can be determined and showcased in a scholarly and professional manner by way of:

- comparing the observation reports on the participants' practices that were completed during quality assurance contact session visits prior to and after the offering of the PDP;
- comparing student feedback reports on the participants' practices that were completed prior to and after the offering of the PDP;
- formal recording of student accounts on their experiences during the contact sessions facilitated by the participants, comments that students make to the administrative staff and in discussions with the mentor, sometimes weeks or months after they have attended the participant's contact sessions;
- inviting the participants to act as guest speakers at academic forum meetings where their peers can peer-assess their successes;
- hosting research indabas at which participants can present their successes as conference papers;
- assisting participants in submitting abstracts for acceptance to present their work at national conferences such as the annual HELTASA conference.
- For benchmarking purposes, facilitators of learning who are facilitating contact sessions of the formal qualifications against which the PDP is benchmarked can be invited to act as observer assessors of the participants' practices.

- In order to ensure continuous involvement of the participants during the times that they are not contracted, they can be invited to act as voluntary mentors for their peer facilitators of learning who either have not yet attended the PDP or who are at the time, attending contact sessions that are offered as part of the PDP. The recommended activities will contribute to the fulfilment of the needs of the facilitators of learning for acknowledgement of their efforts and to feel part of the Institute. It will motivate the participants as it will be seen as an acknowledgement of the quality of the service that they render to the Institute.

- The different study units (modules) in which the proposed curriculum for a PDP is organised (Section 5.3) can be presented as stand-alone units at the different times that the participants are contracted. This will provide more time for value adding activities such as the analysis of examination papers that I mostly had to do in the current study as part of my quality assurance duties as a result of the

time constraints experienced by the participants.

The recommendations were shared with facilitators of learning in an information session regarding the commencement of a next run of the formal contact sessions as the starting point for the PDP. It was openly acknowledged that the idea of writing a formal research report was one of the reasons why facilitators of learning previously did not want to become part of the PDP.

5.2.1.3 Conclusions regarding time constraints that I experienced

Conclusions regarding the time constraints that I experienced can be summarised into three categories, namely organisational policies, job design and my thinking style preferences. The constraints relating to organisational policies and job design will not be discussed in detail as they can infringe on the regulations of the confidentiality policy of the Institute and the ethical agreement applicable to the study.

- The leave policy of the exemplar Institute that does not make provision for research-based study leave, in combination with the fact that there are no academic recesses in which one can focus on research studies, causes time constraints for employees who are studying towards qualifications that can be achieved through research.

- A generalised approach was followed when designing the task description of the Academic Managers in PMI. It focuses largely on the administrative requirements for accreditation as a PHEI. When additional focus is added to aspects such as innovation in facilitating and assessing learning, student support and professional development of the academic staff, additional working hours are needed.

- One's preferred thinking styles can result in one becoming one's own worst enemy while completing research-based studies. This conclusion is based on my own experiences of being driven by predominantly right brain thinking as per the Herrmann Whole Brain® theory. Both the interpersonal and intrapersonal aspects of the C-quadrant dominance (*emotional* and *people-orientated*) are the

driving forces behind my sometimes placing the students' and the Institute's needs before my own while still wanting to do everything possible to fulfil my passion and calling in life.

Time constraints were created through of a combination of my C- and D-quadrant preferences that were the driving force to accept the additional workload. These can be listed as my passion for facilitating and assessing learning that can contribute to uplifting others; the satisfaction experienced while facilitating learning, supporting students and being a mentor in staff development initiatives; my preference for variety; my strong sense of loyalty, responsibility and accountability towards the Institute; and my team spirit in combination with my natural tendency of having a hands-on approach in the activities of my division. Another example is my efforts in trying to create a win-win situation for the Institute and myself by contributing to the income generation for the Institute, while still trying to fulfil my passion and purpose in life. This is done by providing my newly developed rare specialised skill as certified Herrmann Whole Brain® practitioner at no additional cost to the Institute. All the above-mentioned aspects and a high flexibility level resulted in many additional hours spent at work in order to complete all the duties in my task description.

5.2.1.4 Recommendations to eliminate and/or reduce time constraints experienced by researchers who are employed at PHEIs

Time constraints experienced by managers employed at PHEIs, who are studying towards qualifications that are achieved by conducting research, can be reduced and/or eliminated by the following actions taken by top level management of PHEIs:

a) Organisational policies

The leave policies of PHEIs should allow for study leave for research-based studies as many qualifications on master's level and most qualifications on doctorate level are achieved through research. It is a prerequisite for an institution that offers post-graduate studies to employ master and doctorate level qualified academic staff

members. Therefore it is not unrealistic to recommend that the leave policy in a PHEI should include allowances for research-based studies.

b)   Job design

The recommendations are based on the way in which three other PHEIs, members of whose management teams were interviewed, have restructured their academic management structures to create workload balance. One of the PHEIs benchmarked in this section is much larger than the exemplar Institute, one is of similar size and one is much smaller than PMI. The institution of similar size as PMI operates by only utilising part-time contractually employed facilitators of learning as is the case in PMI.

A specialised approach should be followed when designing the task descriptions of academic management staff. The fields of speciality to ensure full accreditation status are divided into administration, curriculum matters, teaching, learning and assessment, and student support (Figure 54).
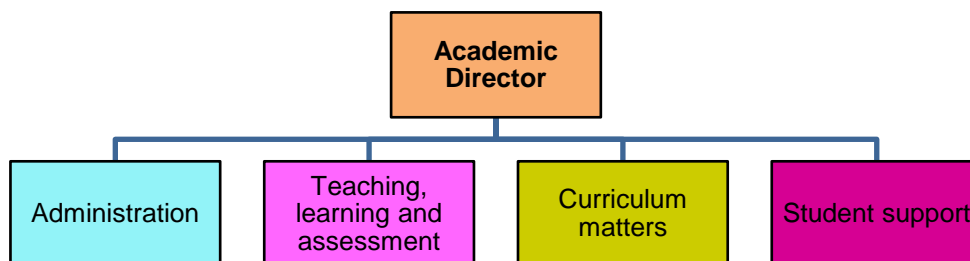
Figure 54: Proposed fields of speciality for Heads of Department

The job titles that are used for the different academic management positions in the institutions that were benchmarked during the study, in relation to those used in PMI, are displayed in Table 36.

Table 36: Comparison of job titles between PMI and other PHEIs

PMI job titles	Benchmarked PHEIs job titles
Academic Director	Director of Faculty Dean of Faculty Head of Faculty

PMI job titles	Benchmarked PHEIs job titles
Academic Manager	Head of Department: Administration Head of Department: Curriculum Matters Head of Department: Teaching, Learning and Assessment Head of Department: Student Support **Note**: The latter two are sometimes the responsibility of one person in small and medium-sized institutions.

Table 37 displays a broad summary of the task distribution within the different portfolios at the three benchmarked institutions.

Table 37: Task allocation to the different academic portfolios

PORTFOLIO (Control function)	RESPONSIBILITIES	RESPONSIBLE PERSON
Administration	Annual reporting and surveys such as DHET and HEQCIS	Different Heads of Department including Operations
	• Student Management System (LMS) • Certification • Qualification and result verification • Uploads on CHE online system	Head of Department: Administration
	• Non-academic compliance such as Occupational Health and Safety (OHS) • Resource management - buildings and grounds	Head of Department: Operations
	Internal and external compliance audits	Head of Department: Administration
	Research output	Head of Department: Administration
Curriculum matters	• Development of new courses and qualifications • Revision of curriculum content • Revision of learning support material • Applications for exemption • Applications for RPL • Facilitating and assessing learning (restricted hours) • Research output	Head of Department: Curriculum Matters
Teaching, learning and assessment	• Quality assurance of teaching, learning and assessment practices • Creating and implementing innovation in learning and facilitating and	Head of Department: Teaching, Learning and Assessment (Separate portfolios for

PORTFOLIO (Control function)	RESPONSIBILITIES	RESPONSIBLE PERSON
	assessing learning practices • Facilitating and assessing learning (restricted hours) • Research output • Professional development of academic staff • In-house training for all staff	teaching, learning and assessment and student support are only in use in the institutions larger than PMI)
Student support	• Special needs students • Learning support and development • Student wellness • Research output	

The following scenarios can be used as benchmark when deciding upon the number and types of task that should be included in the specialised task descriptions of academic management staff.

- In all three benchmarked institutions accreditation and administrative compliance is seen as an administrative function and there are no compulsory hours for facilitating learning added into the task design of this position. It is, however, expected of the person holding this position to do formal research relating to aspects such as legislative changes and process improvement.

- None of the benchmarked institutions include non-academic tasks and reporting lines as part of the responsibilities of the academic Heads of Department (HoDs). Although compliance with Occupational Health and Safety (OHS) regulations is part of the accreditation criteria, the HoD: Operations is responsible to ensure OHS compliance. A designated campus manager who reports to the HoD: Operations is employed to oversee these tasks. In response to the comment that OHS compliance is part of the accreditation criteria, the general response was that it is normal practice in public HEIs, PHEIs and business in general that the operations department is responsible for OHS compliance as it is a legality in any business, whether education-related or not. One IR stated that each person in an institution is responsible for ensuring a safe working environment and that everyone in the organisation benefits if the institution keeps it accreditation status. Therefore not all compliance criteria for

accreditation should be placed in the academic portfolios.

- The working arrangements of the HoDs can be summarised as follows:

  - They focus only on activities relating to their portfolios in the academic management team and matters relating to their specific fields of expertise. In the three benchmarked institutions it was found that a generalised approach – in any level of management – creates a loss of focus as a result of work overload that infringes on quality.
  - HoDs facilitate learning for a minimal number of hours per week. One of the IRs said they believe that one cannot manage that which one does not experience as it usually results in unrealistic expectations if one is not in the situation.
  - It is the HoDs' prerogative to decide whether they want to facilitate learning after hours for additional remuneration. The number of additional hours is, however, limited to prevent a work overload.
  - Time for research in both the specialised fields of their portfolios and specialised study fields is acknowledged in their task design.
  - Research leave for all employees, not only the academic members of staff, is included in the leave policy of the institutions for formal research activities that can contribute to an increase in the research output of the institutions.

c) Thinking style preferences

The following are recommendations on ways of preventing the preferred thinking styles of individuals from creating constraints in research-based studies:

- Managers on all levels of management in an organisation should complete the HBDI® online assessment and attend a formal feedback session as part of a professional development workshop. This will provide them with an opportunity to better understand the actions and reactions of the employees and managers may be informed about how to motivate the employees.

- Managers should not use the knowledge of the employees' preferred thinking

styles to manipulate their behaviour. The knowledge can be used in a motivational manner such as distributing tasks based on the individual employee's preferences in order to obtain ultimate work output by increasing satisfaction levels.

- The support system in the offices of HoDs should be enlarged according to the way in which the HoDs are utilised for additional tasks according to their skills, abilities, competencies and virtues. An *ad hoc* locum can be sourced to attend to the day to day operations in the HoDs' offices during times that they are utilised in special assignments. When the support structure in the office of the HoD is small, a locum should be appointed to complete the duties of the support staff member during times when he or she is on leave.

The recommendation to source an *ad hoc* staff member for the HOD's office stems from five years of experience of trying to cope when the academic support staff member is not at work. I run my office remotely after hours when I work on special client-based projects. My sense of loyalty and responsibility and the realisation that certain processes such as examinations cannot come to a standstill, have forced me to place my own responsibilities towards my studies on hold in order to keep the academic office running.

Through the discussions relating to time constraints experienced by the participants of the PDP and the constraints that I have experienced, it can be seen that more is involved than just improved time management by the individuals. In PMI's context, changes need to be made to the organisational policies, structures and the job design of the Academic Managers. A larger support structure should be created for the academic office as there is currently only one academic administration support staff member employed. The appointment of an *ad hoc* staff member can be done in such a way that it forms part of a succession planning process.

5.2.1.5 General conclusions relating to participant involvement in a PDP

Two IRs made comments and recommendations relating to staff participation in a PDP, which can be considered when planning a PDP or deciding on who should

participate. A contradiction exists between the recommendations of two IRs.

One respondent suggested that participation in a PDP should be compulsory and if the person is not willing to attend he or she will not be contracted to facilitate learning. This IR even suggested, although mentioning that it is realised that it will not be easy to implement, that it should become legislation that all facilitators of learning in HE complete the formal PGCHE qualification to be employed as facilitators of learning in both public and private HEIs. Another IR stated that it was found that the more specialised the field of expertise and the higher the qualifications of the facilitators of learning employed in their institution, the less are they interested in attending PDPs relating to facilitating and assessing learning.

When considering the subject fields of the qualifications offered by the institution where the IR respondent is employed who suggested compulsory PGCHE studies, it can be said that it is in generic management subject fields with a few specialised areas in which there is an adequate amount of skills available in the market to draw facilitators of learning from. The student component of the second IR's institution is highly specialised in their fields and in some instances the institution uses well published specialists as facilitators of learning to suit the developmental level of the student component. If they insist on compulsory PGCHE studies or even participation in a PDP such as the one which is part of the study, they will not be able to source facilitators of learning. In PMI this is also the case as it is not easy to find someone who is interested in being a facilitator of learning, being qualified on honours and master's level in fields such as quality, logistics, supply chain and production management and being employed in industry with practical experience and knowledge of the subjects.

It can therefore be said that although studies towards the formal PGCHE as a prerequisite for being employed as a facilitator of learning in HE is the ideal, it is not practically implementable in all PHEIs.

It can also be concluded that the ethical requirements of a study can also create limitations in a study. One of the ethical specifications of my study was that participants could end their participation without providing a reason for their decision.

This resulted in a participant withdrawing from the PDP whereas he could have been maintained if the reason for his withdrawal had been known; it was an insignificant problem that caused him to withdraw.

5.3 CONCLUSIONS AND RECOMMENDATIONS RELATING TO THE CURRICULUM CONTENT OF A PDP FOR ACADEMIC STAFF IN PHE

When considering the validity of the proposed curriculum content of a PDP for academic staff members in private HE, it should be remembered that the target audience of a PDP that is based on the proposed curriculum content is part-time academic staff members who are employed elsewhere on a full-time basis. Therefore the participants have limited time to spend on their professional development as facilitators of learning.

The proposed curriculum aims at immediate improvement of the learning that takes place during the contact sessions and an immediate increase in the authenticity of the assessments that are conducted during the learning process. The proposed curriculum content was created by considering baseline information that was obtained during quality assurance visits to the contact sessions that are offered at PMI, and primary and secondary information that was obtained through my AR and the AR conducted by the participants of the PDP during the study.

5.3.1 Sequencing of the study units

The proposed sequence of the study units were identified during the following:

- Reflection sessions of the participants of the PDP.
- My reflection sessions on my practice as mentor for the participants.
- Discussions in which the participants and I shared ideas to determine the significance of the different aspects that were identified.
- A final reflection session in which the participants were asked to reflect on their complete experience as a part-time facilitator of learning in PMI.
- Interviews conducted with professionals who had previously attended one of the benchmarked qualifications or PDPs.

PMI conducted a survey in order to determine the views of the facilitators of learning on their experience of being a part of PMI. Information that was received nationally from all the PMI branches was considered. Based on the information that was obtained during all the interactions mentioned above, the curriculum content of a PDP should be structured in the following manner:

Study Unit 1:   HBDI® feedback

Study Unit 2:   The South African HE landscape and institutional background

Study Unit 3:   Terminology used in education

Study Unit 4:   Theories on learning and learning styles

Study Unit 5:   Action research as theoretical framework

Study Unit 6:   Assessing lifelong learning

Study Unit 7:   Ergonomics

Study Unit 8:   Innovative facilitating of lifelong learning

At first glance the sequence of the study units might seem to be incorrect. The paragraphs that follow explain the reasons for suggesting the order indicated above.

Study Unit 1:   HBDI® assessment

The following HBDI® assessment feedback was given during the first contact session:

- The participants were eager to receive the feedback on the online assessment and it provided the first opportunity to experience the importance of speedy assessment feedback.

- The way in which the profile feedback was presented acted as an excellent example of innovative facilitating of learning activities.

- The Herrmann Whole Brain® theory is the theoretical grounding of all learning that took place during the PDP and therefore it was important that the participants understood the principles of the theory from the onset of the PDP.

Study Unit 2:   The South African HE landscape and institutional background

Understanding the HE environment is necessary as:

- HE is controlled by national legislation and the participants need to have a

broad overview of the controlling structures and standards;

- participants need to know how the institution fits into the national environment in order to know which regulations and standards are applicable to the institution in which they work.

Study Unit 3: Terminology used in education

At the onset of the PDP the participants need to be introduced to the terminology used:

- The participants are employed in industry and are not familiar with terms that are used in the educational environment. When they read educational articles they do not always know the meaning of the terms that are used.

- In general discussions in staff meetings abbreviations are used and they do not always know what these stand for.

Study Unit 4: Theories on learning and learning styles

- Facilitating and assessment of learning practices are based on theories and participants need to know about the theories prior to focusing on developing their practices to become innovative facilitators and assessors of learning.

Study Unit 5: Action research as theoretical framework for the development of a professional portfolio

The participants suggested that, during the first contact session, only an introduction be provided regarding the idea of developing a professional development portfolio just to make them aware that evidence should be collected from the start of the PDP. The participants also suggested that AR should be introduced gradually as the PDP progresses:

- It creates stress if AR is introduced sooner in the PDP as the participants do not know what should be developed in their practices and therefore they cannot create an appropriate proposal for the AR project. Time is wasted as the proposal needs to be changed once the participants understand the implications and applications of the theories on learning and learning styles.

- The participants found that they needed to understand the theories on which educational practices are based prior to finding out what their areas for development or transformation were.

- AR is seen as a tool that can be used to evaluate and develop one's practice after understanding the implications and applications of the theories on learning and learning styles.

- AR was found to be a completely new concept in the industrial environment. The participants are used to doing research on products and processes and not on their own practices. A proper introduction to this form of research was therefore needed once they understood the learning theories and could identify their areas for development.

Study Unit 6:   Innovative assessing of lifelong learning

There are three reasons for the suggested order of placing assessing lifelong learning before facilitating it.

- The integrity and authenticity of a qualification is much more reliant on the prevailing assessment of learning practices rather than on the facilitating of learning practices in an educational institution.

- The bottom-up principle of facilitating learning in a way that fits the assessment approach to be followed: The participants experienced that the students must be able to have experienced the activities that are included in the assessment instruments, for example the analysis of a case study and the creation of a graphical representation of the flow of a process.

- According to the SAQA level descriptors (SAQA 2010) the students must be able to apply their knowledge in both familiar and unfamiliar contexts. The students were used to, in all assessments in PMI prior to the onset of the PDP, providing answers from their work contexts. Before case studies were used as part of the learning activities in the contact sessions, the students tended to answer the questions on a case study in an assignment and examination based on their work context and not on the context of the case study.

- The participants experienced the value of using continuous assessment activities as learning activities. Therefore the participants benefitted from learning about the development of authentic case studies before they learned

about alternative ways of facilitating learning such as songs and games. This allowed them to be introduced to authentic assessment and innovative facilitating of learning at the same time.

An additional contextual reason for providing information on assessing learning before information on facilitating learning is shared with the participants is the administrative arrangements in PMI Gauteng. The courses/modules are offered over a period of five weeks. At the end of week two the examination paper must be submitted in order to allow enough time for the moderation and preparation of the examination papers. The participants must therefore be familiar with creating authentic assessment instruments before they need to know about innovative facilitating of learning.

Study Unit 7: Ergonomics

The reasons for placing such a large focus on ergonomics by making it a study unit on its own and presenting it before the study unit on facilitating learning are based on the following experiences of the participants:

- The arrangement of the furniture during group work had an influence on student participation during group activities.
- The restrictions that the fixed desk layout placed on activities such as role-play, group work and games as learning activities due to inflexible space utilisation.
- The impact of fixed desk layout on the integrity of formative assessments due to the small distance between the students during class tests.
- The noise levels during group activities.
- The reflection of light on the projection surface.
- The size and shape of the desks during creative activities such as creating posters.
- The influence of the temperature in the room on the level of student participation and motivation.

Study Unit 8: Innovative facilitating of lifelong learning

This study unit is placed last as it was suggested that it should not be offered as a

study unit on its own; it should be presented in an integrated manner with the other study units from Study Unit 1. The participants suggested the following:

- Reference be made to facilitating of learning from the onset of the PDP as examples are used to explain how the theories will influence the way in which learning is facilitated.

- The integration of facilitating and assessing of learning be done to provide students an opportunity to learn something about facilitating learning in the assessment-related study unit.

- The gradual implementation of new ways of facilitating and assessing learning rather than the immediate use of "unusual" (as per a student) learning activities. Therefore the aspects of singing, dancing and games should be included at the end of the study unit.

5.3.2   Proposed curriculum content for a PDP for academic staff in PHE

The proposed curriculum content of a PDP that aims at creating a scholarly approach to establishing a culture of lifelong learning in the PHE environment is provided in the paragraphs that follow. Only the main elements that the participants need to know to ensure that the learning and assessment practices are of an acceptable standard is included in the proposed curriculum. The curriculum that is proposed can be regarded as the curriculum for the first or introductory phase of a formally presented PDP. More in-depth outcomes can be added in the curriculum of a second phase PDP.

Innovative Facilitating and Assessing of Lifelong Learning in Private Higher Education

PURPOSE STATEMENT

The programme is presented in such a way that the participants will have the opportunity to:

- monitor their own professional development as facilitators and assessors of lifelong learning in a scholarly manner;

- develop their full potential as facilitators and assessors of lifelong learning by becoming active lifelong learners themselves;

- master competencies necessary for developing the full potential of students studying in their fields of specialisation;

- actively contribute towards developing a culture of lifelong learning in their specific contexts.

CRITICAL AND DEVELOPMENTAL OUTCOMES

The programme is structured in such a way that all the critical and developmental outcomes stipulated by SAQA (2000:18-19) should be achieved by the participants.

The critical outcomes to be reached are:

- Identify and solve problems and make decisions using critical and creative thinking.

- Work effectively with others as members of a team, group, organisation and community.

- Organise and manage themselves and their activities responsibly and effectively.

- Collect, analyse, organise and critically evaluate information.

- Communicate effectively using visual, symbolic and/or language skills in various modes.

- Use science and technology effectively and critically, showing responsibility towards the environment and the health of others.

- Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

The developmental outcomes that will be reached are:

- Reflecting on and exploring a variety of strategies to learn effectively.

- Participating as a responsible citizen in the life of local, national and global communities.

- Being culturally and aesthetically sensitive across a range of social contexts.

- Exploring education and career opportunities.

- Developing entrepreneurial abilities.

LEARNING OUTCOMES

The learning outcomes of this programme are grouped into different study units.

Study Unit 1:   Herrmann Whole Brain® theory and HBDI® results

Participants should be able to:

- Understand the principles of the Herrmann Whole Brain® theory.

- Identify their preferred thinking styles.

- Explain how their preferred thinking styles influence their epistemological foundations and their practices as facilitators and assessors of learning.

- Reflect on the results of the HBDI® online assessment which is representing their thinking style preferences and identify areas for professional development and personal growth to become Whole Brain® human beings.

Study Unit 2:   The South African HE landscape and institutional background

Participants should be able to do the following:

- Identify the different role-players, regulating bodies and structures in the South African HE environment.

- Correctly use the abbreviations referring to the different role-players, regulating bodies and structures. These should include but are not be limited to:
  - CHE: Council on Higher Education
  - DHET: Department of Higher Education and Training
  - HEQC: Higher Education Quality Committee
  - HEQCIS: Higher Education Quality Committee Information System
  - HEQSF: Higher Education Qualifications Sub-Framework
  - NLRD: National Student Record Database
  - NQF: National Qualifications Framework
  - SAQA: South African Qualifications Authority
  - SETAS: Sector Education and Training Authority (ies).

- Explain how legislation influences the practices of facilitators and assessors of learning in PHEIs in South Africa. Should include but are not be limited to:
  - The roles of an educator (DoE 2000:13-14)
  - Critical outcomes (COs) and Developmental outcomes (DOs) (SAQA 2000:18-19)
  - SAQA level descriptors (SAQA 2010)
  - Criteria for Programme Accreditation – Criterion 3 (CHE 2004b).
  - Provide an overview of the institution with which they are affiliated.

Study Unit 3   Terminology used in education

Participants should be able to:

- Explain the terminology that is regularly used in education and correctly use the abbreviations referring to the different terms where applicable. Should include but is not be limited to:
  - Assessment (Refer to Study Unit 6)
  - Cognitive abilities
  - Credits, credit values and notional hours
  - Curriculum (various interpretations) and syllabus
  - Edutainment
  - Facilitating learning
  - Knowledge, skills, attitudes, values and virtues
  - Learning resources
  - Learning styles and learning style flexibility
  - Lifelong learning
  - Moderation
  - Outcomes: Critical (CO), developmental (DO) and learning outcomes (LO)
  - Outcomes Based Education (OBE)
  - Paradigm
  - Remediation

Study Unit 4:   Theories on learning and learning styles

Participants should be able to:

- Explain the basic characteristics of adult learning.

- List and describe the implications of cognitive learning theories for both assessment and instruction.

- Apply the principles of different cognitive learning theories and theories on learning styles when designing learning and assessment tasks. Should include but are not be limited to:
  - Bloom's taxonomy
  - Constructivism, social constructivism
  - Gardner's multiple intelligence theory
  - Herrmann Whole Brain® theory
  - Problem-based learning (PBL).

Study Unit 5:   Action research as theoretical framework for the development of a professional portfolio

- Participants should be able to do the following:
- Explain action research as a developmental tool.
- Explain action research as a theoretical framework.
- Differentiate between various action research models.
- Select or design their own action research models to suit their contexts.
- Plan an action research project that will ensure their professional development.
- Conduct the planned action research.
- Define a professional portfolio.
- Present the evidence of their professional development by compiling a professional portfolio.

Study Unit 6:   Assessing lifelong learning

Participants should be able to:

- Explain the purpose of assessment: Continuous assessment (CAS), formative, summative, diagnostic and integrated assessment.

- Differentiate between traditional forms of assessment and outcomes-based assessment.

- Define authentic, alternative and performance-based assessment.

- Explain the principle of fairness in assessment and aspects that can negatively impact on fairness.

- Define ambiguity in assessment.

- Pose questions in a way that will prevent ambiguity.

- Explain how the layout of the test or examination paper can create stumbling blocks during tests and examinations.

- Use different types of assessment in their practices: Self-, peer-, group and assessor assessment.

- Select effective assessment tasks.

- Match the assessment task to the intended learning outcomes.

- Select assessment tasks that closely relate to the instructional style that is used.

- Select assessment tasks that allow the students to demonstrate their progress and capabilities.

- Analyse and evaluate existing examination papers to determine and identify:

- The level of consideration of Bloom's taxonomy and Herrmann's Whole Brain® theory to ensure fairness

- Completeness of the general instructions to be followed

- Ambiguity

- Errors in layout.

- Set criteria and apply the set criteria when compiling assessment tasks.

- Compile Whole Brain® assessment tasks that comply with the prescribed levels of Bloom's taxonomy.

- Set scoring criteria and apply the criteria when evaluating completed assessment tasks.

- Compile scoring guideline documents, such as memoranda, rubrics and checklists.

- Interpret assessment results and draw conclusions based on the

interpretation.

- Identify errors and ambiguity in the assessment tool after interpreting the assessment results.

- Explain the importance of and apply the principles of timeous and constructive assessment feedback.

- Design remediation activities.

- Design authentic re-assessment tasks.

Study Unit 7:   Ergonomics

Participants should be able to do the following:

- Discuss how ergonomics can influence the learning process. This should include but is not be limited to:
  - Furniture
  - Room layout
  - Lighting
  - Noise
  - Electronic projection
  - Aspects influencing the size and shape of the desks: Open book examinations, examination regulations, creative activities and group work.
  - Space
  - Temperature and ventilation in the venue
  - Health and safety regulations

Study Unit 8:   Innovative facilitating of lifelong learning

Participants should be able to do the following:

- Differentiate between teaching and facilitating learning.

- Apply the theory on Whole Brain® learning and the principle of learning style flexibility in their practices.

- Establish a positive learning atmosphere.

- Ensure active student participation during learning activities.

- Apply the principles of co-operative learning in their practices.

- Effectively use group work during learning activities by considering the influences on group work such as:
  - Size of the groups;
  - Principles and methods for effective group formation
  - Ergonomic aspects such as space; seating arrangements and noise levels.
- Interpret a syllabus.
- Plan and develop learning-orientated learning activities. These should include but are not be limited to:
  - Case studies
  - Role play
  - Learning games
  - Discussions or debates
  - Presentations
  - Peer-teaching and mentoring
- Changing education into edutainment through creativity activities, for example, music and singing, poems, posters, creating metaphors and puppet shows.
- Create and/or use different learning media effectively.
- Save cost through creative learning media development.
- Ensure student participation through learning media development.
- Integrate learning and assessment by developing learning activities of which the outcomes can be assessed.

The success of offering the study units as stand-alone units will be investigated during the on-going offering of the PDP.

5.4   REFLECTIONS ON THE ACTION RESEARCH APPROACH USED

In order to evaluate the success of using AR as theoretical and methodological framework for PDPs for academic staff in PHE, I reflect on the appropriateness of using AR as theoretical framework for a PDP, the value that was added to my own practice as mentor and the effectiveness and significance of the study.

5.4.1 Appropriateness of action research as theoretical framework for a PDP that is based on the proposed curriculum content

It can be concluded that it is appropriate to use AR as the theoretical framework for a PDP such as the one that is part of the study. This statement can be substantiated by the fact that both the participants and I were able to attain all COs and DOs as stipulated by SAQA (2000:18-19). Table 38 displays some examples of how all COs and DOs were attained through AR.

Table 38: Ways in which action research ensured that all the COs and DOs were reached by all the parties involved in the study.

CO 1. Identify and solve problems and make decisions using critical and creative thinking.

- The PDP participants had to evaluate their own practices critically to identify areas for improve in the way in which they facilitate learning and had to think creatively in order to develop innovative new ways of facilitating learning.
- I had to evaluate my practice as mentor critically to identify areas for improve in the way I mentor the PDP participants and had to think creatively in order to develop innovative new ways of mentoring.

CO 2. Work effectively with others as members of a team, group, organisation and community.

- The PDP participants and I worked as a team as I conducted informed observation sessions during the contact sessions and we always had reflection sessions immediately after the session in which we, as a team, evaluated the success of the session.
- The different PDP participants often had discussions with their peer facilitators of learning, even with those who did not participate in the project, to share their ideas of both successes and areas for improvement.
- During the reflection sessions mentioned above, the PDP participants provided feedback on my practice as being a mentor for the PDP participants

and suggested ways in which I can improve.

CO 3.   Organise and manage themselves and their activities responsibly and effectively.

- The PDP participants had to manage their own activities in such a manner that they fulfilled their roles as contracted facilitators of learning and at the same time they had to plan, implement and report on their AR, while being employed on a full-time basis in industry.
- I had to organise my activities in such a manner that the responsibilities stipulated in my task description were fulfilled and I had to spend time on my own studies.

CO 4.   Collect, analyse, organise and critically evaluate information.

The process of any research project is to "collect, analyse, organise and critically evaluate information". The fact that the PDP participants and I conducted AR on our practices ensured fulfilment of CO4.

CO 5.   Communicate effectively using visual, symbolic and/or language skills in various modes.

- Oral communication was used during the reflection sessions and written communication was used to compile the research reports.
- Photographic evidence was provided in the reports and some concepts were represented in graphical format.

CO 6.   Use science and technology effectively and critically, showing responsibility towards the environment and the health of others.

- All the reports were created on computers.
- Computers were used to create graphical representations of some of the concepts in the reports.

- Cameras were used to collect both photographic and video evidence. Voice recorders were used during interviews and feedback sessions.

- All the occupational health and safety regulations were considered as stipulated in PMI's standard operating procedure documentation relating to learning activities in the contact sessions.

CO 7.   Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.

- The PDP participants had to be able to use examples from different industries during the contact sessions that they facilitated. They related the continuous improvement cycles that they use in industry to the AR cycles used in their AR projects.

- I had to be able to facilitate the development of innovative learning activities over a wide range of areas of speciality and could follow the same principles with minor adjustments.

- I constantly do benchmarking with other private and public HE institutions in order to determine where PMI fits in the field and to identify areas in which we are a leader and areas in which we need development.

DO 1.   Reflecting on and exploring a variety of strategies to learn effectively.

- The PDP participants were introduced to the principle of learning style flexibility and they had to conduct a literature research on different styles that are preferred by different individuals.

- A few learning theories were introduced to the PDP participants during the sessions that were facilitated as part of the PDP. The PDP participants then had to reflect on their own learning to determine what their own preferred ways of learning were.

- The PDP participants also had to consider how the different learning styles preferred by the students can be accommodated during contact sessions.

- I had to consult literature to determine whether there are any new

developments regarding learning style flexibility in order to be an effective mentor and to widen my knowledge about the subject. I had to develop a deeper level of critical thinking and innovation in my learning as the study was conducted in order to achieve a PhD which is on a higher level than I had studied towards previously.

DO 2. Participating as a responsible citizen in the life of local, national and global communities.

- The new ways in which the PDP participants facilitated learning allowed the students to apply their newly acquired competencies practically in the workplace.
- The students could also share their experiences with others in their working environments in order to ensure professional development of their colleagues who were not enrolled students at PMI.
- The facilitators of learning, therefore had an indirect impact on society.
- My local responsibility was fulfilled through my contribution towards the professional development of the facilitators of learning.
- My national and international citizenship was fulfilled through the presentation of my study in progress at national and international conferences of which the theme in all cases was the improvement of learning.

DO 3. Being culturally and aesthetically sensitive across a range of social contexts.

- Both my own and the studies of the participants were conducted based on the ethical regulations in PMI which do not allow discrimination of any nature against any person or party.
- I had to adhere to the ethical regulations as stipulated by the University of Pretoria that were agreed upon in my application for ethical clearance to conduct the research.

DO 4.   Exploring education and career opportunities.

- One of the students who attended some of the contacts sessions that were facilitated by one of the participants of the PDP is now employed at PMI as a part-time facilitator of learning and she already implements what she experienced as a student.

- The PDP participants were informed of the PGCHE offered at the University of Pretoria on a part-time basis, where they can obtain a formal qualification focusing on a wider range of aspects of being a facilitator and assessor of learning in the HE environment than what was presented as part of the PDP.

- New areas for research were identified during my study, which can allow me an opportunity to learn more in areas relating to my own working environment (Section 5.7).

- As the focus of PMI's qualification is the manufacturing industry, my general knowledge base (Atkins 1995:29) and interest in the manufacturing industry has increased tremendously and I am planning to enrol for some of the courses offered at PMI. This will enable me to supervise a wider range of research conducted by the students as part of their studies.

- I have informed the executive management of PMI that I want to move out of the administrative role in which I am employed at the moment as I can add much more value to PMI as a full-time facilitator and assessor of learning, researcher and quality assurer of the learning that takes place.

DO 5.   Developing entrepreneurial abilities.

- In my case and in the cases of PMI facilitators of learning, who are all employed on a full-time basis in industry, the focus will be more on developing entrepreneurial abilities (developing new business opportunities inside a business or externally for the business in which one is employed) than on developing entrepreneurial abilities.

- The PDP participants can become involved in their employers' training divisions and the division which they are employed can bill the training divisions for their time spent on facilitating in-house training and development

sessions. In this manner the money stays in the business but the financial performance indicators of the division in which the facilitator of learning is employed will improve.

- The increase in my value as human resource for PMI, through the knowledge, experience and competencies that I have gained during the study, was the main reasons for the successful tendering for three projects at clients, two of which had a budget of more than R1 m each. The third had a lower monetary value but it resulted in a long-term relationship in which I have to conduct all the mentorship training for that organisation nationally and in some African countries.

It is recommended that although the participants may not want to compile action research reports or professional portfolios, AR should still be used as the theoretical framework for the PDP. AR provides a formal structure according to which the participants can plan their activities and evaluate the outcomes of their actions. The exposure to AR introduces the facilitators of learning who facilitate research-related courses to an additional way of doing research which had never before been introduced to the students of the Institute.

5.4.2　Using AR to create a learning community

I can without any doubt declare that the time during which I completed the study was the loneliest time that I ever experienced in an educational environment. Being the only full-time employed educator by profession in the whole of the exemplar Institute resulted in a situation that there is no opportunity to share my experiences with someone who has the same passion for all the facets of learning as I do. The strengths and interests of my colleagues who hold the position as Academic Manager in the other regions are my weaknesses and reasons for frustration. Their speciality and interest is the management of education through administrative processes, procedures and policies that drive the standards to be maintained.

Working in a private shareholding, profit-based educational environment contributes to the situation that nobody ever has the time to stand still to listen to what one has to say regarding information received at conferences, or that was found in literature or

through one's own research. With a product that is highly rated on quality and relevance of the curriculum and value adding to the clients' businesses, the main focus of all the employees is business development to ensure the existence of the Institute. The largest focus of my position, as is the case with the other regional Academic Managers, is to ensure that all the administrative processes and procedures are completed in a way to ensure that the Institute does not lose its accreditation status. It does make sense that a large focus should be placed on maintaining the accreditation status of the Institute as its existence depends on it. It should, however, be remembered that my areas of focus, namely teaching, learning, assessment, student support and staff development are also included in the accreditation criteria stipulated by the CHE.

As a result of the situation that the Institute relies mostly on part-time facilitators of learning, who are full-time employees in the manufacturing environment, there is no opportunity to delegate the responsibility of curriculum development and quality assurance of the product delivery to a team of educators who have obtained formal education-related qualifications. It becomes only one of the responsibilities of the regional Academic Managers.

In the public educational environment the administrative tasks are the responsibility of well qualified administrators and the academic members of staff focus on the learning that takes place. A community of educators exists with whom one's own research experiences can be shared and one's colleagues listen attentively when information is shared when one returns from a conference or seminar. New ideas are then evaluated, implemented and supported by the whole academic community. In the absence of a community of educators it sometimes feels as if I am trapped in a soundproof cell of confinement if I cannot share my thoughts, experiences and ideas for innovation of learning facilitation and learning in the Institute.

During a support session with my promoter halfway through my study, I realised that I did not stay on track of what was happening in the education environment relating to learning, as would have been the case if I did not have a divided focus in my position. I realised that I had fallen into the rut of doing without thinking as I had to follow prescriptions provided in legislation and policy and procedure documents with no

accommodation of innovation and creative thinking. I became well informed about legislation and the administrative processes and procedures to ensure the existence of the business and the only thinking that was involved was how to implement the policies and procedures to ensure accreditation. My development in the field of learning, which is actually my chosen speciality and in which I can add the most value, based on my most preferred thinking styles as identified through the HBDI®, was not as intense as it should have been.

I had to find a way in which I can stay informed about the changes and innovation that take place in the educational environment while at the same time try to cope with the growing number of administrative tasks that are my main responsibility in a fast growing PHE institution. Conducting formal AR allowed me to be involved with others who are investigating innovative ways to facilitate learning and learning itself and I could continuously receive feedback on my development from the participants of the PDP. The feedback brought new insights and criteria according to which I could evaluate my own practice and it informed me about topics that need to be included in the literature review of the study. My mentoring relationship which was the main focus of my AR created an audience with whom I could share information and experiences although the audience could not evaluate that what was shared based on formal educational criteria. By presenting my own AR projects at conferences I had audiences that would critique what I was doing. Attending conferences in which the results of other AR projects were presented also allowed me to obtain information regarding the latest developments and paradigms in the educational environment of which I had not been aware.

The value of AR for me lies in the fact that feedback on my work is received continuously in an environment where there are new developments on a daily base. I experience theoretical research as being continuously outdated as by the time that the publications that serve as sources for the study reach the shelves, the information is already outdated and the theorists are already changing their theories. I believe that the most significant learning theories and learning style theories that are published were created and tested during AR projects to ensure their practical application in the learning environment.

I have found that action researchers tend to be eager to share their experiences with others. Many action researchers share their experiences on webpages where discussions with an international community can take place and on which one can receive international feedback on one's views. An example of such an interactive forum is the different education-related interest groups of which one can become a member on the professional-orientated LinkedIn webpage. Even well-known action researchers provide their contact details on webpages and do reply to one in person once contacted (Seldin 2013).

The interactions that I had with the wider AR community and the participants of the PDP filled a part of the gap that I experience as a result of being the only educator in a business orientated education environment.

5.4.3   Reflections on the effectiveness of the research process

AR follows a continual improvement model and therefore it was appropriate to use AR as theoretical and methodological framework for a PDP. The methods that were used and the activities that took place during the project suited the intention and purpose of the study. The information that was obtained during the regular analyses was used to determine the next action to be taken in every next cycle of the AR process. A mixed method approach was followed and both quantitative and qualitative data was collected, organised and analysed.

The completion of the online HBDI® right at the onset of the study allowed the participants to understand the importance of accommodating learning style flexibility. They could relate the knowledge of their own preferred ways of thinking as indicated through the HBDI® to their own preferred ways of learning. The participants could identify how their own thinking styles influenced their own learning and how their thinking styles can create challenges in their learning. They could then use this understanding when developing innovative learning-centred learning opportunities to be used in their practices as facilitators of learning to ensure that students are challenged to use all four quadrants of their brains in order to become Whole Brain® learners.

By employing AR the participants and I could learn through living experiences that allowed us to experience things directly and we could in some instances immediately make sense of what we had experienced. Depending on the nature of what we had learned, we could sometimes immediately correct an action or behaviour that would immediately contribute to our personal and/or professional development process.

The cyclic processes of AR frequently provided new opportunities for learning through experience. They also contributed to developing higher confidence levels for the participants. This was possible as the participants were nurtured during the first cycles of their AR and they experienced success in what they were doing. With every new cycle I became less involved and they had to rely more on their own abilities. I did not "spoon-feed" the mentees by providing all the answers to the problems that they needed to solve. When reflecting on their personal behaviour history (O'Donnell, Reeve & Smith 2007:144) of being able to develop innovative learning-centred learning opportunities successfully with less involvement by me, they developed enough confidence to develop their own styles in their practices as facilitators of learning and they did not become pure clones of my practice. A facilitative mentoring (Du Toit 2013) approach was followed in which the mentees were allowed to discover the answers to questions and the solutions for problems themselves. If I had provided all the answers, a barrier to innovation would have been created.

Higher confidence levels materialised as the participants developed the skill of identifying their own areas for development through reflection. It was important to me that the participants had the opportunity to develop reflective skills as my experience throughout life is that it becomes less intimidating and humiliating when one can identify one's own weaknesses and when they are not pointed out by others. The reflective nature of AR provides the ideal environment for developing reflective skills.

The scholarly approach followed in the PDP of which the success is measured through a formal AR project urged me to view the activities to be more serious than in an informal mentoring relationship. This came about as I continuously engaged in planned self-reflective activities throughout the study.

The most significant constraint experienced, namely a lack of time, was managed

successfully by relying more heavily on the personal accounts of the participants that were verbally shared during reflective mentoring sessions and primary data that was collected during observation sessions. Making the development of portfolios of professional development optional eliminated additional stress experienced by the participants. Participants who had withdrawn during the early stages of the study indicated that they are willing to take part in future PDPs based on the fact that they will be allowed the opportunity to learn from their experiences without having to document their developmental processes formally.

I have learned that AR allows one to shift focus from the originally planned focus area of the study to an area that may be seen as much more significant to be researched. At the onset of the study one of the objectives was to determine how I can effectively manage a PDP. The second focus area was to determine what should be included in the curriculum of a PDP for academic staff with little or no formal training in the field of education. As the study progressed I realised that the participants need more support to design and implement innovative learning opportunities effectively and confidently in their practices. I realised that a more intense involvement in the support system for the participants can have a more significant impact on the results of the PDP than the effective managing of the PDP can have. Through previous experience of the success of following a mentoring approach in a similar situation at the FET college where I used to be employed, I decided to follow a mentoring approach when supporting the participants. While reflecting on the constraints that I had previously experienced in mentoring relationships, it became clear that the success of the PDP can be enhanced if I follow a reflective living approach which will continuously inform me of areas in which I have to develop to ensure successful mentoring relationships. From traditional research paradigms a shift in focus will be viewed as an indication of poorly planned research that will infringe on the accepted validity of the results of the study. In living reality the shift of focus enhanced the positive results obtained through the implementation of the PDP.

5.4.4 The most valuable theoretical baseline knowledge used during the study

Although it is said that it is acceptable for action researchers to generate their own

valid explanations or living theories of their educational influences in learning (Whitehead 2006), it is still of value to have some knowledge of existing theories that can be used as point of departure in one's practice. The most valuable theoretical baseline knowledge with which I entered into the study was knowledge about the Herrmann Whole Brain® theory and the different meta-theories and philosophies on which education practice is based.

The Herrmann Whole Brain® theory provided a deeper understanding of the reasons why different individuals behave, react and learn in the ways that they do. Understanding my own Herrmann Whole Brain® profile allowed me the opportunity to identify the reasons for the view that was held during my school years that I am one of the "not so clever" students. Although I always knew that I could not be viewed as not being intelligent as I could easily solve problems in a practical manner, I still felt as if I was not worth much in life. Once I understood the reason for my struggle as a student at school, it became my absolute calling and passion to help others to realise that individuals are unique in the way in which they make sense of the world and in the ways in which they learn.

Becoming a certified Herrmann Whole Brain® practitioner during my study added validity to my practice as I created an even deeper understanding of the theory and its application. It became part of my daily tasks to facilitate feedback sessions to groups who completed the online HBDI® as clients of the exemplar Institute. With every feedback session that I facilitated, participants identified ways in which the knowledge of their own Herrmann Whole Brain® profiles can assist them to become more effective in their personal development process, working environments and in their personal lives. I incorporated the new socially constructed ideas in future HBDI® feedback sessions and in my own daily practice as manager, facilitator of learning and mentor. The appropriateness and success of the ideas were evaluated by doing AR on my practice as Herrmann Whole Brain® practitioner outside the study under discussion.

The value of incorporating the principles of the Herrmann Whole Brain® theory in mentorship development programmes was acknowledged by one of the exemplar Institute's international clients. In 2011 I facilitated a Whole Brain®-based mentorship

development programme for one group of their employees in South Africa. At the same time I facilitated a Whole Brain®-based "learn how to learn" session for a group of students from the charitable organisation that they support. The success of the Whole Brain® approach was realised through feedback received from the participants. Whole Brain®-based mentoring programmes have since been introduced by four other groups of the same client in different provinces in South Africa and three groups in Mid-African countries. Two more Whole Brain®-based "learn how to learn" sessions were presented to children in different provinces in South Africa.

The value of these experiences with the client is twofold as it created a win-win situation for the exemplar Institute and for me. I could serve the Institute by contributing to the financial income, creating return business and by being the instrument for wider international exposure of the Institute. The experience allowed me the opportunity to serve others by sharing my knowledge with them. This is especially valuable to me as not only employees of the client were enriched. Ultimately, deserving children and young adults of Africa will benefit from these interventions. The Whole Brain® mentoring developmental programmes came about as part of a social responsibility support project for children who are standing on the thin line between being a child and a young adult. The children are at the end of their school years and they are mentored into being adults in the working environment. This is precious to me as I was allowed an opportunity to work towards fulfilling my purpose in life, namely to serve others and to support them in developing their full potential. I have also grown through the experiences as I realise how much I have that others do not have in their daily lives. I have since developed a deeper appreciation for where I am in life. My experiences also urged me to revisit my ontological question of "Am I who I am supposed to be and do I fulfil my purpose in life?" I still cannot provide a final answer.

When considering the information that was obtained through experience, interviews, self-reflection sessions and reflection sessions with the participants, it can be said that understanding the different thinking style preferences of the participants can be regarded as the most valuable aspect that contributes to the success of a mentoring relationship. Understanding the Herrmann Whole Brain® theory and knowing how to implement the principles assists in ensuring the successful managing of a mentoring

process.

By understanding the participants' Herrmann Whole Brain® profiles (Section 2.3.5.1) I could pre-empt the possible constraints that might have appeared during the relationship. The awareness of possible constraints allowed me to be proactive by treating the participants in a way that was believed to prevent any situation that could have led to the participants' resistance to the envisioned development of their facilitating and assessing of learning practices.

Knowledge of the participants' Whole Brain® profiles allowed me as mentor to determine aspects such as the way in which the mentee would like to communicate during the relationship (Herrmann International Africa 2005:5); for example, whether the communication should be verbal or written and whether the message should be conveyed in a conversational way or in short, to the point sentences. It also made it possible to pre-empt the activities that would move the participants outside their comfort zones. As I could pre-empt the participants' actions and reactions, it allowed me the opportunity to plan for the amount of support and the type of support that needed to be given during specific times or events in the development process.

Knowledge of the Herrmann Whole Brain® profile of the mentees assisted me in understanding which of my actions as mentor could have the biggest influence on the mentee's life. An example to substantiate this statement is that a mentee with left brain B-quadrant (organised) dominance might value the strict time frames that were kept during the relationship more than he or she would value the closeness that developed between us. The latter will have a bigger impact on the life of a mentee with right brain C-quadrant (emotional) dominance.

A mentee with right brain dominance will develop a closer relationship with the mentor and the ending of the relationship might not be as easy as with a left brain dominant mentee. If both the mentor and the mentee have a strong preference for C-quadrant (emotional) thinking, both the mentor and the mentee will find it hard to end the relationship.

My knowledge of the philosophies and meta-theories on which education is based allowed me to identify the epistemological and ontological foundations of the study. The principles of the philosophies and meta-theories allowed me to decide on the approach to be followed during the study, actions to be taken and the level of my involvement in the data collection process.

I have experienced the truth of the principles of phenomenology that one cannot research something if one is not where what one researches is happening. I was deeply involved in the data collection of the study as I was an observer in many of the sessions presented by the participants. I did not attend only the contact sessions that are discussed in the thesis. I regularly attended the contact sessions that the participants facilitated after reflection sessions on their practices and after mentoring sessions in which they then improved their practices based on the feedback received during these sessions. I experienced that I had richer primary data, collected by using all my senses, to work with when analysing the activities that took place during the contact sessions. I could see facial expressions and hear comments made by the students during group work that the participants would not have been able to report on themselves as the comments were made while they were attending other groups at the time that the comment was made. I could feel the atmosphere during the different learning activities and this allowed me to determine the level on which the students were challenged by the learning activity. My presence allowed me to add more validity to my findings as I could confirm what was reported by the participants with what I had experienced and observed.

Phenomenology aims at removing the subjectivity from research by following a mixed method approach in which triangulation can be used to confirm the findings. This principle was applied by doing quantitative analysis of the marks obtained by the students in test and examinations before and after the use of learning-centred class activities. Therefore the finding that a deeper level of learning was achieved by using innovative learning activities was not based only on my own perception and those of the participants of the PDP. The results of the quantitative analysis of the marks validated the qualitative findings.

Understanding the principles of hermeneutics urged me to be more understanding of

the fact that the participants never produced formal AR reports and professional development portfolios. I could place myself in their shoes of working full-time in industry, facilitating learning on a part-time basis at the exemplar Institute, understanding the burden of assessment and administration tasks that go with facilitation and still being responsible for attending to their families. This understanding allowed me to be more flexible and to rely more heavily on the primary data that I collected during the observation and mentoring sessions. Although my dominant C-quadrant preference allows me to be hermeneutic by nature, the formal principles of the meta-theory and the philosophy of humanism on which the hermeneutic principles are based could be used as substantiation for deviating from the original research plan. The substantiation provided evidence that the research was not poorly managed, but that a flexible approach was adopted as the process was adapted to suit the unplanned circumstances that appeared during the research.

5.5   MENTORSHIP DURING PROFESSIONAL DEVELOPMENT

You are invited to share my thoughts and feelings while reflecting on the experiences of my journey towards professional development as mentor that I continually reflected on during the AR process I followed. Conclusions relating to my mentoring practice were drawn throughout the study and rich descriptions of the contexts in which the conclusions were drawn are provided in all sections in which my mentoring practice is mentioned. Throughout the thesis I share reflective thoughts of my life and professional/academic experiences with you and therefore this section focuses on reflections on my professional development and/or transformation as a mentor for the participants of the PDP. Only the most distinct areas of development that can ensure a successful mentoring relationship are mentioned.

5.5.1   The roles that I fulfilled while being a mentor

By means of a reflective process I could identify the aspects that I have come to know through the roles that I fulfilled during my practice as mentor. During the process of reflecting on my life experiences as a mentor I realised that a mentor must be able to adopt various roles at the same time. A mentor's roles are similar to those of an educator as stipulated by the DoE (2000:13-14). The different roles that I had to

adopt and reflect on were the following:

- **Learning mediator:** I had to reflect on the diverse needs of my mentees based on their preferred thinking styles as identified by means of the HBDI®. I had to find ways in which I could inspire them to continue on their road of professional development although it was not always easy for them being employed on a full-time basis in industry and being a part-time facilitator of learning. I had to reflect on the extent to which I have knowledge of the subject content that they facilitate in order to be able to support them with examples from their contexts when needed.

- **Interpreter and designer of learning programmes:** The specific context in which the facilitators of learning operate, namely being part-time employees in the PHE environment while not having received any formal educator development before, was considered when the curriculum of the PDP was decided upon – keeping the notion of reflecting before action in mind.

- **Leader, administrator and manager:** With regard to this role I had to practise what I preach and substantiate the validity of the principles of the methods and theories that I wanted the participants to implement in their practices. I initially thought that I was responsible for ensuring that the participants received all the resources needed for the various learning opportunities that they had designed and implemented. I then realised that as a leader I should motivate the participants that they themselves could source what was needed in order to allow them to become more independent in their practices.

The fact that a mentor tacitly becomes a role model or an icon for the mentee should be acknowledged and respected. Being a role model for someone places a huge responsibility on the mentor. The mentor should not only behave in a fitting manner at all times in the context where the relationship is active; he or she should in all spheres of his or her life follow the same ethical and moral standards. Mentees tend to be aware of the actions and behaviours of the mentors even outside the context of the relationship. Actions that the mentor does not deem to be important are observed by the mentee and are sometimes surprisingly highly valued and respected by the mentee.

I had to fulfil the role of quality manager to ensure that the learning that takes place during the learning opportunities is up to standard for HE level studies as per the SAQA level descriptors (SAQA 2010).

- **Scholar, researcher and lifelong learner:** The PDP that was presented aimed at creating a scholarly approach to establishing a culture of lifelong learning in the PHE environment.

I had to be aware of matters relating to the fields of specialisation of the participants to be able to assess the quality of the learning that took place during the learning opportunities. I constantly had to improve my own knowledge base relating to the fields in which I had to assist the mentees. It may ruin the trust and respect of the mentee if the mentor can only advise the mentee utilising outdated perspectives. This idea does not indicate that only what is new is best. The mentor must know about traditional and new theories relating to specific subject matter in order to assist the mentee to evaluate critically whether the older or the newer ideas are the better.

I became a scholar by viewing the reciprocal mentoring relationship (Murrell 2007:2) as being a win-win relationship. I could extend my knowledge base regarding topics from the curricula of the courses offered by PMI and the self-efficacy of the mentee was improved when I acknowledged that I had learned something from the mentee. I was open and willing to learn from my mentees as they sometimes had innovative ideas when creating innovative learning opportunities. If the mentor does not see himself or herself as a fortress of knowledge (Taubman in Pinar & Reynolds 1992:229) he or she can also learn something from the mentee. In the context of the PDP it happened that during joint reflection sessions I could make more sense of a concept that was discussed during the learning opportunities that were observed. It can therefore be said that mentoring can be regarded as a social constructivist learning opportunity as the members of the relationship can create new insights and deeper understanding of a concept or situation that is discussed or investigated during the mentoring relationship.

I have learned that the role of mentor forces one to become an independent scholar, researcher and lifelong learner by applying the principles of self-regulated professional learning.

- **Community, citizenship and pastoral role:** Reflecting on this role I realise that I had to ensure that the ethical rules that were stipulated at the onset of the study were adhered to in order to display a sense of respect for the democratic and constitutional rights of others. Throughout the run of the PDP I fulfilled a pastoral role by providing the support that the participants needed in their quest to reach their full potential. I now realise that similar to the idea that facilitators of learning should know more about their students' background, interests and capabilities (Mynardt & Furlong 1994:71; Boshoff 2007:142-149), mentors should know more about the mentees' lives than what is known in the working environment. It is helpful for mentors to use examples from the mentees' own life experiences when explaining complex concepts or misconceived perceptions (Section 4.4.4.1). It helps to know about, inter alia, a mentee's hobbies, general interests, frustrations, fears, levels of self-efficacy (Boshoff 2007:131-141) and his or her vision of who he or she wants to become.

- **Assessor:** The progress of the participants' professional development had to be monitored – by me and by the self. I continuously provided feedback to the mentees as part of my continuous reflection for them to reflect on the areas in their practices that needed focus. I always ensured that the feedback that was given to mentees was not done in a way that would be experienced as degrading. I allowed time for comprehensive feedback in areas where improvement needed to take place. I always informed the mentees that the feedback should not be seen as punishment for bad performance but that the comments in the feedback aimed to provide a stepping stone for them to move in the desired direction of professional development.

- **Learning area and subject specialist**: As this role was not part of the focus of my study I did not reflect on it and therefore do not consider it as a part of my meta-reflection.

In a sense I acknowledge the fact that I enacted the role of a mother who had to nurture the participants through the first steps towards their professional development – indicating a part of my ontological stance. I supported the mentees during their professional development process as a mother supports her children during the years in which they grow up. During the early stages of the mentoring relationship a nurturing approach was followed. As the mentees grew and became more mature in their professional roles a facilitative approach in which the mentees were allowed to develop in their own preferred ways was followed. A significant development as mentor that I experienced during the study was the ability to change from using a nurturing approach to using a facilitative approach. In the past my strong preference for serving and sharing (C-quadrant thinking) caused me instinctively to provide ideas to my mentees of how to improve certain aspects that they experienced as being a challenge. During my current mentoring relationships I have mastered the ability to provide just enough information to the mentees regarding ways which they can consider to improve their practices and then leave it to them to investigate the possibilities themselves.

5.5.2   Trust as a critical ingredient for a successful mentoring relationship

All individuals have different "layers" as part of their inner being. We are not always willing to expose our deepest layers to the world as these layers sometimes house our weaknesses and scars of the past. As in any other relationship, trust is regarded as one of the most important factors to maintain a stable and long-lasting relationship.

In order to create mutual trust in a mentoring relationship both parties must be willing to allow one another to see what is inside each layer of their being. In an interview with Eskell-Blockland (n.d.) an interview respondent, Cabangile, stated that counselling sessions must be "give and take […] you [the counsellor] must tell a little about yourself even if you don't get deep." In answer to Eskell-Blokland's question why that is so, Cabangile replied that she had been betrayed so many times when she "was giving, only giving. And people were using that information to destroy" her (*id*). In a mentoring relationship both the mentor and the mentee must realise that the layers of one's inner being are fragile and that they must be handled with care to

protect them from any form of damage. The unpacking process usually happens as a step by step process that allows the participants to see how what has been found is handled by the other participant. Once no damage is inflicted the participants are able to trust that another layer can be unpacked without any damage being inflicted.

As a first-time viewer of my mentees' existing layers of their being, I need to be extremely careful in the way I open the different layers. I may be the cause of cracks and irreparable damage if I am not careful when opening the different layers as some of the layers that I am not aware of, may be cracked or broken. I know the pain that results from damage caused by first-time viewers of my inner layers who later use the knowledge to manipulate me. The damage goes even deeper when I have, for the sake of the survival of the relationship, to pretend that no damage was caused. I sometimes have to hide the fact that I am aware of the manipulation that takes place. I then lose respect for the viewer due to the viewer's false pretences and the fact that I have to be insincere for the sake of the survival of the relationship, especially when it is a power-based relationship.

I strongly believe that it is unethical and immoral if what is found in the inner layers of an individual is used to manipulate the individual or to judge him or her from one's own perspective. It may cause the individual not to be willing to open up again, in order to hide the visible scars inflicted by insensitivity or to be protected from further damage. Through experience I know how hard it is to trust someone who has caused damage to the trust in a relationship. I tend to trust others completely until I have reason to doubt their trust. If the trust is broken the scars are much deeper than would have been the case in a relationship in which the trust was not as deep. Just as easily as I can completely trust others, just as hard I find it to restore my trust in others once the trust has been broken. My belief that it is impossible to repair the damage done to the trust in any relationship needs to be changed during personal and professional development initiatives that I undertake in the future.

I believe I was able to maintain the trust relationship with my mentees as some of them even opened up a layer that goes deeper than mere professional development. Two individuals for whom I have been a mentor throughout my years in the educational environment during mentoring sessions mentioned aspects that they

believe to be weaknesses in their general conduct with people and in their personal relationships. We had open discussions of possible ways in which they can change their behaviour by following a Whole Brain® approach. Mutual trust was maintained by following the approach of give and take as explained by Cabangile (Eskell-Blockland n.d.). I am always open to constructive criticism during feedback sessions after a mentoring session. I sometimes mention something that I feel I can improve on and my mentees suggest ways in which I can use a Whole Brain® approach to improve on the aspects that have been identified. I also allow them to suggest developmental aspects that I am not aware of.

5.5.3   Personal growth that resulted from being a mentor

My journey as a mentor was not always easy and straightforward. It was a lonely road and many a times I had to step back into the past which was not always an easy road in itself in order to be able to determine the future. By reliving the past and reflecting upon my life experiences I have learned what the value of learning that takes place through experience is.

By looking back into my past I have realised the truth of the idea that each individual carries huge potential within himself or herself. It depends on the individual whether the potential will be neglected or developed. The individual decides whether to change the negative experiences of the past into positive ones of the future or whether he or she will allow the negative experiences of the past to be a permanent obstacle in the road to developing a better future. I have developed a deeper appreciation of my life experiences, although not all were positive and pleasurable. I could not always appreciate what I experienced at the time that it happened, but I now know that whatever happened in the past is the foundation for the future. Had I not experienced an education system in which different learning style preferences were not acknowledged, I would not have been able to provide guidance to my mentees regarding the significance of accommodating different learning style preferences in the educational environment.

Being a reflective mentor developed my self-awareness. I became thankful for my inborn virtues such as my ability to be flexible that allows me to adapt to any

circumstance, dedication and perseverance no matter the odds, and my acceptance of my calling to serve others. Although I sometimes experience these characteristics as the reasons to be open to exploitation, I now realise that these same characteristics allowed me to survive in the world. I need to develop the ability to say "no" in order to protect myself from being exploited. I currently always place the needs of others above my own needs and most of the time it is to my own detriment. I need to find balance between the time and effort that I spend on others and what I owe to myself in order to have a win-win relationship with the world in which I work.

I have become more aware of my own areas for professional development relating to behaviour as a facilitator of learning and mentor that can have an influence on the lives of others. This happened as a result of developing a deeper understanding of how my life experiences as a student had an influence on my value system and behavioural patterns. As a child I only lived up to the expectations that my teachers had for me. I did not excel as I was seen as one of the "not so clever" children for a large part of my life. Only when I started working was I allowed the opportunity to prove my worth through dedication, perseverance and innovation in my working environment. I now understand the value of creating expectancy (Gerber, Nel & van Dyk 1999:269-271) and vision that surpasses each individual's expectations and the importance of challenging individuals to develop even beyond their and others' expectations.

My self-efficacy was strengthened through my direct involvement in the development of the participants of the PDP. I experienced a sense of satisfaction when finding evidence that I positively touch the lives of the students by positively touching the lives of the facilitators of learning. I realised that I now come closer to being fully me as I can fulfil my inborn calling to serve others and to support them in their developmental process. That which I had experienced and in some instances suffered in the past, could now be used to add value to the lives of many others.

The biggest contributor to the development of my self-efficacy is the allowance to raise my own voice when creating my own living educational theory. Previously my right brain-oriented views were completely ignored as they were viewed as insignificant in a left brain dominated environment. This resulted purely because of

what I say is not the same as what is believed by the majority who live in the world in which I am. The study allowed me the opportunity to formalise my views, to take a stand and to drive change and/or transformation in a way that has had positive results. The fact that what I say is viewed as significant enough to be included in a doctoral thesis made others listen to my right brain-orientated voice. My contribution to the professional development of others, through sharing what I have learned and the way in which I support them in their developmental process, is now viewed and acknowledged as being valid by a wider audience. There is still a part of the left brain-orientated audience in my world that is not convinced of the validity and significance of my work. I experience their characteristic of not being easily persuaded as the driving force to persevere in doing research in an attempt to try and make them see the point of view of the right brain-orientated individuals who are among them, in order to achieve equal appreciation for all in the learning and working environment. All individuals are what God created us to be and we should therefore appreciate all of God's creations and the value that they add to the world that we are in.

By receiving the power to raise my own voice I can fulfil my calling to serve and support others without losing dignity in a society where only those who aim at being the frontline leaders are viewed as successful and valuable to an organisation. Those who lead by serving others are sometimes viewed as having no ambition. The frontline leaders in an organisation are leaders who use the pull approach in leadership. Those who are leaders in their fields of expertise and who use their knowledge to help other individuals to develop their full potential are leaders who use the push approach in leadership. Pulling leaders focus only on what they believe to be a bright future, which may through experience prove to be a bleak one. They sometimes forget about the significant impact that human beings can have on their ability to reach their goals as they will not be able to reach their goals without the human resources in the organisation. An organisation may not survive difficult times without the supporting power of the pushing leaders who are willing to hold the rear positions. The pushing power can be the difference between success and failure.

The pushing leaders have the advantage of having a wider vision as they can see what is needed in the future when looking at the pulling leaders and they also know

about the consequences of the obstacles experienced in the past. The pushing leader can better lead and retain those who fall behind but who have skills, which is significant for the existence of the organisation. It sometimes happens that human resources value and respect the pushing leaders much more than the pulling leaders. This happens as the pushing leaders suffer the same consequences as human resources during difficult times. Many of the human resources in an organisation believe in the words of Lachlan McLean who once said that "you can only lead others where you yourself are willing to go". These words can be interpreted as an indication that leaders must also be servers in order to be successful and I found validation for my hands-on approach in my role as manager and mentor.

I have experienced the value of social constructivism and being part of a learning community. My involvement in the lives of others by being a mentor allows me to evaluate my own knowledge and belief system continuously and I can sometimes validate what I have known intrinsically. Being a mentor allows me to, through collaboration with my mentees, determine the areas in which I have to develop or transform as I construct a new understanding of the world. I am therefore continuously reminded that there will always be room for improvement in my practice due to the dynamics of the educational environment in which I am.

5.6   SIGNIFICANCE OF THE STUDY

Although the processes followed during the study can be viewed as being successful, the significance of the study should also be evaluated to determine the overall success of the study.

The envisioned total cultural change was not achieved during the run of the PDP but it can be said that the first step towards it was successfully taken. The willingness to take part in future PDPs displayed by newly appointed facilitators of learning and participants, who have previously withdrawn, can be seen as an indication that the cultural change will be achieved although it will be a longer process than expected. The students started to enquire why not more of the facilitators of learning use innovative learning activities and this can be regarded as an indication that even the students experienced the move towards innovation as worthwhile and significant.

Top level management of PMI became aware of the successes of the PDP and it resulted in the inclusion of the development of the academic staff members as one of the main focus areas in the strategic plan for 2010 to 2012 (PMI 2009b:4). The professional development of the academic staff was again included in the 2013 to 2017 strategic plan (PMI 2012:5). The principles of innovative facilitating and assessment of learning were introduced to the other PMI regions in one-day workshops and positive feedback was received from those facilitators of learning who now use the principles in their practices.

The success of the PDP became known to a public HEI and PMI was contracted in 2010 to present the PDP to seventy five academic staff members of the faculty of agriculture and science. The results that were achieved are commendable and the dean of the faculty congratulated PMI on the quality of the programme. Three participants of the project showcased their innovative work at the 2010 annual conference of the Higher Education Learning and Teaching Association of South Africa (HELTASA).

The study contributes in three ways to the relevant body of knowledge. Firstly, it can contribute to the acceptance of AR as a valid theoretical and methodological framework for research that aims at achieving professional excellence. McNiff (2002) states that AR is still not accepted as being significant in the development of new knowledge that can be added to the wider body of knowledge. Now, more than a decade later, I still experience this view in a left brain-oriented environment in which the value of a research project is evaluated based only on the quantifiable outcomes of the research project. By reporting on the successes achieved through an AR project in which innovative, flexible and Whole Brain® approaches have been used, the development of new perspectives on the criteria for judging the significance of AR projects can be supported. The positive impact that the study has had on two fields simultaneously, namely educational practice and management practice, can be viewed as a proactive, productive and cost-effective way of achieving professional growth that can result in changing the culture in an organisation.

Secondly, the study provides a proposed curriculum outline for a PDP offered to academic staff who have not attended any formal educator-related education or

professional development programmes. Although the curriculum originally aimed at the professional development of facilitators of learning in the PHE environment, the success of the programme presented at a public HE institution proves that the curriculum can also be implemented in the public HE environment.

Thirdly, readers who are not aware of the Herrmann Whole Brain® theory are introduced to its principles and the advantages of utilising them. Enough information is provided to allow the reader to develop a basic understanding of the principles and ways in which it can be applied in the learning and management environments. First-time innovative facilitators of learning can use the information provided in the rich discussions of the learning-centred activities used in this study to help them in the development of their first innovative learning sessions.

5.7   SUGGESTIONS FOR FUTURE RESEARCH

When looking back on our journey we can say that it was successful. We succeeded in what we aimed to do by finding new ways in which learning can be facilitated to contribute to the development of a culture of lifelong learning. We became scholars in our own practices and we found answers to both the questions that were raised at the onset of the study.

In order to support the notion of lifelong learning and the idea that there will always be room for improvement in any situation, new destinations for future journeys have been identified. The following aspects have been identified as possible areas for future research:

In the context of the exemplar institute, the traditional form used for student feedback on the quality of the facilitators of learning is still in use, although innovative learning-centred learning opportunities are presented during the contact sessions that the students attend. The form currently in use focuses largely on processes and procedures with only eight of the 35 questions referring to facilitator of learning conduct. New student feedback survey forms that are less lecturer-centred (traditional term used on purpose) but more learning-centred, in which the students are challenged to reflect on their own learning experiences, can be designed. An

unrevised peer assessment form is still used to evaluate the practices of the facilitators of learning. A new peer assessment form that focuses more widely on accommodating learning style flexibility when facilitating learning should also be developed and piloted.

A curriculum for an intermediate level PDP can be developed and piloted to allow participants who were part of the PDP discussed in this thesis to develop their practices as facilitators and assessors of learning. The focus of the next level PDP can be the introduction of a wider range of learning and learning style theories and innovative assessment techniques. Once the intermediate PDP is successful an advanced PDP can be developed that can include, inter alia, mentorship, curriculum development, research supervision and needs identified during the run of the intermediate level PDP.

A study that will contribute to the body of knowledge regarding ways to improve student performance and achieving a deeper level of learning on HE level can be conducted. The effectiveness of formally introducing the students to the Herrmann Whole Brain® theory could be investigated. Students can complete the HBDI® online as part of their pre-enrolment assessments. A mixed method approach can be followed to determine whether the students' awareness of their preferred thinking styles has an effect on their academic performance and the depth of knowledge that is achieved. As all the students who are enrolled at the exemplar Institute are employed in industry, the study can have a wider focus that may result in a better return on investment for the Institute's clients that employ the students. The students can be mentored to use a Whole Brain® approach when completing the work-based learning integrated project, which aims at achieving a higher productivity rate by improving processes and procedures in their working environments. The results of the study may also contribute to the body of knowledge regarding the effect of age on student learning as the ages of the students who are enrolled at PMI as the exemplar Institute range from 20 to 62 years of age.

5.8   ANSWERING MY ONTOLOGICAL QUESTION

During the study it was suggested that I should also refer to the ontological stance of

the participants of the PDP. After considering the intense experiences and in some instances internal conflicts in my own mind while trying to find the answer to my ontological question, I realised that the participants never referred to anything that can be related to their deeply considering their ontological stances relating to their being facilitators of learning. Their involvement in the study resulted more in an attempt to survive the challenges created by the change in the approach to be followed in their practices. This resulted from the limited time in which they were involved in the study as part-time contracted facilitators of learning while being employed on a full-time basis in industry. It is logical that they would therefore rather consider their ontological stances in relation to where they are employed on a full-time basis. By considering the intensity of my experiences I can say that I believe that it is close to being impossible to consider one's ontological stance based on experiences that sometimes last for only five weeks, once or twice per annum, as is the case with the participants of the PDP. Participants can be challenged to consider their ontological stances during the implementation of an intermediate and advanced PDP and by increasing the time that they are contracted to facilitate learning.

5.8.1   Evaluating my life and practice to find an answer to my ontological question

Throughout the study it has become more and more important to me to find the answer to my ontological question. The further the study progressed the more I realised that I have a passion for what I do to contribute to the development of others, while acknowledging that I am far from perfect myself. I am humbled by the realisation that by helping others to develop their full potential I actually help myself. The passion that I feel extends far beyond the call of duty. The calling is so strong that it has become the most powerful driving force in my life. I feel guilty and personally empty if I am not involved in supporting others to develop their full potential. While trying to define the intense feeling, passion, drive … I cannot find the correct single word to use that explains my experience … I stumbled upon the words of Dawson (n.d.) who writes about "personal mastery" by chance. The term immediately made sense to me as in my mind it refers to the "I" as a being in the world. The "I" must be the master of itself, it should not be controlled by other worldly beings or things. It should take responsibility for its own life and being alive. When

reading the words of Senge (1990:126) as quoted by Dawson (n.d.) that "personal mastery goes beyond competence and skills … it means approaching one's life as a creative work, living life from a creative as opposed to a reactive viewpoint" I realised that my understanding of the term correlates with what Senge says. To me, creativity is developing something new from either nothing or by thinking of ways in which something that already exists can be improved. Reactivity entails trying to survive something that has already happened that influences one's life. We need to be creative and proactive to prevent us from becoming what others want us to be and not being fully what God intended us to be.

In order to develop a deeper understanding of what Senge refers to as being personal mastery as quoted by Dawson, I have read the work of Senge several times. After reading and rereading what Senge (1990) says about personal mastery I realised that Dawson (n.d.) effectively summarises Senge's views. Dawson says that personal mastery is "about creating what one wants in life and in work." He continues by saying that continually expanding personal mastery is a discipline and he lists a number of the key principles and practices on which the discipline is based. The list (*id*) includes: "personal vision, personal purpose, holding creative tension between vision and current reality, mitigating the impact of deeply rooted beliefs that are contrary to personal mastery, commitment to truth, and understanding the subconscious".

When trying to determine whether I am creating what I want in life and in work, I evaluated my own life and work against some of the characteristics of practitioners of personal mastery identified by Dawson (*id*).

- **Practitioners of personal mastery have a sense of purpose that lies behind their goals**

Throughout the study it has become clear to me that my drive to support others to develop their full potential is a spiritual calling and therefore it has become the purpose of my earthly being. Thomas Aquinas (1225-1274) believed that the ultimate purpose in life is to experience eternity with God (Möller et al. 2003:24). I grew up with the belief that we will one day, when we want to enter the gates of heaven at the

end of our lives, have to answer to the question of what we have done as well as what we have not done what we should have done. From a young age we all learn the adage of doing to others as one wants them to do to oneself. When considering these ideas which I was regularly reminded of as a child, I realise that it was an attempt from my parents to ensure that they fulfil their duty as parents to bring me up in a way that will ensure that I will experience eternity with God. I have tried to instil the same principles into my children and if I were now asked why I did it, I would say that I was willing to do anything to ensure that they experience eternity with God.

Someone once said to me that with my talent to facilitate learning "it will be a sin if [I] do not use the talent". When following a hermeneutic approach in trying to understand the true meaning of what the person said, while realising that what is not said is sometimes more important than what is said, the speaker indicated that I will not experience eternity with God as we believe that we will not reach heaven if we sin. It can therefore be said that although my goal is to fulfil my duty in life, the true purpose of fulfilling my duty is to experience eternity with God.

- **The vision of practitioners of personal mastery is more like a calling than a good idea**

I am urged through the Bible to fulfil my purpose in life. In Matthew 5:15 it is stated that no one "lights a lamp and puts it under a basket, but on the lampstand, and it gives light to all who are in the house." The command that immediately follows in verse 16 is the driving force in my life. It reads: "Let your light shine before men in such a way that they may see your good works, and glorify your Father who is in heaven" (Bible Hub 2011 and Maxwell 2002:1093). I regard my talent to facilitate learning in a way that will help others to develop their full potential as my "light" and therefore my calling from above. When others comment on it, I have the opportunity to glorify my heavenly Father by proclaiming that it is not possible through my own strength but that it is a talent received as a gift from my Creator.

- **Practitioners of personal mastery feel connected to others and to life itself**

My personal thinking preferences as identified through the HBDI® assessment , with

my dominant preference for the C-quadrant of Herrmann's metaphoric Whole Brain[®] model, is the reason for my ability to connect to others. By nature I easily become attached to human beings crossing my road and I do whatever I can to assist them in a way that will improve their lives. By saying this, I do not want to create the impression that I see myself as a perfect being. I am well aware of my flaws as I intensely feel the pain when I realise that I have hurt others through what I said or did.

Covey (2004:297) states that our emotional life is mostly developed through and manifested in our relationships with others. His view confirms the reason for my constantly wanting to be among other human beings. What I want for myself is what I want for others. I want to be able to become all that I can be. By communicating with others we learn from others, much more than we learn on our own. In order to return what I receive I want to share the knowledge and experience that I have with others for them to be able to become fully them. I am fulfilled when I can serve others and help them to develop their full potential. I know how the feeling of being richer in mind and spirit after learning something new positively influences my self-efficacy and therefore my outlook on life and the level of content in life. I want to support others to experience the same feeling of fulfilment in mind and spirit.

Like any other human being I get hurt, have my high and low days on which I feel that life is unfair and when I get frustrated for not being able to do the things that I know I do best and through which I can positively touch the lives of others. My dominant C-quadrant thinking makes me experience the frustration intensely and I regularly have to recall the good things in my life to keep myself going. Through many life experiences I have learned that the happiness that lasts the longest is intrinsic happiness that I have found in myself through self-development and by allowing a Higher Power to take me where I need to be, at the time that is best for me. By contemplating the past I realise that what happened to me in the past, whether good or bad, has created a better future for me. I then find it easier to accept that what is upsetting me in the present as I know it, can have a positive result in the future. Colloquially speaking my reaction then is, "Oh well, that is life" and I just continue in faith.

- **Practitioners of personal mastery feel that they are part of a larger creative process that they can influence but cannot unilaterally control**

I am like a drop in a pond. If I can influence one person's life positively, that one person will be able to touch the lives of others through the proverbial ripple effect. The more lives I can touch the wider the effect of the ripples that are created. I have no control over how many ripples will be created by each drop and I also have no control over how far they will spread.

I am a facilitator of learning by calling and by considering the comments that some of my students made in the past, I know that I succeed in my goal to touch the lives of others positively. I have realised that if I can support the participants of the PDP to touch the lives of the students successfully in a way that will result in the participants and the students becoming lifelong learners, the effect of the ripples will be much more widespread with more drops in the pond than I would have been able to create on my own.

- **Practitioners of personal mastery are committed to seeing reality increasingly accurately**

One of the most significant areas of development that I experienced during the study also fits in with the characteristic discussed immediately above. I have improved my ability to view things more holistically by considering any situation from a Whole Brain[®] perspective. Where my thoughts were previously completely dominated by emotional thinking, I now realise that I exist in a world over which I do not have total control. When considering life from a philosophical perspective I realised that I must become more aware of the reality of the situation in which I am while at the same time consider the bigger picture to see where my current state may end in the future. Aquinas, father of the Thomism philosophy, also believed that humans do not only rely on their feelings and intuition when trying to make sense of the world. They also use their senses and ability to reason (A-quadrant) when trying to make sense of the world (Möller et al. 2003:24).

When following a Whole Brain[®] approach I can develop a more realistic view of a

situation. Although it does not happen as a natural process, I force myself to stand still and to think about the situation at hand in a Whole Brain® manner. I now consider the facts at hand (A-quadrant), find ways in which I can change the situation where possible (D-quadrant) or identify how I must change to fit into the situation and then implement the actions that may result in the envisioned change (B-quadrant). Lastly I consider the results to determine whether what has been implemented is successful in satisfying my own needs and in my working environment, mostly the needs of others in order to be able to survive in a left brain-dominated environment (C-quadrant).

I do, however, realise that there is still a long way for me to go before I will be successful in following a Whole Brain® approach in all situations. I need to learn to experience life less intensely for the sake of my own survival. I must learn that just as I want to have what is best for me, others want the same for themselves, which incidentally is C-quadrant thinking, although it is most of the time denied by left brain-dominant individuals. In a left brain-dominated environment where individuals are driven by facts, figures and processes with little consideration for emotional thinking, I will continuously be the one at the losing end. I need to try to use a Whole Brain® approach constantly without supressing my emotions, just to be able to survive in tense situations where it is expected from me to become what others want me to be.

I recently had a real-life experience of the result of following my true nature of trying to satisfy the needs of those around me at all times. I have learned about the negative effects of just supressing my emotions to be able to fulfil all my duties and responsibilities that others expected from me in the time frames set by them. When I unexpectedly lost my child, I suppressed my emotions in an attempt to survive in the left brain-dominated world in which I exist. A few months later I experienced a total loss of control over my emotions which ended in me becoming close to being incapable to survive the stress that was created in the fast moving world. I have dearly learned the true reality of the principle of *majority rules*, which is one of the presuppositions of a supposedly fair democratic environment. I have learned that one must be able to, where others are involved, forget about one's own being and become one of the "them" for the sake of one's own survival. This made me to realise that fairness is a perception as fair is fair only when both parties view the situation as

being fair and that is not possible in a situation where majority rules.

I am not willing to lay down the "I" completely and be a human becoming, sculptured by others. The value that the "I" contributes to the lives of others makes me say that I am who I was created to be. The question to be answered is: Am I where I am supposed to be? This can be seen as my area for personal and professional development. I need to learn how to adapt to the world in which I exist, which wants me to focus more on the reality of the here and the now. In order to create balance in my life I must find a way in which I can spend less existence time in order to have more time available to live. I must find ways to change my world to be an environment in which I can fulfil my purpose in life, where I can be free to be who I was created to be while at the same time, in a balanced manner, also fulfil the expectations of others placed upon me.

- **Practitioners of personal mastery are extremely inquisitive**

With the D-quadrant being the second most dominant quadrant of my brain, I constantly want to experience, see, hear and learn new things. I want to see what lies outside the most obvious and my immediate environment. I want to try new and innovative ways of doings things that I then analyse to see which new things I can learn from the results of my actions. Although I am strongly emotionally- orientated, when it comes to learning, I am completely Whole Brain®-orientated. I want to receive as much information as possible, such as the facts of a situation or thing, specifications, cost and where it originated (A-quadrant). I want to know how it can be used in real life, how easy it is to implement an idea or process or what the obstacles may be and the time-saving that can result from it being implemented or used (B-quadrant). I consider the influence that it can have on the lives of humans, animals and the natural environment (C-quadrant) and I always think of how it can be developed to be better, more versatile and how long it will still exist or be used in the future (D-quadrant).

The negative aspect of being inquisitive is that I find it hard to survive in an environment which is based on routine, processes and procedures where everything happens in the same way every day, where strict rules apply and where I am in the

same environment every day of my life. I thrive in an environment that provides a variety of opportunities to learn something new every day.

- **Practitioners of personal mastery do not resist, but work with the forces of change**

The acceptance of change goes hand in hand with the need for variety and renewal (D-quadrant). Dawson (n.d.) does not mention that the change should be for the better and understood by all who are involved in order for it to be accepted and not to be resisted. I find it hard to accept change if it will have a negative effect on the human beings who will be affected. I also cannot accept it when the effect of the change will result in the lowering of standards, values, ethics and morality or when it will limit the possibilities for innovation and the drive for excellence.

I am all for change in an organisation that can result in the improvement of life, processes and procedures, financial stability and the creation of a better future, on condition that none of the aspects are negatively influenced or neglected to ensure the success of another aspect. The change must have an overall positive outcome to be seen as holistically successful.

- **Adding another characteristic of practitioners of personal mastery: They practise what they preach**

I want to add another characteristic of practitioners of personal mastery, namely that they practise what they preach. Senge (in Dawson n.d.) holds the same view when linking personal mastery to effective leadership by saying that "the core leadership strategy is simple: be a model. Commit yourself to your own personal mastery". I believe that to be seen as a true leader one should not only expect from others to adapt, change or transform their viewpoints and practices to fit one's viewpoints; one must be willing to do exactly what one expects others to do. Any relationship can be successful only when a give and take approach is followed in which a feeling of acceptance and mutual trust is created. Leaders must display a willingness to adapt, change or transform their viewpoints in a way that will display acceptance of and appreciation for the diversity of the human beings who cross their paths by allowing

individuals to develop their full potential in their diverse areas of speciality. It must be remembered that a leader is only as strong as the support of his or her followers.

When evaluating the level in which I practise what I preach I remembered the words of one of my students during my master's research. The student said:

Ma'am, you told me that one has to have a purpose and goal in life. You must know why you have to do something as that motivates you to go beyond the ordinary. Only if you can look back and see your successes you don't feel worthless and you start believing in yourself. It feels great to be a winner! (Boshoff 2007:141).

Considering my clear understanding of what my calling and purpose in life is, the dedication with which I pursue fulfilment of my purpose, which most of the time pushes me to go beyond the ordinary by laying off my personal life in order to fulfil my calling as a facilitator of learning, I can without any doubt say that I practise what I preach. The appreciation displayed by the participants of the PDP and the students whose paths have crossed mine throughout my years of being a facilitator of learning is one of the biggest contributors to the development of my self-efficacy. Knowing that I do everything humanly possible in the 24 hours available in each day to fulfil my purpose in life creates a feeling of satisfaction.

After reflecting on my practice in relation to the criteria set for practitioners of personal mastery identified by Dawson (n.d.) I can say that I meet most of the criteria with a clear understanding of my areas for professional development.

5.8.2 The answer to my ontological question

I now realise that I will never be able to provide the final answer to my ontological question: "Am I who I am supposed to be and do I fulfil my purpose in life?" I will only be able to answer the question based on my prevailing level of personal and professional development and self-understanding of the "I" and my being in the world. My continuous quest to be better in what I do and to do more in order to fulfil my purpose in life will urge me to revise the question continuously.

The current answer to my ontological question is: I am partially who I am supposed to be and I partially fulfil my purpose in life. By nature I am who my Creator wanted me to be and therefore it can be said that I am who I am supposed to be. I am not willing to question His decision to create me to be right brain-orientated, with the strongest characteristic being willing to serve others and the inborn aptitude to facilitate learning in a way that has a positive impact on the lives of others. I live through helping others to develop their full potential although I realise that I am not perfect myself. By helping others I contribute to my own personal and professional development. By acknowledging their contribution to my development I assist in the development of their self-efficacy that will make them feel alive and willing to take the next step on the journey of lifelong learning.

In another sense I am not who I am supposed to be. I exist in a reactive manner in a world that is dominated by prevailing economic conditions, in which there is hardly any appreciation for right brain-orientated thinking. I do not know how I will ever be able to be completely who I am supposed to be and completely fulfil my purpose in life in the current world in which I am. I can only trust that my Creator will provide me with the wisdom to see what he wants me to be and do in order to become fully me. I pray that He will provide new avenues that will lead me to places where I can be fully me, in both my working world and my private world as I currently only survive in both these worlds. I trust that He will provide the wisdom and strength to make peace with having to lay down parts of my life that keep me alive, in order to be able to create balance in my life. As Robert L Stevenson (1850-1894) put it, "to know what you prefer instead of humbly saying Amen to what the world tells you you ought to prefer, is to have kept your soul alive".

5.8.3   Arriving at a resting point in my journey

I have now completed the reporting of my action research for the purpose of obtaining this PhD qualification. However, I realise that this is only one phase in my quest for lifelong professional and personal development. Although I want to reach my next destination in the easiest and fastest way possible, I have to make peace with the idea that I must be willing to endure the discomfort of change and/or transformation, as "transformation is what creates the butterfly's future" (Pesut 2013).

I may experience the idea of resting along the road as an obstacle that will delay my progress on my journey to become fully me, but I sometimes have to rest along the road for the sake of my own survival and to "keep my soul alive".

Figure 55: "Transformation is what creates the butterfly's future" (Pesut 2013)

I know I am not close to the end of my journey yet and that there are still many challenges to come. I have therefore decided to sit down for a while at a quiet resting place in order to revive my soul and body and to get the energy and inspiration to continue on the strenuous, but exciting, journey of transformation towards being fully me. During my resting period between my transformation stages my main focus in life will be to become who a part of me is meant to be … a grandmother, mother, daughter, sister, aunt, friend, and yes … just me. By coming to a standstill I will be able to hear the whispering voice of my Creator when He tells me which route to follow when I continue my journey.

I thank you for travelling this far with me on my journey of a thousand miles that is still to be completed …

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Faculty of Education

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE	**CLEARANCE NUMBER :**	HS 10/05/02
DEGREE AND PROJECT	PhD Professional development of academic staff in private higher education	
INVESTIGATOR(S)	Anna Elizabetha Magdalena Johanna Boshoff	
DEPARTMENT	Humanities	
DATE CONSIDERED	27 September 2013	
DECISION OF THE COMMITTEE	APPROVED	

Please note:

For Masters applications, ethical clearance is valid for 2 years

For PhD applications, ethical clearance is valid for 3 years.

CHAIRPERSON OF ETHICS COMMITTEE	Prof Liesel Ebersöhn
DATE	27 September 2013
CC	Jeannie Beukes Liesel Ebersöhn Dr PH du Toit

This ethical clearance certificate is issued subject to the following conditions:

1. A signed personal declaration of responsibility

2. If the research question changes significantly so as to alter the nature of the study, a new application for ethical clearance must be submitted

3. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.