AN ACADEMIC DEVELOPMENT MODEL FOR UNIVERSITY AND TECHNIKON STUDENTS - MEETING THE DEMANDS OF THE 21st CENTURY

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SUMMARY

TITLE: An academic development model for university and technikon students - meeting the demands of the 21st century

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The demands of a rapidly changing future on learners of Higher Education Institutions who need to be effectively employed, necessitate that these institutions become responsive to the demands and challenges of the future world of work. Employers keep on emphasising that first entry employees not only lack basic skills when entering the world of work, but that they also have difficulty in coping with the accelerated nature of the changing future. In order to address this dilemma, this research firstly focussed on the current state of Academic Development programmes at universities and technikons in South Africa, because these programmes claim to address problems which learners and the institutions might have, such as the support of teaching policies and procedures, quality assurance and advisory services.

The documenting of the current state of academic development (AD) revealed that AD of learners focusses on issues such as access, redress, academic performance and throughput. These endeavours constitute a model where remedial, supportive work is done in fragmented fashion, to enable learners to attain the necessary skills to cope with the demands of higher education. It was further indicated that by adopting this aim for AD, higher education is not proactively responsive to the needs of the future world of work, but rather reactive to the immediate needs of learners and institutions alike. They focus on better results in stead of lifetime employability.

A causal action research phase followed to identify what the demands of the future are for man,

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and to assess the current state of academic development of learners against these demands. The conclusion is that these demands constitute a total paradigm shift and that higher education is not responsive to these challenges. In order for learners to pursue lifetime employability, a totally new, reengineering AD-model should therefore be constructed.

It is concluded that only through maximising human potential, which can be attained through facilitating lifelong learning, will learners be able to meet the challenging demands of the future world of work. This reengineering AD-model contains the guiding idea or purpose and vision of the model, namely that it should maximise human potential. It contains the theory, methods and tools, represented in the development of intra-, inter- and suprapersonal relationships through facilitating metalearning and cooperative learning, and it contains innovations for the infrastructure to encompass whole institutions.

Recommendations for future research fall in two categories, namely the future as source of research, and future research still to be undertaken. In terms of the future as source of research, ongoing research is needed by researchers all over the world to determine what the future holds in store. Regarding the proposed AD-model, future research still needs to be undertaken with regard to the implementation and ongoing reengineering of the model.

Key words: Academic development; Maximising human potential; Facilitating lifelong learning; intrapersonal relationships; interpersonal relationships; suprapersonal relationships; metalearning; cooperative learning; reengineering; world of work. When referring to students at tertiary institutions the word, learners, will be used throughout.

SAMEVATTING

TITEL: 'n Akademiese ontwikkelingsprogram vir universiteit- en technikonstudente - voldoening aan die eise van die toekoms.

Die eise wat 'n vinnig veranderende toekoms aan leerders aan hoër onderwysinstellings stel met betrekking tot effektiewe indiensneming, vereis dat hierdie instellings gehoor moet gee aan die dringende eise en uitdagings van die wêreld van werk. Werkgewers benadruk telkens, dat benewens die feit dat nuwelinge in die werkplek nie die basiese vaardighede bemeester nie, hulle veral probleme ondervind om met die snel veranderende aard van die toekoms tred te hou. Ten einde hierdie dilemma die hoof te bied, is hierdie navorsing uitgevoer. Eerstens is gefokus op die huidige stand van akademiese ontwikkelingsprogramme by universiteite en technikons in Suid-Afrika, aangesien hierdie programme veronderstel is om die probleme van leerders, sowel as van die instansies aan te spreek, met betrekking tot ondersteuning van onderrigbeleid en -prosedures, kwaliteitsversekering en algemene adviseringsdienste.

Die dokumentering van die huidige stand van akademiese ontwikkeling (AO) het aangedui dat die AO van leerders fokus op toegang tot tersiêre instellings; die aanspreek van probleme van leerders wat nie aan die toelatingsvereistes voldoen nie; asook op akademiese prestasie en deursetsyfers. Die AO-programme verteenwoordig dus 'n model waar remediërende steun verleen word aan leerders wat oënskynlik nie oor die nodige vaardighede beskik om aan die eise van hoër onderwys te voldoen nie. Hierdie siening dui daarop dat hoër onderwys nie noodwendig proaktief reageer op die dringende eise van die toekomstige wêreld van werk nie maar eerder reaktief fokus op die onmiddelike behoeftes van leerders en instansies. Die fokus is dus om beter resultate te verkry, instede daarvan om lewenslange werksbevoegdheid na te streef vir leerders.

'n Volgende stap was om die eise wat die toekoms aan die mens stel, te identifiseer. Die huidige stand van AO van leerders sal dan aan hierdie eise gemeet word. Die gevogtrekking waartoe gekom is, is dat genoemde eise 'n totale paradigma skuif verteenwoordig en dat hoër onderwys nie proaktief reageer op hierdie uitdagings nie. Ten einde lewenslange werksbevoegdheid na te streef, behoort 'n fundamenteel nuwe, gerekonstrueerde akademiese ontwikkelingsprogram vir

leerders daargestel te word.

Die bevinding was, dat slegs deur die fasilitering van lewenslange leer, waardeur maksimalisering van menslike potensiaal verwesenlik word, sal leerders bevoeg wees om aan die veeleisende eise van die toekoms te beantwoord. Die voorgestelde gerekonstrueerde AO-model omvat die rigtinggewende doelstelling en visie van die model, naamlik die maksimalisering van menslike potensiaal; die teorie, metodes en instrumente, wat verteenwoordig word deur die ontwikkeling van intra- inter- en suprapersoonlike verhoudings deur die fasilitering van metaleer en kooperatiewe leer; en dit omvat innoverende herstrukturering van die infrastruktuur, ten einde instansies in hul geheel te betrek.

Aanbevelings vir toekomstige navorsing val uiteen in twee kategorieë, naamlik die toekoms as bron van navorsing en toekomstige navorsing wat nog onderneem moet word.

Sleutelwoorde: Akademiese ontwikkeling; Maksimalisering van menslike potensiaal; Fasilitering van lewenslange leer; Intrapersoonlike verhoudings; Interpersoonlike verhoudings; suprapersoonlike verhoudings; metaleer; kooperatiewe leer; rekonstruering; wêreld van werk. Deurgaans word na studente as leerders verwys.

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CHAPTER 1

Problem statement, aim, methodology and course of the research

1.1 INTRODUCTION

Never before in the history of man have we experienced the dramatic, rapid and intense changes as we do right now. These changes are sweeping across the globe and can be seen in all spheres of life. Unprecedented political, social, economical, scientific and technological changes have taken place with astronomical implications, resulting in problems never experienced before. These problems, therefore, pose new challenges for man, as they cannot be solved through traditional or modified ways. They need innovation, fundamentally new interpretations and views, for these problems constitute paradigmatic changes. Mehrtens (1999:23) describes this phenomenon when she says:

> *It is a truism these days to say that we live in unprecedented times, with changes that are endemic, rapid, pervasive and paradigmatic.* (Mehrtens, 1999:23.)

Education, as a fundamental science of and for change, is amidst this transformation, resulting in a near crisis, with academics, theorists, authors and educational planners frantically searching for solutions to address the problems which these rapid changes are causing.

The basic aim of education is to prepare learners for the future as they all have to find jobs in the world of work after completion of their final education. Since the world of work, which forms part of the total reality of life, is subjected to these unpredictable changes, it is only logical that education must keep pace with these changing demands. South Africa is also caught up in this dilemma and educational planners have researched various options to solve these problems.

A recent move in addressing these problems, is to create a culture of learning and to integrate education and training in order to improve competitiveness internationally (HSRC, 1995:6). Outcomes-based education has also been introduced in South Africa to compensate for the

perceived lack of competence which learners have when entering the world of work. There is, however, a lack of understanding what these changes really mean and how to cope with them in order to fulfil the demands of the post-modern world (Slabbert, 1998:1).

In Higher Education Institutions (HEI's), programmes have been developed to address the so-called Academic Development (AD) of learners, in other words, to assist learners who lack specific academic skills which are demanded for higher education and consequently assumed to be necessary for the future world of work.

In the following paragraphs, the researcher endeavoured to highlight the problems encountered in HEI's, with specific reference to the South African situation.

1.2   THE PROBLEM

The problem which this research aims to concentrate on, is basically that higher education does not seem to fulfil its purpose appropriately because employers keep on complaining that new employees lack not only basic skills, but that they have difficulty to adapt to a rapidly changing future.

1.2.1   THE PROBLEM IN HIGHER EDUCATION

Higher education (HE) is probably the most important, prestigious, and sought after education to man. It opens doors to a vast number of professional and other careers and opportunities. Eventually, most people in top career positions are people with degrees, diplomas and post degrees. HE, therefore, supposedly provides the world of work with highly trained human resources, people with state of the art knowledge in their various fields of expertise, because of its dedication to ongoing research. The challenge is, however, to keep abreast of the changing demands of the work place. Learners need *more* than merely academic knowledge.

When entering HE, learners usually lack certain skills and attitudes necessary to be successful in HE. The problem being that there is a vast gap between what scholars are prepared for in the school system and what is demanded from them when entering HE.

1.2.1.1 The gap between primary/secondary and higher education

The demands which HE places on learners, are totally different from those which they were used to at school. Independent thinking and learning, and taking own responsibility for the totality of the learning experience are the major demands at institutions of higher learning. Unfortunately, if learners have been used to twelve years of "spoon feeding", it is virtually impossible for them to change their behaviour in such a fundamental way. It is therefore imperative, that primary and secondary education should reconstruct their thinking about education in a completely new, fundamentally changed way, in order to bridge the gap. The detrimental effect of this gap is that learners fail at an alarming rate during their first year at HE institutions.

1.2.1.2 High failure rates

To prove this statement, the researcher wanted to refer to statistics in this regard, but failed to secure statistics regarding drop-out and failure rates from the central statistic unit for education. It may be because of the sensitive nature of publishing these statistics. Numerous reports and articles indicate, however, that there is a concern with regard to under-achievement at tertiary institutions in South Africa. Greyling (1997:1) indicates that "many inadequacies have affected the learning development of the majority of South African learners and have resulted in under-achievement". Du Toit (1997:25), refers to a discrepancy between learner potential and actual performance; the latter not reflecting the real potential of learners, therefore also resulting in under-achievement. Stumpf (1998:82) suggests that, for greater efficiency and effectiveness, steps should be taken to ensure better throughput (success) rates at tertiary institutions in South Africa. It is therefore clear that what happens on our campuses and in our lecturing halls is not conducive to student learning in order to achieve the required success.

In addition, due to the world wide change in socio-economic status with more people becoming financially independent resulting in higher education being more accessible; the changing status of women entering the economy and the world of work on the same level as men; accelerated development in developing countries; and more careers being available due to scientific and technological developments, there is an increasing demand for HE. This phenomenon has become known as "massification".

1.2.1.3   Massification

In the South African context, particularly, massification is a reality because of the changed political situation where the emphasis is on the right to education for all. Education, particularly secondary and higher education, is now available to all sectors of the population through many and varied funding mechanisms. It is further anticipated that the figure of 300 000 school leavers during 1995 in South Africa, will increase to 600 000 in the year 2005, resulting in more learners being able to enter HE (Stumpf, 1998:75). The so-called demographic bulge, or change in age structure of people entering HE, is also impacting on the numbers of learners enrolling for HE programmes. These phenomena result in a new population of learners (formerly disadvantaged pupils in mostly black schools), entering HE. These learners have a notable disadvantage when compared to school leavers from historically white schools. This results in even higher drop-out rates and lower throughput rates which are described by Prof. Jan Kirsten, chair of the SA Universities Vice-Chancellors' Association (SAUVCA), as *appallingly low* (Swarts, 1998:11). In addition, HE programmes are extremely expensive and institutions cannot afford the present high failure rates to continue.

1.2.1.4   Funding

In the South African context the state is currently providing subsidies to institutions of HE, based on throughput. Normally, 50% of the subsidy granted, is paid out when learners enroll and the other 50% when he/she obtains the qualification. It is therefore obvious that low throughput figures result in less state subsidy. In addition, the percentage with which HE institutions are being subsidised by government, is decreasing steadily each year (Smit, 1999:15). It therefore

became imperative for institutions of HE to improve their throughput figures.

1.2.2 THE DEMANDS OF HIGHER EDUCATION

As was previously stated, HE demands of learners to be independent learners, to take responsibility for own learning. They therefore need to be highly motivated. Learners also need to have excellent communication skills. The latter being of utmost importance, because without the necessary reading, writing and oral competencies, no student will be successful at HE. An attitude of critique and inquiry is also amongst the important demands placed on learners in HE. Learners therefore have to develop higher order thinking skills, verifying and evaluating information for applicability and truth value in specific circumstances. Furthermore, learners need to be able and willing to *find and organise information* in this technological age where there is an overload of information. They need to be "technologically literate". The problem is that most learners, and increasingly more learners since massification, do not meet these demands of HE.

1.2.3 PROBLEMS THAT LEARNERS ENCOUNTER

Most first entry learners have always had the problem of bridging the gap between secondary school and HE. In South Africa, since the entrance of many formerly disadvantaged learners into HE, more problems have been encountered by learners.

1.2.3.1 Access and redress

Learners from disadvantaged schools find it almost impossible to meet the entrance requirements of most programmes at technikons and universities. In order to redress the inequalities of the past, these institutions had to find means of giving access to these learners in spite of existing entrance requirements.

1.2.3.2 Poor language proficiency

Since the official academic languages at institutions of HE in South Africa are English and Afrikaans, most learners from the black communities are disadvantaged, because these languages

are used as their second or even third/fourth languages. When entering HE institutions, these learners therefore have grave problems in language proficiency: reading, writing and expressing ideas clearly. It is indeed one of the most difficult problems for HE to deal with, because language can be seen as the vehicle taking learners successfully through their studies. Without language competence and, for that matter, communication skills, learners have grave problems.   It is also not a matter of "giving" learners "quick fixes" in English or Afrikaans. Language acquisition requires years of continuous practice and use.

1.2.3.3   Lacking academic skills

When entering HE, learners need to be competent in academic skills like independent study, information retrieval, report writing, higher order thinking, etc. Learners entering HE lack the ability to work independently. They still need directive instruction, which is not always a given in HEI's. Learners need to take responsibility for their own learning and development. Most learners, especially the disadvantaged learners, lack these competencies. Although it is not the responsibility of HE to develop all of these skills, they have had to seriously rethink the situation in order to enable learners to be successful in their studies. High failure rates can be directly coupled with this phenomenon. When adding poor language proficiency, these cost institutions of HE dearly.

1.2.3.4   Lacking life skills

Learners from disadvantaged backgrounds lack general life skills due to the fact that they were not exposed to first world resources. Some rural schools do not have electricity, water, proper sanitation, laboratories or libraries. In addition, economic restrictions kept these learners from coming into contact with most first world amenities like television, computers, modern buildings and even travelling to other parts of the country. Many may never have seen areas beyond a radius of 200 kilometres from where they reside. This seems to be painting a bleak picture, but it is realities of the South African situation. It results in learners lacking life skills, like virtually no experience of library use or working with equipment in laboratories, rarely any experience of technological devises (computers, video machines, overhead projectors and even lifts), and

lacking social competencies of intercultural nature (this is true of all learners in the South African context). Since the invasion of technology into all spheres of life, this scenario has worsened. These problems obviously need to be addressed if learners are to be successful at institutions of HE.

1.2.3.5 Work load - too little time

Because of the accelerated nature of programmes offered at HE institutions, many learners find it hard to keep up with the work load. They need more time on each academic task in order to understand it thoroughly. HE institutions therefore had to find ways of giving these learners more time to follow certain programmes.

1.2.3.6 Computer literacy

In this technology driven age, no person can afford to be technologically illiterate. It is even said that in future, literacy will not be measured by the ability to read, write and do arithmetic, but rather by the level of computer literacy. Obviously, since computers are highly technical and costly, many learners are not computer literate when entering HE. This problem is being addressed through the availability of computer laboratories and tutors assisting learners with the basics of computer literacy. Being computer literate, however, is not the only challenge that faces future employees. There are a whole range of related competencies like being able and willing to learn new technologies as they develop; being flexible and adaptable; able to work effectively in teams; and solving new problems (usually associated with technology) using creative ways of thinking; which are all needed for the workplace of the future and it is this aspect that needs high priority.

1.2.3.7 Lacking competencies for the world of work

One of the main complaints of companies of the nineties all over the globe it seems, is that learners are not well prepared for the current and future workplace needs (Harvey, Geall and Moon, 1997; Verville, 1995; Eager, 1996; McEwen, 1997 and Carruthers, 1997). There are

distinct changes in the current workplace, and more are envisaged for the future. The message which the corporate world sends to HEI's, is that they should do more to prepare learners for this changing workplace. Verville (1995:46) says in this regard:

American business has experienced a transformation in the past decade that dwarfs the changes brought about by the industrial revolution. Many businesses.... believe there is a mismatch between current workplace needs and the preparation learners receive. ....employers are asking higher education to do more to prepare learners for the environment in which they will be seeking work.

Harvey et al. (1997) have undertaken a major survey in the UK to assess the future needs of employers in the context of widespread organizational change and to define what attributes graduates will need to succeed in their careers. Their findings are, amongst others, that it is important that graduates move from "knowing what" to "knowing how", in order to find out what they need to know (Harvey et al, 1997: 295).

Competencies should therefore be defined and developed, along which learners will be prepared for a changing world of work. In order to address all the problems which learners are experiencing when entering HE, Academic Development (AD) of learners was introduced in most universities and technikons in South Africa. This concept is broadly equivalent to what has more usually been called "educational development" in Australasia and the UK (SAAAD, 1998:13). It is therefore not unique to South African HE and the South African context.

1.2.4 THE ROLE OF AD IN ADDRESSING STUDENT PROBLEMS

Because of the problems facing HE, as described, AD programmes were established in traditionally white HE institutions with the aim to give academic support to an increased intake of black disadvantaged learners (SAAAD, 1998:4). Although there are reports of sporadic successes, it does not seem as if these programmes are accomplishing a fundamental change in education or, for that matter, in student attitudes as was indicated in 1.2.1.1, namely that learners should become independent learners and meet the demands of a changing work environment. AD

therefore does not seem to be rendering a permanent solution to these problems. AD should therefore re-evaluate its aim, because the aim of supporting learners with academic success may even be part of the problem.

Academic development embrace a similar range of functions such as coordination and support of teaching policies and procedures, quality assurance, advisory services on learning strategies and study skills, to name a few (SAAAD, 1997:14). The focus therefore seems to be on *support* and *advising* with regard to educational or academic development.

Academic development of learners in South Africa has historically been associated with support programmes and access courses for learners who would otherwise not succeed in higher education (SAAAD, 1997:4). The approach has also been described as a deficit model for learners from educationally disadvantaged backgrounds. After twenty years of AD in higher education, it is still seen as peripheral attempts to address learners' social and academic needs with an abundance of programmes, including foundation programmes, access programmes, language enrichment, life skills, study skills, career counselling and many more, which are added to the curriculum or offered through separate interventions alongside the curriculum (SAAAD, 1997:5).

When studying recent reports on AD in South African institutions of higher education, (SAAAD, 1997 and Kotecha, 1995) it seems clear that AD practices focus on direct instruction of certain subjects in bridging or foundation courses, and supplementary, fragmented skills which learners seem to lack. According to the technical committee report (Kotecha,1995:36) on AD in South African higher education, AD programmes can be described as follows:

> *The focus of AD programmes varies dramatically to include direct teaching instruction to under prepared learners in bridging or adjunct language programmes, curriculum development, supplementary instruction, staff development programmes, computer-aided instruction, language development, educational technology, cross-cultural communication, life skills and tutor training programmes.*

As this description of AD matches most of the learners' deficiencies, one can argue that AD is meeting the demands of learners. This implies that learners are presented with skills which are thought to be essential for gaining access into higher education. It further implies, however, a reactive view of AD, being an "ambulance service" (SAAAD, 1997:4) for learners lacking the skills to cope with higher education. Furthermore, these skills seem to be presented in a fragmented way, added onto the curriculum, endeavouring to quickly fix what is perceived to be wrong.

Learners rely on these practices to assist them in performing better academically, which constitutes a misconception of what AD should be intended for. Instead, learners should be developing into self-reliant, independent learners, sustaining the inquiring mind and learning culture, required for HE.

These programmes fail, therefore, to understand the educational function and demands of HE to develop independent learners. Slabbert (1998:2) says in this regard:

> *Although there might be isolated reports of sporadic success in adopting these quick fixes, it has become evident that they are and will be short lived because of a non-existent foundation to build upon. Our intended production of a learning culture as educational aim is therefore still in jeopardy.*

1.2.5 FAILURE OF AD PROGRAMMES TO SOLVE THE PROBLEMS

The focus and aim of AD might be the problem. Resulting from the aims of AD, namely to support learners to improve their academic performance and to gain access into higher education, AD practices and programmes are devised to pursue these aims, resulting in quick fixes, instead of long term, life long attitudes, resulting in a culture of learning. During twenty years of AD it does not seem as if anything has changed; learners still fail at an alarming rate (Stumpf, 1998:75). It can therefore be described as a static struggle to support learners to perform to a set standard with the aims of gaining access to, and performing better at higher education. It constitutes a misconception of what AD should really be focussing on, according to fundamental pedagogical

knowledge of what education is intended for, namely that learners should develop as independent learners with independent thinking abilities, preparing themselves for the future world of work. This need is echoing through most of the literature that describes the vast changes and its demands on man of the post-modern world (Covey, 1992; King, 1994; Sunter, 1996; Biggs and Telfer, 1987; Hunt, 1992; Welmans, 1997; Herbst, 1998; Toffler and Toffler, 1995; Harvey, et al. 1997; Jones, 1996; Carruthers, 1997, and Land and Jarman, 1992).

According to SAAAD findings (1997) on AD programmes being currently presented, the deliberate actions of AD-practitioners to facilitate independence amongst their learners are seriously lacking. Independence constitutes a state of mind that flows from *within* a person. The person is responsible for his/her own well-being and does not depend on outside factors to accomplish what he/she wants. The problem is that AD of learners still rely on the approach that learners need support from outside through quick-fix programmes, instead of endeavouring to "fix" it from within. The problem is therefore, that learners will stay dependent on AD-practitioners for their academic progress if the said aims of AD stay intact. It does not seem as if AD of learners focuses on the future at all, proactively developing learners for the new millennium and its demands.

It seems as if AD programmes are offered in a fragmented way, through heterogeneous and differentiated curricula and even through different departments and /or units, presenting more or less the same content! The SAAAD report (1997:56) says in this regard, that fragmentation can lead to "duplication of provision and lack of holistic understanding of learners' problems." It is exactly this fact that is of great concern, namely that there does not seem to be a holistic approach to AD, taking into account that learners need more than a few acquired skills in order to cope with the demands of the future. Fragmentation of AD programmes might be easy to present and manage, but is detrimental to the development of learners as whole human beings. Having to attend special programmes or extra support sessions, and being classified as "at risk" learners, needing extra support to be "accepted," might, in fact, foster feelings of low self-esteem which is detrimental to motivation.

A possible solution to the problem of fragmentation comes from the findings of the SAAAD report, (1997:64), which reads as follows:

> *The majority of the respondents indicated that student development should be integrated into every faculty and department, becoming part of every student's academic programme.*

This can mean, therefore, that AD should be presented within subjects in an integrated way, or as extra subjects to be taken by all learners, adapted to the field of study, i.e. for the social sciences, economic sciences or natural sciences. This is recommended practice, therefore found to be lacking in AD programmes. AD of learners, as is presently being presented at HEI's, fails to meet the demands of employers and man of the post-modern world (Covey, 1992; King, 1994; Sunter, 1996; Hunt, 1992; Welmans, 1997; Herbst, 1998; Toffler and Toffler, 1995; Harvey et al, 1997; Jones, 1996; Carruthers, 1997, and Land and Jarman, 1992), it also fails according to the findings of the SAAAD-report, in that it can be seen as an ambulance service, instead of an intervention causing fundamental changes in a student's life, his/her attitudes, beliefs and behaviour.

Despite the fact that AD programmes are running at most HEI's and that, as recently as 1997, research has been done on the practices of AD (SAAAD, 1997), it still remains clear that AD does not fulfil the aims for which it is intended, namely to prepare learners holistically, in order to meet the challenges of the 21st century. It is therefore imperative that this research needs to be done. The aim of the research done by SAAAD was primarily to conduct an audit and needs assessment on strategic change in higher education in South Africa (SAAAD, 1997:2). It is the belief of the SAAAD researchers, that AD programmes are central to transformation of higher education institutions (SAAAD, 1997:4). The researcher, on the other hand, after reading the report of SAAAD, realised that there is no mention of a fundamental change in AD. Recommendations still reflect *a reactive approach,* including *modifications* of an ambulance service, this time only integrated into mainstream courses, or given other names, like compulsory generic courses, writing and reading centres to promote independent learning, the coordination between counselling and AD-services, and the like (SAAAD, 1997:119). It remains a reactive approach,

instead of a proactive change. The problem which is clearly stated in chapter one of this research, namely how will learners be able to meet the demands of a rapidly changing future, which needs urgent attention by all educational institutions, is not at all addressed by the research of SAAAD (1997).

1.3 THE PROBLEM SUMMARISED

The aim of AD programmes internationally and in South Africa, seems to be that of advising and rendering support on matters with regard to problems which learners encounter in their academic performance. The problem is, however, that these aims result in a reactive model which does not focus on the development of learners to face the rapidly changing demands of the future, nor do these programmes instill an inner self-directedness, creative force and independence through which learners can create their own future. It seems as though quick-fixes are still devised to rectify perceived lack of skills, instead of thinking fundamentally new about AD and its aims. Additionally, the aims of current AD programmes seem to result in "tunnel vision" where the only matter of importance is student performance. It lacks creativity and a future focus, which is vital for the times which we are experiencing right now. The problem is therefore that AD of learners is a reactive support project, instead of a proactive development plan for a life long venture into turbulent and unknown changing times, in which learners will be responsible to create their own future.

1.4 THE AIM OF THE RESEARCH

The aim of this research therefore is to design an AD model for higher education institutions, that will maximise the potential of learners to excel in the demands of a challenging unknown future.

1.5 THE RESEARCH QUESTION

What is the best possible model for AD programmes at higher education institutions in South Africa that will facilitate learners to maximise their potential so that they will excel amidst the challenging demands of an unknown future

To answer this research question, a number of sub-questions need to be answered:

1.5.1 RESEARCH SUB-QUESTIONS

Research question 1:

What is the current state of AD? This is a question that needed to be revisited, in spite of the SAAAD-report (1997), to establish AD as it is actually practised in terms of perceptions and believes that constitute the realm of subjective experience and socially constructed reality.

Research question 2:

What are the demands of the future for learners in HE?

Research question 3:

What should the AD model consist of in view of these demands?

Research question 4:

What should the best AD model be to prepare learners adequately for the unknown future?

This research project therefore aims at finding answers to these questions.

The methodology for conducting this research is described in the headings to follow.

1.6 RESEARCH METHODOLOGY

The field of this research is Academic Development practices at institutions of higher education in South Africa. In this research endeavour, the researcher was guided by the following fundamental questions: What is the nature of AD practice? (which is an ontological question according to Guba and Lincoln, 1994:108); what is the nature of the relationship between the researcher and the field of enquiry? (which is an epistemological question, according to Guba and Lincoln, 1994:108); and which methods can be employed to best research the field of AD?

1.6.1 THE NATURE OF ACADEMIC DEVELOPMENT

Academic development programmes have existed in South African HEI's since the early 1980's. Historically these programmes were associated with access programmes and academic support programmes for learners from educationally disadvantaged backgrounds (SAAAD, 1997:4). Most institutions, however, only started with AD programmes when significant numbers of disadvantaged learners started to enlist at their institutions since the early 1990s. It is also obvious that no clear foundation underpinned AD practices (SAAAD report, 1997:5).

The ontology of AD, or what can be known about AD, need to include *perceptions* and *beliefs* of people, moving into the realm of *subjective experience*, where individually and socially constructed reality forms part of the whole picture of the research..

1.6.2 THE RELATIONSHIP BETWEEN THE RESEARCHER AND THE FIELD OF INQUIRY

For the purpose of this research, namely the inquiry into academic development of learners at HE institutions, the researcher, as an academic development practitioner, sees herself as an "insider" and the respondents as colleagues in the same field. We have more or less the same expertise, speak the same "jargon" and can share with each other our experiences in the field of academic development. The researcher is a participant-as-observer and not in a position where she stays on the periphery, studying reports, looking at phenomena, she is personally involved in, and experiencing the field of AD

As an "insider" interpreting the field of inquiry, the researcher "cannot stand outside the life world observing it"(Polkinghorne 1983:240), yet it requires a high level of self-knowledge and self-development in order for the researcher to accept that her assumptions and perceptions can be tested and transformed as well. The researcher should therefore be "open" to what the data presents and take a stance between objectivity and subjectivity. This implicates, the researcher should be objective in so far as not allowing preconceived perceptions to interfere with the analysis of data. Subjectivity, however, also comes into play, as the field of human inquiry cannot be reduced to objective observations only. People's feelings, reactions, motives and intuitions

have to be taken into account as well. There is not one truth only which corresponds with reality and which can be objectively observed, but rather some truths which are held within communities (Slabbert, 1998:40).

The researcher realises that from a position of "insider", consideration must be given to ethics and "politics". Politics in this sense refers to the micro politics of personal relations, to institutional politics/policies and to politics/policies of government (Punch, 1994:85). The ethic position of confidentiality, of not identifying institutions or respondents and respecting their views, will thus be taken up by the researcher. The research will be conducted throughout with the informed consent of respondents. They will be seen as partners and stakeholders in the research process. As far as micro politics are concerned, the researcher feels that she will encounter no real problems, thanks to her institutional background, the position of expertise and the relevancy of the research. Institutional and governmental policies might pose some problems, however, since AD was introduced as support programmes for previously disadvantaged learners and the researcher is from a so-called advantaged background and institution.

1.6.3 RESEARCH DESIGN

In the light of the previously described realities of this study, the researcher must decide which research design will best allow access to the field of enquiry. Before the researcher can decide on a suitable design/methodology, however, the decision must be made which paradigms should guide this research, for it will dictate the methodology.

1.6.3.1 Guiding paradigms for the research design

Since all human beings have certain beliefs about reality according to their deeply embedded principles and value systems (mostly within cultural context), it is also true that the researcher's beliefs will shape how he/she sees the world and acts on it. According to Denzin and Lincoln, (1994a:13), "these principles combine beliefs about ontology (what is the nature of reality?); epistemology (what is the relationship between the inquirer and the known?) and methodology (how do we know the world or gain knowledge of it?)" which guide the way in which the researcher conducts the research and which can be termed a paradigm. Guba and Lincoln

(1994:107), describe paradigms as basic belief systems based on ontological, epistemological and methodological assumptions:

> *A paradigm may be viewed as a set of basic beliefs (or metaphysic) that deals with ultimate or first principles. It represents a world view that defines, for its holder, the nature of the 'world,' the individual's place in it, and the range of possible relationships to that world and its parts, as, for example, cosmologies and theologies do. The beliefs are basic in the sense that they must be accepted simply in faith (however well argued); there is no way to establish their ultimate truthfulness. If there were, the philosophical debates ..... would have been resolved millennia ago.*

This research is therefore embedded in and guided by certain paradigms. The researcher has to study various paradigms, which are theoretically well argued, in order to decide on the most suitable, taking into account the aim and nature of the research.

From what has been said in the previous paragraphs, it must be clear that no single paradigm can guide this research, and the research problem cannot be solved by employing one set of views only. The inquiry into academic development is complex, involving a variety of ideologies and interpretations.

In order to choose an appropriate paradigm (or paradigms), the ontology, epistemology and methodology of four selected paradigms have been studied, all of which are inquiry paradigms, suitable when doing human inquiry. Some of these paradigms will then be selected for their appropriateness to this research. The main principles of the four paradigms are summarised and tabled (Table 1.1) as adapted from Guba and Lincoln (1994:109).

1.6.3.2 Appropriateness for this research

It seems that constructivism would be the most suitable paradigm to guide this research, because of the fact that it advocates that realities are apprehensible in the form of multiple, intangible mental constructions, which are not more or less "true" in an absolute sense, but merely more or

less informed and/or sophisticated. Constructions are therefore alterable, as are their associated realities. The hermeneutical/dialectic methodology is aimed at the reconstruction of previously held constructions (Denzin and Lincoln, 1994b:110-111).

Although it is accepted to work within a specified paradigm, the *bricoleur-researcher*, which is described by Weinstein and Weinstein (Denzin and Lincoln, 1994a:3) as a researcher who uses "all the tools of his/her methodological trade, deploying all strategies methods and empirical materials at hand", also works *between* and *within* overlapping paradigms - in this case constructivism overlaps with critical theory as far as epistemology and methodology are concerned: the epistemology is "transactional and subjectivist". The investigator and the object of investigation are interactively linked so that the 'findings' are *literally created* as the investigation proceeds" (Guba and Lincoln, 1994:111). The methodology suggests that individual constructions can be elicited and refined only through interaction between and among investigator and respondents" (Guba and Lincoln, 1994). The researcher will therefore endeavour to understand the data within the realm of human experience (Polkinghorne, 1983:215), interpreting the text and participating in the production of meaning (Schwandt, 1994:121), making use of various overlapping paradigms and methods.

The insider position of the researcher does not implicate that the researcher takes an exclusively subjective stance towards the inquiry, but rather a stance between the two poles: subjectively looking into own practice, but objectively attempting to *interpret and understand* the field of inquiry and not to predict the outcome (Polkinghorne, 1983:239). In conducting the research, the value-ladenness of facts is deemed more important than the exactitude of facts. These paradigms, therefore, seem to be appropriate for this research.

The researcher would like to agree with Guba and Lincoln (1994:108) when they state:

> *In our opinion, any given paradigm represents simply the most informed and sophisticated view that its proponents have been able to devise, given the way they have chosen to respond to the three defining questions.(referring to the ontology, epistemology and methodology)....the sets of answers given are in all*

TABLE 1.1 Basic Beliefs (Metaphysics) of Alternative Inquiry Paradigms

Item	Positivism	Postpositivism	Critical theory : materialism, feminism, post-modernism, participative inquiry, action research	Constructivism
Ontology	naive realism- "real" reality but apprehend able	critical realism "real" reality but only imperfectly and probabilistically apprehendable	historical realism-virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallized over time	relativism - local and specific constructed realities
Epistemology	dualist/ objectivist; findings true	modified dualist/ objectivist; critical tradition/ community; findings probably true	transactional/ subjectivist; value-mediated findings	transactional/ subjectivist; created findings
Methodology	experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	modified experimental/ manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	dialogic/ dialectical	hermeneutical/ dialectic

cases human constructions; that is, they are all inventions of the human mind and hence subject to human error.....advocates of any particular construction must rely on persuasiveness and utility rather than proof in arguing their position.

The chosen guiding paradigms resulted in the study of various research designs which emanate from these paradigms, in order to find the most suitable design to access the field of inquiry.

1.6.3.3   Specific research design

The overall research design for this study is a grounded theory methodology, because the design of a theoretical model for AD practice is the purpose of the study. This methodology was, in an overall sense for the study, conducted in an action research format.

It is important to note that the description of the research methodology of this study will be recognisable as such, but may not necessarily have been implemented in its purest form because the "various strategies of enquiry used by qualitative researchers will differ depending on the purpose of the study, the nature of the research question and the skills and resources available to the researcher" (Schurink, 1998a :253).

The grounded theory methodology is based more on observation and inductive reasoning, and is concerned with the *generation of theory*, rather than testing a theory (De Vos and van Zyl, 1998:265). Phenomena are discovered, developed and provisionally verified through systematic data collection and analysis.

In the grounded theory design the research question initially starts out broadly, but becomes progressively narrowed and more focussed as the research progresses and concepts and their relationships are discovered to be relevant or irrelevant (De Vos and Van Zyl, 1998:268). It is for this reason that the research question or questions need to have the flexibility to explore a phenomenon in depth.

It makes use of the constant comparative method, has a certain flexibility and is oriented towards action and process. It also includes aspects of the inquiry paradigms like participation with others, taking *continued action* and endeavouring to interpret and understand the data. All these aspects make this research design most suitable for the intended research process. It will also be necessary to make use of action research within the grounded research design, because of the following reasons (Reason, 1994:330-331):

i)   It is a form of inquiry into practice.

ii)   It is concerned with the development of effective action that may contribute to the transformation of organisations and communities toward greater effectiveness.

iii)   It integrates the four territories of human experience, in that it "sees, embraces and corrects incongruities among mission, strategy, operations, and outcomes.

vi)   It is "profoundly educational" in the sense that it provides the opportunity for "learning by searching, or researching" (Park, Brydon-Miller, Hall, and Jackson 1993:3).

v)   It enables humans to co-create their own reality, also through cooperation with research participants.

The researcher stated previously, that she attempts to understand or interpret the day to day experiences regarding academic development programmes in order to develop "effective action". It is in relation to this fact that Reason (1994:332) states:

> .....*therefore valid human enquiry essentially requires full participation in the creation of personal and social knowledge......reality become manifest not just through the mind, but through the reflective action of persons and communities. ....Knowledge arises in and for action*".

Experiential knowing arises through participation with others and according to Reason (1994:333), "the implication of this epistemology of action is that the primary outcome of all these forms of inquiry is a change in the lived experience of those involved in the inquiry. Participants are empowered to define their world in the service of ...worthwhile interests, (consequently) they change their world in significant ways, through action....and through

experience-" People can therefore learn to be self-reflexive about their actions and how they perceive the world. It is to this goal that the researcher wants to work.

A wide variety of empirical materials could thus be implicated for use in the proposed research, i.e. personal experience, interview, interactional text, historical data and introspective dialogue (reflective) "hoping to get a better fix at the subject matter at hand"(Denzin and Lincoln,1994a:2).

1.6.4 RESEARCH RESOURCES

The researcher will attempt to critically inquire into existing practice in the field of academic development, to understand how her colleagues interpret academic development and eventually to measure present practice against the future demands of the world of work. For instance, what is the influence of technology; of a changing economic, social and political world order; of changing scientific views; and subsequently, what new attributes are important for employees. This will be done as an attempt to transform and emancipate academic development from the remedial support of under prepared learners to an intrinsic development of all learners enabling them to deal with the strenuous demands of the new millennium. For this purpose, the researcher will utilise a wide variety of literature and other sources (television, Internet, contemporary magazines, newspapers, reports, practical experience) in order to establish which information could contribute to this research.

Three categories of research resources are being distinguished, namely literature, praxis and the future (Slabbert, 1998:41). Literature research always presents research already executed in the past and is an important source of epistemologies, theories and views which can increase the standard of acceptability of the knowledge claims of this research. Similarly, praxis research can heighten the acceptability of this research when current practice and the potential thereof are utilised as research resource. For the aim of this research, the future in terms of an anticipated future, is an important research resource in order to establish the demands of the future world of work and the impact it will have on the development of learners' potential. Past and current research, however, will determine if and how AD practices should have to change when juxtaposed against the future demands.

Each of these research resources has its characteristic aims and the way in which these resources were implemented in this study, is discussed in the following paragraphs

1.6.4.1 Literature research

The aims of literature research are to

* determine fundamental concepts;

* obtain deductive explanations of fundamental concepts;

* investigate the epistemology of fundamental concepts; and

* develop a theoretical construct (theory or model) of fundamental concepts.
   (Slabbert, 1998:42).

These aims constitute the interpretive character of the hermeneutic paradigm (utilised under the methodology described for constructivism in the previous paragraphs). The interpretive interaction with the phenomena under investigation, results in decisions and action which are formulated into language of a moral and aesthetic character, rather than the predominantly scientific, political and technical language (Slabbert, 1998:42). This is evident throughout this research.

The "sustained interaction" within the hermeneutic paradigm, eventually leads to the aims within the critical paradigm. These are to

* investigate the contexts of fundamental concepts and the actions (practices) based upon them to show how they are lacking;

* generate new fundamental concepts which are alternatives to existing ones; and

* supply some evidence why the newly generated fundamental concepts are more likely to be correct or contain less remaining error or are a step towards a more clarified truth (Slabbert, 1998:42).

Relevant literature resources were obtained by searches on electronic databases for scientific literature and written databases under chosen keywords. Reference lists of scientific articles, newspapers and popular literature, as well as published congress or conference proceedings, were consulted. Official documents of institutions, associations and foundations were included in the literature research sources. For this research, the researcher also made use of the works of futurists, scenario planners, philosophers and visionaries, as well as television programmes which dealt with the future and its demands. The Internet was also a rich source of information.

1.6.4.2   Praxis research

Praxis research always represents current research - which results in having only present actions and their results as resource.

The aims of praxis research are to

*   serve as source of external observation of current practices;

*   serve as source of internal observation (self knowledge through reflection on own practice); and

*   verify, elaborate and refine fundamental concepts as *findings are created* (see epistemology of grounded theory).

Within the critical paradigm the aims of praxis research are to:

*   observe the contexts of fundamental concepts in order to explicate them;

*   supply alternative actions based on newly constructed fundamental concepts; and

*   obtain evidence why the alternative actions are more likely to be accepted. (Slabbert, 1994:43).

There are mainly two broad categories within praxis research, namely quantitative and qualitative research.

A)   Quantitative research

Quantitative research was developed from the methodology of the natural sciences and is designed to arrive at objective knowledge statements (Slabbert, 1998:43). Quantitative research methodology is generally used to determine cause and effect and to quantify phenomena into measurable generalisations. It therefore relies heavily on quantitative data which is then statistically analysed. This research methodology came under severe criticism over the last decade, because of its failure to address the requirements of human inquiry, namely the moral, aesthetic, subjective, intersubjective and reflective knowledge statements inherent in the human sciences.

For the purpose of this study a quantitative research methodology was not deemed suitable, as this research deals primarily with human inquiry, and falls beyond the boundaries of this research.

B)   Qualitative research

It is clear that at least part of this research must be of qualitative nature to establish AD practice as a human endeavour. Human inquiry needs insight, and understanding of the context, it needs to be subjectively valued, rather than objectively observed as is the case with quantitative research. Rich, descriptive data is of great importance, in order to gain adequate knowledge of the research undertaken, and the methods used, are therefore aiming at obtaining such data. Quantitative research usually aims at the measurement and statistical analysis of variables and would thus not be deemed appropriate for this particular study. In this regard, the viewpoint of the researcher coincides with that of Heron as well as that of Skolimowski (Reason, 1994:324) in saying that:

> ...*human beings (are) co-creating their reality through participation: through their experience, their imagination and intuition, their thinking and their action. We always partake of what we describe so our reality is a product of the dance between our individual and collective mind and what is there, the amorphous primordial givenness of the universe.*

This research methodology is seen to be more suitable to the human sciences and has gained tremendous support and popularity because of its

*   inherent ability to explore the human being for what it fundamentally is and to understand its consequent actions more comprehensively;
*   acknowledgement that knowledge is subjectively and intersubjectively constructed;
*   recognition of fallibility of knowledge thus constructed; and
*   ability to restore humanisation in human science research (Slabbert, 1998:44).

It is noteworthy how well qualitative research "fits" into the guiding paradigms for this research. This research methodology is derived from ethnography and relies on the exploration of a phenomenon. It is therefore much more stringent on the researcher than quantitative research because of the burden on the researcher of preconceived ideas, perceptions, prejudices cultural boundaries and similar problems which can influence the investigation. It does not rely on quantity to validate it, but on inherent quality which is determined by the way in which data is gathered and analysed, and what special measures are taken to ensure trustworthiness of the data. This research methodology is able to investigate phenomena which could not otherwise be researchable by quantitative methods. (How does one quantify attitudes, feelings and principles?) The analysing of data does not follow the route of finding statistical correlations between categories or exactitude of response interpretation, but rather understanding of what presents itself through the data, for "human science is largely ex post facto understanding" (Polkinghorne 1983:239).

i)   **The position of the researcher in qualitative research**

In most cases the qualitative researcher's position can be described as that of an "intersubjective insider" (Van der Merwe, 1996:292) rather than the objective outsider. The said position suggests that the researcher is involved in the research process practising science that is not value-free because inquiry into human experience always involves a biographic dimension of the researcher as well as the researched, i.e. culture, gender, language, age. This argument positions the researcher in direct opposition to the positivist view of research being value-free and done by an objective outsider who emphasizes the measurement and analysis of causal relationships between

variables. The qualitative researcher, however, emphasizes the "socially constructed nature of reality, the intimate relationship between researcher and the study (or researched) and situational constraints. He/she stresses the value-laden nature of inquiry and how social experience is created and given meaning" (Denzin and Lincoln, 1994a:2). The qualitative method will therefore not be the application of rules, but rather "the activity of using ethical principles to guide the making of an ethical decision (interpretation)" (Schwandt, 1994:122); therefore the making of responsible decisions (interpretations), relying on good reasoning.

ii) Format for qualitative research

Although there is no typical format for qualitative research, the following are important according to Slabbert (1998:44-45):

a) Identifying the phenomenon to be studied. In this case, AD practices in HEIs.

b) Determine the aim of the study. There need not be any problem formulation or hypothesis, although neither is excluded.

c) The sample group is chosen with a specific purpose, rather than at random so as to be a representative sample of a certain population. The sample is therefore determined according to the needs of the study (Morse, 1994:229). There is no control and experimental group, although this is not necessarily excluded. For this study, the sample will be determined according to the needs of the study as it progresses.

d) Collecting data: The way in which data is collected is crucial and can take place by using several methods, which are discussed under the following headings:

* **Questionnaires:** To be suitable for qualitative research, mostly open questions or statements where the respondent should give descriptions are used, rather than questions requiring answers of codeable nature. These kinds of descriptive questionnaires will be used for this research.

* **Structured, semi-structured and unstructured interviews**: The latter two will be utilised for this study, "in an attempt to understand the complex nature of the study without imposing any priori categorization that may limit the field of inquiry" (Fontana and Frey, 1994:366).

* **Observation and recording of behaviours**, which entail detailed descriptions of situations practices and interactions between people. The researcher needs to discover what there is, not what is expected or anticipated. The role between the researcher and the researched can be:

  ~ **uninvolved**, which means that the researcher stays objective and that subjects are unaware of the research project and his/her role and relationship within it;

  ~ **periferal**, meaning that the subjects of the research are aware of the investigation, but the researcher does not become part of the subject's world. He/she stays on the periphery, although there may be some interaction;

  ~ **active**, this means that the researcher becomes involved in the world of the subject, but the two parties, although in frequent interaction, retain his/her own identity and the relationship becomes close;

  ~ **complete**, meaning that the researcher tries to live the world of the subject and as such becomes a subject with whom the relationship is a very familiar one.

  For this research, the researcher's role will be that of being actively involved, having frequent interaction with the subjects, yet retaining own identity.

* **Using excerpts** from documents, correspondence, reports etcetera, as will be done for this research.

* **Text data analysis**: Certain concepts re-occur frequently when analysing texts and transcriptions. Attention will be given to the meaning of these concepts, and their usefulness to this study.

* **Trustworthiness**: Data collection will be done in such a way in order for it to be as trustworthy as possible. Trustworthiness constitutes the term *internal validity* which is used by positivists, in order to determine to what extent the researcher's observations and measurements are true descriptions of that particular reality. In human enquiry, however, there is not one true description of reality. It is perceived reality and involves "the *credibility* of portrayals of constructed realities...qualitative researchers award credibility only when the constructions are plausible to those who constructed them, and even then there may be disagreement..." (Kincheloe and Mclaren, 1994:151). Trustworthiness and credibility are also criteria supported by social constructivism (Guba and Lincoln, 1994:114), when collecting and interpreting data. Furthermore it demands that data must be *transferable* (parallelling external validity), meaning that data must be compared with similar research undertaken by other researchers to establish similarities. (Generalisations are not made, though, in qualitative research); *dependable* (parallelling reliability in quantitative terms), meaning that data should be consistent when gathered over time or compared from different sources; and *confirmable* (parallelling objectivity). The researcher should therefore be aware of the fact that his/her own perceptions can influence the way in which data is gathered and interpreted.

Several ways in which trustworthiness can be enhanced are discussed briefly, as it will be operationised in this research, and indicated every time when it was done.

* Trustworthiness can be established through different forms of data collection, different data sources and different researchers engaged in interaction with the data (Denzin and Lincoln, 1994a:3). This approach is called triangulation and is used to enhance credibility, transferability and consistency of data. In this study, the researcher will make use of triangulation and it will be indicated as the study proceeds. Reason and Rowan (1981b:241-242) make the following statement with regard to triangulation:

..valid knowledge is a matter of relationship...and may sometimes be enhanced if we can say we know, rather than simply I know: we can move towards an intersubjectively valid knowledge which is beyond the limitations of one knower.

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* Consistency or dependability (reliability in quantitative terms) can be obtained when saturation of data occurs. This happens when data is collected using multiple methods and sources until repetition of data occurs to a large extent (Morse, 1994:230). Adequate or sufficient data is therefore gathered, getting similar responses, which then results in the conclusion that the data is saturated. For the consistency and dependability of this study, the researcher will work towards saturation of data.

* Appropriate data needs to be gathered. This refers to the selection of information according to the theoretical needs of the study; data should therefore be applicable (Morse, 1994:230). This researcher will endeavour to gather applicable and appropriate data towards fulfilling the aim of the study.

* The researcher must distance herself from her own preconceptions on the research topic/question, as it may influence the way in which data is gathered or interpreted. This activity is called 'bracketing'. Bracketing also takes place when data is categorized into meaningful clusters, enabling the researcher to ask meaningful questions as the research progresses (Strauss and Corbin, 1990:62-64). In this research, it will clearly be indicated when bracketing was done.

* The researcher will make use of 'thick' descriptions, meaning to write down direct quotes of the participants, built on low inference data instead of writing down interpreted data during the data collection. During data collection for this research, the researcher will make use of thick descriptions and it will be indicated as the process progresses.

* The researcher will reflect constantly on the meaning of the data in order to find how it 'fits' together, keeping in mind the non-interference of personal prejudices and perceptions. When analysing the data, the researcher will constantly keep this in mind.

* Peer evaluation of the data analysis can be done by requesting knowledgeable colleagues to comment on the interpretation of the data - this is also called independent audit. The study is validated when confirmation of its credibility/trustworthiness is obtained from

peers. The researcher will request a sample of respondents to verify the "correctness" of the data and to comment on the interpretation of the data.

* Studies have certain life cycles when doing qualitative research. Huberman and Miles (1994:431) state that the researcher can undo errors by collecting data the second time around because "changes reflect a better understanding of the setting, thereby heightening the internal validity of the study...the more one investigates, the more layers of the setting one discovers". This will be done for this research, heightening the validity.

* When interpreting data, the researcher should ensure
   ~ thoroughness,
   ~ comprehensiveness,
   ~ usefulness, and whether the interpretation is
   ~ worthy of adoption, for these are all useful criteria to be adhered to when appraising the validity of the research (Schwandt, 1994:122).
   The researcher will adhere to these criteria when data is interpreted.

* The audit trail: Careful documentation of all data collected, leaves an adequate amount of evidence which could be trailed and reconstructed by the readers of the research document (Morse, 1994:230). In this research, raw data, data reduction and analysis products, process notes and correspondence can be traced.

e) Data will be recorded exactly as it has been observed, or told and written by the subject. The primary data consists of quotations, summaries of written information and descriptions of narrative observations, rather than numbers.

f) Primary data will be analysed by a process called open coding - the identifying of patterns that emerge from the data and which is then described in categories and themes. This process may then be followed by axial coding, or making connections between the categories, considering causal conditions, context, interaction effects and consequences (Strauss and Corbin, 1990:62-68). Careful attention will be given to the quality of

cognitive processes when analysing the data, as this could jeopardise the trustworthiness of the study. These processes are comprehending, synthesizing, theorizing and recontextualization and is integral to all qualitative methods (Morse, 1994: 24-43).

g)   Results: The processed data will portray the results.

h)   Conclusion: The conclusion manifests in the understanding of the phenomenon, not a generalisation.

The researcher will refer to the various ways of data collection and data analysis, while documenting the research. Mention will be made throughout of how trustworthiness was established.

C)   Action research

Action research emphasizes the fundamental importance of experiential knowing, and holds strongly the vision that people can learn to be self-reflective about their world and their action within it. "The notions of praxis, critical subjectivity, double-loop learning and interpenetrating consciousness" are of importance when doing action research (Reason, 1994:333). The aim of the action researcher is to be personally engaged in the process, trying to understand it, while continuously planning, reflecting and evaluating the process, in order to implement immediate adjustment for improvement. Action research embraces the idea that experiential knowing arises through participation with others (Reason, 1994:333). The basic methodology consists of a spiral of the following activities:

a)   Identifying the general idea.

b)   Reconnaissance.

c)   Constructing the general plan.

d)   Implementing the first action step.

e)   Evaluation.

f)   Revising the general plan.

g)   Implementing the next action step.

h)   Continuing the spiral.

Action research investigates a phenomenon in action and revises/rectifies/adjusts immediately to improve the quality of action. The relation of action research to qualitative research is obvious (Slabbert, 1998:46).

This study will be recorded according to a spiral of activities, inherent in action research.

1.6.4.3   Future research

Future research refers to both the future as *source* of research in terms of an anticipated future, and research still to be undertaken, in view of its value or necessity for literature or praxis research (Slabbert, 1998:47). The aim of future research for this study is therefore twofold.

i)   Future as source of research:

*   The anticipated future and its demands need to be studied and researched, constantly.

*   Current shortcomings and deficiencies need to be identified, when juxtaposed against the demands of the anticipated future.

*   The identified demands of the future direct and guide research that needs to be done presently.

ii)   Research still to be undertaken, in future:

This research is usually expressed in recommendations at the conclusion of the research.

1.6.4.4   Concluding remarks

When starting off with the research, the researcher realised that the requirement of qualitative research, of carefully writing down each and every step followed, of trial and error, and the continuous action taken upon reflection of incidents that influenced the way forward, she would engage in credible, thorough, and comprehensive research. At the same time the researcher was involved in metalearning, or as Senge, Roberts, Ross, Smith and Kleiner (1994:60) puts it, the

"wheel of learning", namely reflecting, becoming an observer of own thinking and actions; connecting, or creating ideas and possibilities for action; deciding, or settling on a method for action; and doing or performing the task; immediately starting reflecting on it again etcetera. It is a deep learning process as the research progresses, it is action research and research in action. The researcher can, through own experience therefore, relate to what is taking place in the field setting. From all the research resources and guiding paradigms described, a research methodology has been followed, described by Slabbert (1998:47) as explorative-reflective-elaborative research, since it contains each of these components executed in a perpetual cycle. (Slabbert, 1998:47).

This methodology can in short be described with the following actions:

*   an idea originates from an observation or is generated;

*   this idea is now explored by a selection of the guiding paradigms and research resources which will best provide access in the exploration of the idea;

*   formative and summative reflection evaluation on the explored idea is executed, which makes alteration, refinement and elaboration of the idea possible to improve its quality;

*   the latter makes it possible for a new idea to come into existence;

*   this new idea can now subsequently be explored as described previously; and

*   a perpetual cycle between exploration, reflection and elaboration completes the methodology.

It is evident, when reflecting on the research methodology described, that it is essentially qualitative in nature. In terms of relevance for this research, the quantitative research resource will not be implemented. The particular research resources and how it was used in this study, will be referred to while documenting the process, and is indicated in the course of the study.

1.7 COURSE OF THE STUDY

The problem, aim and methodology of the study were described in this chapter.

Chapter two deals with the documenting of the current state of academic development in higher education institutions in South Africa. This chapter is recognised easily for its qualitative grounded theory methodology, conducted in an easily identifiable overall action research format, starting with the design of a questionnaire, followed by a pilot study and then progressed through a number of appropriate action research steps until the investigation of the current state of AD practice could lead to the underpinning grounded theory of AD as it currently exists.

Chapter three is a causal action research phase that needs to assess the current state of AD against what the necessary precondition for AD practice is in an unknown future. This step continued with the grounded theory methodology through literature research to find what human visionaries, futurists and philosophers project to be expected from human endeavours in an unknown future. In this respect, the research design remains in the qualitative domain. The views derived from this investigation will provide the grounded theory for the design of a theoretical model to guide AD practice appropriately and adequately for the 21st century.

Chapter four is a resultant action research phase caused by the discrepancies found between the current state of AD practice and what the demands of the future in this regard will be. The result is the construction of a grounded theory for AD that will facilitate learners to excel in maximising their potential as the best way to cope with the challenging demands of the 21st century facing them. In this regard the research remains essentially in the qualitative domain where the grounded theory is constructed in the form of a theoretical model that will guide AD practice to excel in the new millennium.

Chapter five arose as necessary next action research phase that reflects on the designed grounded theory in the form of a critical assessment of a human accomplishment. The assessment recognises accomplishments as well as deficiencies in the process and in the product of this research and makes recommendations for improvement. This remains an essentially qualitative research

endeavour and, although it is the conclusion of this study, it also signifies another phase in the action research format regarding future research.

CHAPTER 2

The current state of Academic Development

2.1   INTRODUCTION

Establishing the current state of Academic Development of learners at tertiary institutions in South Africa is the research question that was to be answered through the research undertaken and described in this chapter. The aim is to establish what the present practice regarding AD is, and the kind of programmes that are run at the institutions of higher education in South Africa. It is also important to determine what the aim of these programmes are.

The researcher therefore took as point of departure her own institution, where AD is practised as a joint venture by the Departments of Guidance and Counselling, and Study Guidance. The information needed, is of a qualitative nature, namely, a description of what programmes are run, how they are organised, what the profile of academic development practitioners are and what the aim of these programmes is, amongst others. Information, therefore, was gathered from the units dealing with either guidance and counselling, or programmes dealing with study related guidance and academic development of learners.

The research process was therefore implemented as a participating process, describing experiences while conducting the research, trying to understand through holistic and systematic thinking as well as intuitive knowing, the field of inquiry and acting upon the findings, always endeavouring to find rich and varied data through a variety of methods. The various strategies used by qualitative researchers will differ depending on the purpose of the study, the nature of the research question, the accessibility of the research field, the resources at the researcher's disposal and the skills of the researcher (Morse, 1994:223). That is why some strategies used, also in this research, may be identified with some major recognised qualitative research strategy, but the researcher adapted the particular strategy to suit the exploration of the research question in the most effective way, considering the above limiting possibilities.

2.2 RESEARCH DESIGN

The overarching research design selected for the exploration of this research question is the qualitative research design of grounded theory. This is the most appropriate design to explore this research question: What is the current state of academic development of learners at tertiary institutions in South Africa? What is important to take cognisance of is the fact that the research in this chapter focusses on establishing the practice of AD rather than the theory as such, because it is the practice that produces outcomes and not the theory, although the practice is a revelation of the basic paradigms and covert theory of practitioners. That is why the grounded theory research design was used as the foundation for this research and adapted to accommodate the exploration of the research question that focusses on practice.

As the researcher started to operationise the research, it was obvious that another important adaptation needed to be made. The first research actions clearly indicated the need for the research design to be conducted in an action research mode, not in the participative or applied sense (because no real need for that was indicated), but simply action research in the grounded research design. This came to the fore when a pilot action (described later) indicated the need for continuous formative assessment while conducting the research. In preparation for the research, the researcher engaged in a qualitative pilot study.

2.2.1 PREPARATION FOR THE RESEARCH

In preparation for the research, the researcher studied relevant literature with the purpose of a broad orientation with regard to the prospective investigation and to ensure that there are sufficient literature that is freely available (Strydom, 1998:179). Dissertations and theses, as well as documents pertaining to the area of the intended research, served as rich sources of information; not only about the research topic, but also regarding research designs and procedures.

The researcher involved the experience of experts. She requested the assistance of an expert in qualitative research design, Prof. T. De Wet of the University of Pretoria (Management School) in evaluating the qualitative research process as the research progresses. In addition, various

discussions with colleagues concerning the field of investigation and the aim of the study, took place in order to gather useful information and various views on the subject. By involving experts and colleagues during the qualitative pilot study, in preparation for the research, the researcher endeavoured to ensure that the investigation brings unknown perspectives to the fore, or to confirm or reject the researcher's own views (Strydom, 1998:181). It was also done as a form of triangulation, heightening the trustworthiness of this research.

The research process was implemented according to different phases, each of which followed logically upon the previous phase, out of which a new research question evolved.

2.2.2 PHASE ONE

<u>**Research question 1**</u>

How will the researcher determine the current state of AD?

A   Specific qualitative research design

Since the research question pertains to determining the current state of AD, the researcher realised that this information could only be obtained from the practising institutions. Obtaining this information from practising AD institutions will manifest the grounded theory research design, although not necessarily in the purest sense of the word.

B   Sample

Theoretical sampling was done, because the researcher had to decide what data to collect, for grounded theory to be developed (Schurink, 1998a:254).

C   Data collection method

Literature research was done pertaining to the area of this research. This acted as a rich source of information which could assist in determining what kind of information is needed in order to investigate the current state of AD. The researcher's own personal experience as an AD practitioner also served as valuable assessment for the information required.

When the required information was established, it was rephrased into questions and the obvious consequence of a questionnaire to obtain the information was immanent.

Although questionnaires are usually used in quantitative research, the open ended questionnaire allows for descriptive, qualitative data. It is therefore utilised in this research, as a form of in-depth-interview, a qualitative method, to enable the researcher to get an "insider" view of the phenomena, as well as to explore other avenues of research emerging from the questionnaire (interview). It is also similar to interviewing as a mode of systematic enquiry, helping the researcher to understand the closed worlds of institutions and the AD communities (Schurink, 1998b:297), which could eventually lead to a grounded theory. Interviewing is regarded as a meaning-making process and with this questionnaire, the researcher had exactly this in mind.

The researcher realised, that she should carefully plan the wording of the questionnaire for it to be clear and concise, and that it should not be too long and time-consuming. The challenge is, therefore, to incorporate all the necessary questions in order to collect the relevant information, yet to be economical in the sense that little time is needed when answering the questionnaire. The basic objective is to gather information, facts and opinions from knowledgeable people on AD of learners. A carefully worded covering letter accompanied the questionnaire, ensuring anonymity, indicating the purpose of the study, allowing for free and open answers and motivating quick responses (Fouche, 1998:156-157).

After careful consideration, the researcher realised that the aim of the study, and the research question should lead to the aims of the questionnaire. This in turn, would lead to what sections and subsequent questions to include in the construction of the questionnaire. The inclusion of

sections was deliberately done, in order to facilitate the eventual processing of the data (Fouche, 1998:159). The aim of the questionnaire was to establish:

* how the units/departments dealing with learning development of learners are structured;

* what the task description of the person dealing with these functions is;

* which specific methods and computerised programmes were used;

* whether these methods and programmes are aimed at academic development;

* what the respondents' views are regarding the influence of curriculum 2005 (future needs).

i)   Information about the institution

Questions should include information about the institution, for instance how the academic development of learners is organised, i.e. whether it is a department, section or unit. In other words, an organigram would be requested. This would give valuable information as to establish whether each institution has a separate unit/department/section, dealing with academic development of learners, or whether the counselling department, various academic departments, or perhaps career guidance, is responsible for this task. This would have an impact on the *focus area* of AD in each institution. In other words, when organised under counselling, AD might be seen as remedial counselling sessions to learners who have learning difficulties; if organised under various departments, the focus might be on the tutoring of specific difficult subjects. Life skills could, for instance, be the focus area for development if AD is organised by career development and guidance.

It would also be of importance to know whether these institutions organise AD programmes under the auspices of Student Affairs, or Academic Affairs. According to the researcher's own experience, Student Affairs tends to place the emphasis on student-related problem areas, addressing student problems in a holistic way (individual, social, inter-active, academic), while Academic Affairs tends to concentrate on academic programmes and progress. The name of the institution was requested, to enable the researcher to contact the institution should a follow-up be necessary.

ii)   The profile of the AD-practitioner

The profile of the AD-practitioner should be investigated, in order to establish the field of expertise. Counsellors usually deal with personal or study related problems, but are there specific AD-practitioners, who deal with the total *development* of learners? In which fields have they had experience, and what specific skills or competencies do they have that distinguish them from lecturers or counsellors?

iii)   Methods and programmes used to develop learners

With regard to the methods used, the researcher wanted to gain a clear picture of the way in which institutions address the problem of high failure rates and under-achievement of learners. The researcher was therefore interested to establish whether and how tertiary institutions address this problem. The questionnaire should reflect what steps are taken by the various institutions, to ensure that learners' performance reflects their potential. In other words, do institutions use various methods to enhance academic development of learners, and if so, which methods?

The role of computerised programmes with regard to remedial development, also needed to be established, as this is a method which is used widely in the technology driven day and age. Programmes such as reading enhancement, practising concentration, study skills, mathematics exercises, language exercises, etc. may be, for instance, computerised programmes which can be used to develop the academic potential of learners. The question was therefore asked, "Which programmes are used to enhance student academic development?"

iv)   Student performance

It would be of little value if these methods and programmes to enhance student performance were not assessed and researched, and therefore a question regarding the performance of learners and how it is recorded and researched, was also included.

v)   Influence of curriculum 2005

The research should also indicate to what extent tertiary institutions take cognisance of the fact that the requirements of SAQA, the NQF and OBE as reflected in Curriculum 2005, which is proposed and implemented by the Department of Education, will impact on their learning environment. The researcher therefore wanted to know whether institutions are planning for a changing learning environment, and whether this change will be facilitated within an AD programme. The question posed, was therefore: "How do you see the influence of Curriculum 2005 on what you are doing?".

The structuring of the questionnaire was done for the purpose of understanding the AD practices at the institutions, in other words, questions were posed in such a way that respondents could describe the situation clearly, so as to indicate the reality of each institution's methods, programmes and units. A mixture of response systems were used (Fouche, 1998:160-165), which are:

> *Closed questions. These were asked when specific information was needed, for example what the unit is called where student development is taking place.
> *Open Questions. By asking open questions, the researcher opened up the possibilities of receiving data that describes the current state of affairs with AD.
> *Matrix-type questions. The respondents were requested to draw matrixes, explaining clearly the activities, methods and programmes used in their normal practice. This could ensure data of codeable nature.

In writing the questions, the researcher adhered to the basic principles of brief and clear sentences; each question contained only one thought; questions were relevant to the purpose of the questionnaire; and no abstract or ambiguous questions were included (Fouche, 1998:157-158). According to the aims of the questionnaire, the following sections were included:

A) Composition of the organisation/institution;

B) Profile of the practitioner;

C) Methods and programmes used;

D) Student performance;

E) Influence of Curriculum 2005.

Section A

The following questions were decided upon in section A, dealing with organisational information:

1) "What is the name of your tertiary institution?"

This question was asked, in order to establish a communication link with the *specific* institution, so that, after evaluation of the data received, the researcher can request more data, or detail from the institution.

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2) "What is the name of your department/section within the tertiary institution?"

The name usually constitutes the focus area of a unit, i.e Counselling division, Student Services, as mentioned before.

3) "Make a diagram of the composition (structure) of your department/section and indicate your position in it clearly."

This was asked to establish the environment/structure within which learning development is taking place. If it forms part of the Counselling unit, the approach to AD might differ from that of an academic department, which takes on AD as an integral part of its programmes.

Section B

The following questions in section B deal with the profile of the practitioner involved with learning development of learners and aims to establish the title of the position, the educational qualifications, special skills required, experience and functions performed. (When looking at general requirements for post descriptions, these are usually the questions asked.) These questions

were included because the actual activities being performed and the competencies of the person in the position needed to be established. This could give a good indication of the nature and frequency of activities and the profile of the person deemed necessary by the institution to deal with learning development. The questions were the following:

4)   "What is the title of your position?"

The title would indicate whether it was the manager of the programme responding, if the respondent was exclusively dealing with AD, and what standing AD had at a particular institution.

5)   "What is the minimum educational requirements for the position?"

The answer to this question would indicate whether the institution regards AD as a professional activity, or merely as the job of an assistant, for instance.

6)   "What is your highest educational qualification with regard to the position?"

The answer to this question would indicate whether the incumbent reflects on the position of AD specifically, and what his/her highest educational qualifications are, specifically with regard to AD.

7)   "What are the minimum skill requirements for this position?"

This question aims to determine whether the incumbent has specific competencies which could enhance his/her being involved in AD of learners.

8)   "What is your highest skill performance?"

With this question the researcher wants to establish in which area of competence the incumbent see himself/herself as being *highly* competent.

9) "What is the minimum practical experience required for this position?"

The answer to this question might indicate whether any specific experience is required from AD-practitioners.

10) "What is your practical experience in this position?"

The actual experience which the incumbent has, with regard to AD should be reflected in the answer to this question.

Questions 5-10 would indicate the range within which AD practitioners are required to be proficient. It could also indicate the professional status of AD practitioners and the importance of their roles at the various institutions.

11) "What is the main function of your position?"

This question was asked to establish whether AD is an add-on function, or the main function of the incumbent.

12) "Give a task analysis of your position (or describe the activities your position requires)."

The answer to this question would give an indication to what extent the incumbent busies him/herself with AD-related tasks.

13) "Make a table with two columns. In the first column write down as clearly as possible the five major activities you are actually involved in, in order of frequency (highest to lowest) and indicate the approximate frequency (number) per day / week / month / semester in the second column."

Questions 11-13 could establish and prioritise the main activities which is regarded as AD activities of the particular unit.

Section C

With the questions in section C, the researcher wants to establish what specific programmes are used to develop learning, i.e. computerised reading and remedial language programmes, and according to what methods, i.e. study skills, note taking skills, life skills, etc. In establishing what methods and programmes are used, one could also understand the major or priority focus or even the aim of the institution regarding learning development.

14) "Make a table with three columns. In the first column write down the five major methods and/or programmes you are using in order of frequency. In the second column describe the method and/or programme clearly but briefly and in the third column indicate the approximate frequency usage (number per day / week / month / semester)."

15) "How and when do you use the computer."

Computerised remedial programmes are focussing on the individual, therefore individual learning problems and progress can be monitored.

Section D

Section D deals with student performance, and was included in order to establish whether research is being done with regard to the effectiveness of the programmes/methods used.

16) "How do you keep record of student performance."

17) "What is your aim in keeping record of student performance."

The answers to questions 16 and 17 could give an indication whether the department/unit/section is indeed serious about the performance of learners, and if they keep record of learners' performance before and after attending their programmes.

Section E

The new outcomes based education model as prescribed by the new policy on education in South Africa might have an influence on the practices of learning development in tertiary institutions and this last question is intended to establish whether practitioners reflect on the influence it might have, and how they plan to deal with it.

18)   "How do you see the influence of curriculum 2005 on what you are doing?"

A copy of the questionnaire is attached as addendum A.

D   Results

The results of this phase was a completed open ended questionnaire, with accompanying covering letter, ready to be mailed.

E   Conclusion

The conclusion is that this investigation could now proceed, in the form of a pilot study, using an open-ended, mailed questionnaire. This obviously led to the next step, namely to operationise the research, and to the next research question, namely deciding where and to whom to send the questionnaire.

2.2.3 PHASE TWO

Research question 2

To where and to whom must the questionnaire be sent, in order to obtain a view of the current state of AD?

A   Specific qualitative research design

The overarching research design is grounded research, although it is conducted as a form of basic action research. The aim being, to develop a grounded theory of the AD practice.

B   Sample

Theoretical sampling was done, because the researcher had to decide where the data should be collected for a grounded theory to be developed (Schurink, 1998a:254).

The researcher decided to include all counselling and guidance units attached to tertiary institutions in South Africa. These settings were purposely chosen, because it is where the process of AD is most likely to occur, being units/departments where professional people deal with learners having all kinds of problems and needing guidance. It would also be units/departments to which the researcher would most probably have access, which is an important consideration for the success of the research (Schurink, 1998b:301). The address list was obtained from the secretary of the South African Association for Counsellors and included 64 members, of which some were working at nursing colleges and one at a teaching college. There were also units from institutions outside the borders of South Africa, but still in Southern Africa. From this list it was established that units are called different names, i.e. Student Services Bureau, Counselling and Career Unit, Counselling and Learning Department, Student Development, Academic Student Development, to name a few. It was therefore important to take care that the correct unit, one that is mainly concerned with the academic development or improvement of student learning, was identified.

The size of the sample was therefore 64. Each institution was coded, using the letters of the alphabet, in order to adhere to the ethics of not identifying the respondent/institution. Because there are only 26 letters in the alphabet, twenty six institutions were coded A -Z, and the following twenty six, AA -ZZ, followed by Aa - Ll..

From the personal experience and situation of the researcher, working in a combined unit dealing with *study guidance and counselling*, a unit which has only recently started with some AD-interventions, the researcher decided that it would be a logical point of departure for the sample to include all counselling and guidance units attached to tertiary institutions in South Africa. Although a pilot study is intended for only a sample of the whole population of the inquiry, in this case the institutions practising AD, the researcher decided to include the whole population in question because of its small size (n=64) when comparing it to populations of other studies.

C   Data collection method

Data was collected by using a mailed, open-ended questionnaire.

D   Results

There were only six out of a possible sixty four replies. Two of these did not complete the questionnaire, but sent letters and information leaflets instead. The results were tabled according to the questions and the corresponding answers of the various institutions. The results of the two who did not complete the questionnaires, were recorded partly within the table, where applicable, and partly in transcribing their feedback, after distilling the important, relevant facts. The responses with regard to organigrams, indicating the structuring of AD units, were given in a very unsatisfactory way. Examples of this feedback are forthwith given:

Example one:
3.   *The line of authority is:*
      Vice-Chancellor - DVC (Academic) and DVC (Administration) - Senior Director
      of Student Development - Coordinator of the Academic Skills Programme and

Coordinator of Student Counselling - ASP Staff and Student Counsellors.

Example two:

> *We are structured so as to approach student learning development globally.*

Example three:

3. *See addendum A* (The addendum referred to, probably an organigram, was not included!)

Because of the unsatisfactory results with regard to the organigrams, the researcher decided to simply include it in table format, adhering strictly to what was given, not interpreting her own thoughts.

Phase two:

Section A: **Structure**

QUESTION 1:	*What is the name of your tertiary institution?*
	Names are not recorded here, due to ethical code.

QUESTION 2:	*What is the name of your department/section within the tertiary institution?*
INSTITUTION F:	Bureau for student services
INSTITUTION I:	Division of Tertiary Education and Educational Development Unit
INSTITUTION M:	Student Counselling services
INSTITUTION Q:	Student development (name of department).

QUESTION 3:	*Make a diagram of the composition (structure) of your department/section and indicate your position in it clearly.*
INSTITUTION F:	Addendum 1 (Did not include the said addendum indicating the structure).
INSTITUTION I:	The Division is structured as follows: Academic Affairs -> Faculty of Humanities (Dean) ->School of Education (Head of Department) ->two units; DTE and EDU (see 2).
INSTITUTION M:	Director, deputy director, psychologists, researcher-psychometrist, reading development officer, secretary, admin. assist., messenger.

INSTITUTION Q:	Line of authority: Vice-chancellor (Academic) - and Deputy Vice-chancellor (Administration) - Senior director of student development - Coordinator of Academic skills programme and Coordinator of Student Counselling - ASP staff and Student Counsellors.

Section B: Description of position and tasks

QUESTION 4:	*What is the title of your position?*
INSTITUTION F:	Student counsellor
INSTITUTION I:	Head of the division
INSTITUTION M:	Director
INSTITUTION Q:	Director of student development

QUESTION 5:	*What is the minimum educational requirements for the position?*
INSTITUTION F:	Magister degree (M. Ed. Psychol..)
INSTITUTION I:	Higher degree, teaching qualification, and tertiary experience.
INSTITUTION M:	Doctorate
INSTITUTION Q:	Doctorate

QUESTION 6:	*What is your highest educational qualification with regards to the position?*
INSTITUTION F:	M. Ed. (Psychol..)
INSTITUTION I:	Ph.D in tertiary education, publishing books in the field, many years of experience.
INSTITUTION M:	Doctorates: D.Phil.(psychol..); D.Ed.
INSTITUTION Q:	M.Ed., D.Lit. et Phil.

QUESTION 7:	*What is the minimum skill requirements for this position?*
INSTITUTION F:	No response
INSTITUTION I:	Depends on skills gained in tertiary environment and what the institution currently needs.
INSTITUTION M:	Registration as psychologists with SAMDC.
INSTITUTION Q:	Not understood

QUESTION 8:	*What is your highest skill performance?*
INSTITUTION F:	No response
INSTITUTION I:	Depends on skills gained in tertiary environment and what the institution currently needs.
INSTITUTION M:	Twenty five years experience in career counselling and psychotherapy. Specialisation in student development. Lecturing.
INSTITUTION Q:	Not understood

QUESTION 9:	What is the minimum practical experience required for this position?
INSTITUTION F:	To be registered at the SAGTR as psychologist one needs to complete one year internship at an accredited institution.
INSTITUTION I:	Three years.
INSTITUTION M:	Ten years.
INSTITUTION Q:	Not specified

QUESTION 10:	What is your practical experience in this position?
INSTITUTION F:	Four years private, five years at the Bureau.
INSTITUTION I:	Twenty five years of teaching in a variety of institutions, here and abroad.
INSTITUTION M:	Twenty years
INSTITUTION Q:	Since 1992, therefore six years

QUESTION 11:	What is the main function of your position?
INSTITUTION F:	Career counselling, study guidance, reading development.
INSTITUTION I:	Management of the division (staff meetings, budget, etc.); organise accredited courses; build up a resource library in the field.
INSTITUTION M:	Managing Student Counselling Services. Consultation with academic departments and institutional administration. Teaching.

INSTITUTION Q:	Management of the Academic Skills Programme and Student Counselling Services.

QUESTION 12:	*Give a task analysis of your position (or describe the activities your position requires).*
INSTITUTION F:	Career counselling for Std. 9 and 10 pupils and for learners.
INSTITUTION I:	Management of the division (staff meetings, budget, etc.); organise accredited courses; build up a resource library in the field.
INSTITUTION M:	Limited counselling, psychotherapy and lecturing. Meetings. Consultation. Training. Research.
INSTITUTION Q:	Assist Senior Management in whatever tasks assigned to me. Represent the Department on various bodies and committees. Provide leadership to the Department. Supervise the two coordinators. Administer the Department (staffing, budget etc.).

QUESTION 13:	*Make a table with two columns. In the first column write down as clearly as possible the five major activities you are actually involved in, in order of frequency (highest to lowest) and indicate the approximate frequency (number) per day / week / month / semester in the second column.*

INSTITUTION B:	1. Bridging course in Physics, Maths and Chemistry.
	2. A three day New Student Orientation Programme with follow-up sessions run by The Bureau for Student Development and Advice. (A clinical psychologist, an educational psychologist and a social worker.)
	3. An SI-programme. Run by an ex-English language lecturer. Nearly all first year learners take part in this programme.
	4. The English Department is involved with reading and communication development and include learning skills in their courses.
	5. A mentoring programme is in place for second and third year learners.
	6. Courses run by the Academic Staff Development unit, addressing learning styles as part of new staff induction programmes.
	7. Newsletters to staff including learning development and teaching for better learning. The aim is to get staff interested in student learning, specific needs and to be concerned about student's failure to learn.
INSTITUTION F:	No comment

INSTITUTION I:	Such an exercise is confusing because our structure requires us to work in EDU as well. What is below is a huge guesstimate:
	DTE courses — Quarter of the year
	Core courses-development and teaching — Quarter of the year
	Meetings about institutional initiatives — Quarter of the year
	Regular institutional business — One eighth
	Student data tracking — One eighth
INSTITUTION M:	The following feedback was received from this respondent:
	Activities — **Per week**
	Psychotherapy — 15
	Meetings — 4
	Lecturing — 4
	Consultation — 10
	Research — 7
INSTITUTION Q:	**Activities** — **Frequency**
	Executive management — 35%
	Departmental management — 30%
	Administration — 20%
	Professional activities — 15%

Section C: **Methods and programmes**

QUESTION 14:	*Make a table with three columns. In the first column write down the five major methods and/or programmes you are using in order of frequency. In the second column describe the method and/or programme clearly but briefly and in the third column indicate the approximate frequency usage (number per day / week / month / semester).*	
INSTITUTION F:	No comment	
INSTITUTION I:	Accredited courses for staff	Four hours per week
	Core courses for learners	Four sessions per week
	Curriculum development with staff*	
	Workshops for staff*	
	Course evaluation with staff*	
	* Difficult to calculate, is continuous.	
	Methods used for staff are post-graduate discussion groups. Tutorials and practicals are used for learners.	

INSTITUTION M:	Programmes	Weekly
	Psychotherapy: developmental help	20
	Career counselling: learners and prospective learners	10
	Training: Interns, lecturing	3
	Consultation: student leaders and institutional staff	2
	research: student development	5
INSTITUTION Q:	N/a	

INSTITUTION W:	Provisions being considered include:
	~ "generic skills" courses (e.g. computer literacy, basic numeracy for social science learners)
	~ bridging courses (e.g. English for Academic Purposes - a credit-bearing course for under prepared learners - teaching academic literacy using materials and examining issues from the disciplines)
	~ foundation courses (e. g. Courses introducing learners to the conceptual and methodological foundations of particular disciplines)
	~ catch-net courses (for the benefit of learners who fail bridging or foundation courses and who have to repeat them)
	~ courses with writing adjuncts (e.g. courses at different year levels with writing intensive activities)
	~ extended curricula (e.g. allowing learners to do two years over three, or three years over four)
	~ concurrent supplementary tutorials (i.e. extra classes for learners attending mainstream courses). Problems are however, erratic attendance, lack of time and study overload.
	~ the Academic Development Programme: comprising staff working from a central unit or within faculties, specialising in tutorial programme design, course design, curriculum development, language development, admissions testing and educational research
	~ the writing centre: a walk in facility assisting learners with academic writing skills

	~ the career development office: addressing issues relating to careers; workshops, CV writing, recruitment programmes etc. ~ orientation programmes: run in some faculties for first years, introducing them to the campus and its resources, inputs on career and curriculum choices, study skills, learning social and personal development skills are also included ~ Residence "peer-helper" or mentoring system: senior learners providing general guidance and moral support to first years ~ the Student Advice Office: including bursaries, accommodation, transport, health care.
QUESTION 15:	*How and when do you use the computer.*
INSTITUTION F:	Everyday
INSTITUTION I:	Frequently. (Computer use.) Communication across the campus through the LAN. Access to WEB-sites. We use word processing programmes for text work; spread sheets for some quantitative work; statistics for student tracking research.
INSTITUTION M:	Always, for administration, research and assessment.
INSTITUTION Q:	Typing of documents (policy, position papers, lengthy memos). Occasional correspondence. E-mail to colleagues locally and abroad. Typing of academic articles and books.

Section D: **Student performance**

QUESTION 16:	*How do you keep record of student performance.*
INSTITUTION F:	Records are kept at the faculty offices.
INSTITUTION I:	Records student performance on the BANNER system.
INSTITUTION M:	On main computer network of institution.
INSTITUTION Q:	N/a

QUESTION 17:	*What is your aim of keeping record of student performance.*
INSTITUTION F:	No comment
INSTITUTION I:	To enable us to do more holistic research into student trends, cohort attrition, course data etc.
INSTITUTION M:	Follow-up of learners. Research regarding student development.
INSTITUTION Q:	N/a

Section E: **Curriculum 2005**

QUESTION 18:	*How do you see the influence of curriculum 2005 on what you are doing?*
INSTITUTION F:	A positive influence - working with learners who know more about the world of work.

INSTITUTION I:	Very important. We have incorporated material on the OBE curriculum in the courses and workshops for staff.
INSTITUTION M:	Curriculum 2005 may initially cause confusion, if not chaos, and our assistance will be more necessary than ever. Once the curriculum is established and running smoothly we hopefully will receive more learners with the skills required for tertiary education.
INSTITUTION Q:	As yet we do not know what sort of learners Curriculum 2005 will produce. In the meantime, tertiary curricula are likely to be much more affected by the NQF. Nevertheless, certain academic departments are reworking their syllabuses in line with what they understand to be OBE.

Two institutions did not complete the questionnaires. They did, however, give feedback in the form of letters and information leaflets, which indicated what was done in their institutions with regard to the academic development of learners. Some of the feedback is integrated in the above tables, but for the sake of comprehensiveness, the following results are also included:

INSTITUTION B:

This respondent answered the questionnaire in a general fashion, writing an interesting letter depicting the general field of academic development.

His position is that of Director of Academic Staff Development and he directed my questionnaire to the person who "is probably the nearest to a student learning specialist" that they have. A clear indication, therefore, that there is no specific unit dealing with the academic development of learners.

The structure is of such nature, that student learning development is dealt with "globally". It includes the activities which are tabled.

The respondent also included newsletters directed to staff, encouraging them to develop learning while teaching.

INSTITUTION W:

This respondent replied by sending some correspondence regarding how student development at his institution is addressed. It did not include any information regarding the profile of the practitioner, only the activities, facilities, programmes and the aim with regard to student development were recorded as follows:

Aims

The aims of the institution are inter alia, to provide learners with a foundation of skills and knowledge for life and for addressing the challenges facing our society. Future teaching programmes are to explicitly develop the analytical, numeracy, language and communication, and computer skills of all learners; provide for different entry levels; allow for differential rates of

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progress through the curriculum. (The last two items relate to making mainstream curriculum provisions to accommodate learners from diverse backgrounds with different levels of preparedness

E   Data analysis method

i) The first step in analysing the data was done by reading through the data several times in order to get a sense of patterns, categories or themes that are emerging. The researcher was therefore engaged in the cognitive processes of conceptualising and categorising, breaking the data down into parts, examining and comparing it. This method is also called open coding (De Vos and Van Zyl, 1998:271).

ii)The researcher then started *bracketing* (categorising) the data into meaningful clusters (Strauss and Corbin, 1990:62-64).

iii) The researcher also used the *intuiting* strategy, by actually "looking at" the phenomenon (Poggenpoel, 1998:337), and asking the questions, " what is actually there?", as well as "what might be there?" (Reason, 1981:243). The latter question was asked, because "there are always emerging possibilities which are not yet included" (Reason, 1981:243). The researcher therefore also read "between the lines", especially because the feedback was very unsatisfactory with regard to enlightenment of AD practices.

iv) Trustworthiness was ensured by making use of thick descriptions, in other words, using the exact wording of respondents when analysing the data. By continuously reflecting on the data and its relationship and meaning, adhering to thoroughness and comprehensiveness in as far as no feedback was omitted or deemed inappropriate, the researcher ensured trustworthiness. The researcher also outlined the exact steps in data collection - it can therefore be trailed and audited by an outsider, if necessary. Triangulation was also done, by making use of multiple methods of analysing data.

F   Data interpretation

During the interpretation of the data the researcher attempted to understand why certain responses were given or omitted, and how responses could reflect the attitudes towards, or interest in AD.

There was a feeling of disappointment and shock that so few respondents reacted on the questionnaire. It was, after all, directed to colleagues who, according to the researcher, should be well aware of the importance of conducting research in this field. Hunches are, that respondents themselves were not really involved in AD, or that they didn't have organised programmes for learning development. It might also be that respondents had feelings of fear or insecurity, afraid of exposure, or of compromising their positions. In other words, they might feel uncomfortable that they are not really dealing with academic development of learners. (Note that qualitative research does not rely on quantifiable data, it is able to investigate feelings and other phenomena of qualitative nature: chapter one). It may also be attributed to the fact that the questionnaires were directed to people not *mainly* dealing with AD. At one institution, the response was particularly disturbing, because the respondent interpreted the question regarding the structuring of the AD department, as privileged information. After a personal telephonic conversation and the assurance that the institution will not be identified, the respondent sent some feedback pertaining the questionnaire.

From the few responses received, the following interpretation could be made:

i) Structuring of AD

Respondents only answered what they saw as applicable to their situation. From this feedback it seemed as if AD does not function as an independent structure in most institutions. Academic development, student development, staff development, student services and student counselling are quoted as being "learning development". AD is therefore added to existing units, where it is deemed necessary. The researcher realised, therefore, that it would be a difficult task to identify a specific unit/department, which deals with AD of learners.

ii) Profile of AD-practitioner

In section B, it seems as if the question was too open, or not clear enough. Post descriptions were sometimes vague or even ignored. Skills required for the position were either ignored or interpreted as experience. Activities of some respondents related to management rather than learning development. In asking oneself why the responses in this section were unsatisfactory with regard to special skills and functions, it can be argued that respondents were not clear on which skills to include, or that their positions were related to their professions, being a counsellor, or manager of the division. They therefore included these functions and didn't give further attention to specific AD-competencies and functions. It can also be that the respondents *are not conversant with AD-practices at all,* but do not want to indicate the fact. The researcher realised, that it would be a challenge to identify specific people who professionally deal with AD of learners.

iii) Methods and programmes used

Descriptions of methods and programmes were not always done. The reason may be, that there are no programmes running. Institution B, however, gave a comprehensive list of *activities* which deal with student learning, where even the orientation programme is included. The focus of the respondent at institution I was more on staff development than student development. Institution W gave excellent feedback in describing the different programmes and courses which are designed specifically for the academic development of learners. These courses seem to be focussed on specific problem areas which were identified, i.e. communication skills and general under-preparedness. The latter means learners who show significant gaps in knowledge and understanding, and who need to be equipped with learning skills and study strategies vital to high academic achievement (SAAAD, 1997:17). Skills were therefore added to various curricula.

Generally, it seems as if the facilitation of learning development is seen as *academic support* to under prepared learners and that it is dealt with as the specific needs arises. Mostly, these needs are seen as problems, because respondents refer to bridging courses, addressing the lack of academic skills, and mentoring student progress, as well as allowing for different entry levels for

learners. It therefore seems as if AD is indeed still only a *reactive response* towards a specific problem.

iv) Student performance

Recording of student performance and the aim thereof were dealt with in a very cryptic way throughout. It indicated, however, that research is being done with regard to student performance and attrition rates. It seemed as if programmes dealing with AD of learners were scattered between departments and that no specific policies were in place.

v) Influence of Curriculum 2005

The responses on curriculum 2005 indicated that tertiary institutions are well aware of what impact Curriculum 2005 could have on their approach to teaching and learning. The respondents hoped for learners to be more prepared for tertiary studies, but they also reflected on the training of staff for the new outcomes based curricula.

G   Conclusion

When reflecting on the interpretation of the results, specifically with regard to the structure of AD and the profile of the AD practitioner, the researcher realised that the questionnaire did not always reach the correct or most appropriate unit/department, neither did it always reach the correct or most appropriate person to answer it. It also seemed as if respondents did not understand the questionnaire clearly, be it because they were not designated to AD, or AD does not feature in their institution, or that the questionnaire was not very clear. These first research actions clearly indicated the need that the research design should be conducted in an action research mode, not in the participative or applied sense (because no real need for that was indicated), but simply action research in the grounded research design. This came to the fore when the pilot action indicated the need for a continuous formative assessment while conducting the research. The researcher therefore needed to engage in some follow-up with the aim of: a) clearly identifying *specific people* in each institution, dealing specifically with AD, because it was clear from the

responses that not all respondents were AD-practitioners;   and b) obtaining much *clearer and much more applicable* data, reflecting specific activities and a specific profile of an AD-practitioner; such data might be more applicable to this research than the data received, which seemed to be from people not really involved in AD.

By engaging in a step by step evaluation of the pilot study, the researcher could determine the weak and strong points of the investigation and decide where to modify, adapt or what to focus on. The pilot study fulfilled its function, therefore, of highlighting problems, in this instance, with regard to data gathering, i.e. the suitability of the questionnaire and/or the respondents used. It paved the way for the next phase of the research to be planned, giving direction to the investigation, in order for it to be worthwhile (Strydom, 1998:185-187).

2.2.4   PHASE THREE

Research question 3

How would the researcher find the most appropriate persons who will be able to help her construct the view of the current state of AD by giving clear and appropriate data.

A   Specific qualitative research design

During this phase, a form of grounded research was still followed, because of the overarching research question, which demanded a grounded theory to be developed, focussing on the practice of AD. It was done in a basic action research mode, however, evaluating the present situation, revising the plan, and deciding on the next step, before implementing it.

B   Sample

Theoretical sampling was again used for the same reasons as in phase one, namely to decide what information to get and where to get it from. The extreme or deviant case sampling method was also used during this phase, because the researcher wanted to select participants and situations

that would be most likely to provide information rich data (Schurink, 1998a:255).

Respondent Q indicated, in the previous phase, that their institution has numerous satellite campusses, and that only one of the campusses should be targeted for this research feedback. He indicated which campus it is. The researcher therefore scrutinised the address list used, and realised that this is the case with quite a few institutions. This fact made the sample significantly smaller than the 64 units listed on the address list. Some of the institutions included on the list are beyond the boundaries of South Africa, and incidentally, not one of the latter responded to the original questionnaire. No responses were received from any nursing or educational colleges either. According to Morse (1994:228-229), "productive data collection" lies in the fact that the researcher focusses on samples that will give appropriate data. The researcher therefore had to seriously rethink the sample, and to whom the questionnaire should be addressed. In other words, to find out who the specific people were, dealing with academic development of learners in a specific institution.

After considering all these facts, the researcher decided to include only universities and technikons (36) in the sample for productive data collection to take place.

C   Data collection method

The researcher made use of the telephonic questionnaire method (Fouche, 1998:154), by personally phoning all the universities and technikons in South Africa (36) going to a lot of trouble trying to establish to whom the questionnaires should be sent. The advantage was, that the researcher could personally explain what she needed, the respondent could not really refuse an answer, and it was useful for the exploratory mode of the research at the time. The following questions were asked:

a)   Do you have a specific unit dealing with academic development of learners? In explaining what the researcher meant, she gave the following keywords: "study skills", "reading development", "bridging programmes", and "academic skills".

b)   Who is the person in charge of these functions as described in a)?

c) To which department should I address the correspondence? In other words, in which department does the person in b) work?

D Results

i) By personally contacting all technikons and universities, the researcher could establish rapport with some of the original respondents, although this didn't prove to be the case in all instances. In some cases it was the same unit/department to which the first questionnaire was sent, but in other cases, a totally different unit. Disturbing was however, the fact that in some instances the researcher could, after this conversation, not clearly establish where or to whom to send the questionnaire, because the contact person was not sure whether there was such a unit, or people dealing with AD as described. In such cases the researcher identified the most appropriate candidate *suggested* by the person whom she contacted.

ii) In the case of one institution, a personal interview was conducted with the head of the counselling division, in order to establish whom to consult with regard to AD. The reason for this was, that he indicated telephonically that we should meet in order to verify what information is needed. This would enable him to give appropriate information. It became clear that there was no centralised unit for the purpose of academic development of learners and that it was done *within* faculties.

E Data analysis method

The researcher made use of the qualities of insight and understanding, trying to give meaning to the data. This is referred to as *theoretical sensitivity* , where professional and personal experience also comes into play (De Vos and Van Zyl, 1998:268-269).

By continuously reflecting on the data and its meaning, the researcher endeavoured to ensure trustworthiness.

F   Data interpretation

The feeling of the researcher was, that the reason why people and units/departments could not easily be identified, might be because the specific institution did not have any specific AD-programmes for learners, or programmes identified with AD, and did not want to disclose this fact, fearing negative evaluation of their departments/units/sections. It might also be, that AD activities were scattered all over the institution and that it was difficult for one person to identify exactly where, and whom to contact. Another reason may still be, that the researcher was directed to people who were not knowledgeable about AD however hard she tried to explain the concepts. It served the purpose, however, of establishing in most cases, who would be a *knowledgeable* person to send the questionnaire to. In some cases, the researcher could establish that AD was being catered for in academic departments, and that questionnaires should therefore be forwarded to identified individuals in these departments. In some institutions, however, the unit/department and people working with AD of learners could be easily identified.

G   Conclusion

Through the personal contact and conversations, the researcher felt confident that rapport was established. She more or less knew to whom and where to send the questionnaires, and felt confident that colleagues at universities and technikons would respond to the questionnaires, because they should have been in the same position somewhere during their careers, conducting research and relying on colleagues for support. Since AD has become such an important issue, with many under-prepared learners entering tertiary institutions, this research should prompt colleagues to participate.

The information needed will be obtained only from the productive resources identified through an adapted questionnaire. The consequent challenge remained the collection of clearer and more appropriate data, from AD-practitioners identified in phase three and for which an adapted questionnaire needed to be compiled.

The pilot study ended at this stage because the research design for the prospective research has been tested (Strydom, 1998:179).

2.2.5 PHASE FOUR

Research question four

How should the researcher adapt the original questionnaire, for the responses to indicate more clearly what the current state of AD in South Africa is?

A   Specific qualitative research design

The overarching research design of grounded theory was used as it allows for systematic procedures of data collection, which, through inductive reasoning, eventually leads to a grounded theory to be developed (De Vos and Fouche, 1998:81). This phase was, however, done in the basic action research mode (not applied or participatory) because of the spiral of actions that were taken: evaluating the previous step, revising the plan, and implementing the next step.

B   Sample

Theoretical sampling took place, in order for the data to allow for a grounded theory to develop (Schurink, 1998a:254). In addition, following logically upon phase three, the sample included only the thirty six universities and technikons in South Africa.

C   Data collection method

The value of the pilot study was that it highlighted some problems, which the researcher endeavoured to straighten out. The sample was changed, but the questionnaire also needed some adaptions. The data collection method still remained the use of a questionnaire but, as with the pilot study, in the form of a qualitative interview. The following steps were thus followed:

i) The researcher designed a second mailed questionnaire with a mixture of open-ended and closed questions , keeping in mind the problem areas which were highlighted in the analysis of the first phase, namely:

a) vague and unclear answers with regard to post descriptions and specific AD activities;

b) wrong interpretation of questions, for instance with regard to the profile of the AD-practitioner, skills were interpreted as experience;

c) very cryptic answers were given with regard to the methods and programmes used to facilitate AD of learners, so that no clear picture of these programmes or methods could be formed.

ii) The format and wording of the questionnaire were therefore changed, but not the sections. The questionnaire included the following kind of questions: a) open ended; b) closed; c) matrix; d) dichotomous; and e)follow-up.

iii)The researcher again adhered to the principles of keeping the questionnaire simple and short; every question was relevant to the purpose of the study; clear instructions were given with each question; wording of the questions were carefully chosen for reasons of ambiguity or preconceptions; and matrixes were pre-constructed which were more "user-friendly".

iv) A carefully worded covering letter was drafted in order to:

a) explain the aim and field of the study;

b) identify the institutions where the researcher is presently working, and enrolled for the M.Ed. studies;

c) explain the questionnaire;

d) indicate the importance of this particular study; and

e) urge the respondents to give feedback (Fouche, 1998:155).

In the covering letter, the researcher wrote an additional note in her own handwriting, trying to establish *personal rapport*, urging the addressee to please read through the information and send it to the appropriate person if the recipient was not felt to be the most appropriate.

v) The researcher also included more than one copy of the questionnaire, where she felt it might be needed, for instance where various people dealing specifically with AD could combine their feedback, resulting in more comprehensive and clear data.

vi) The proposed second questionnaire was sent to Professor Thinus de Wet, a colleague and expert in the field of qualitative research (being a qualitative researcher for private enterprise), requesting an evaluation of the questionnaire. This was done as a form of triangulation to ensure trustworthiness by engaging another researcher in interaction with the research process (Huberman and Miles, 1994:439). The proposals of the said colleague were incorporated into the questionnaire as it served the purpose of clarifying some issues.

The format of the second questionnaire was as follows:

1.   *Draw a diagram of the composition of your department, indicating the various positions according to tasks. Clearly indicate the division dealing with academic development of learners please.*

(The researcher then left an open space for the respondent to draw the diagram, and also gave an example of the structure of her institution.) This question is basically the same as the three questions asked in section A of the first questionnaire, but is now condensed into an organigram. The researcher hoped to receive a clear picture of where AD features in an institution, and whether specific sections/individuals were dealing with AD of learners.

2 a).   *What is the present profile of the person filling the position that deals with study guidance/academic skills development?*
       Qualification...
       Experience..
       Special   skills..

The question was asked in such a way, as to ensure that it is not necessarily the profile of the manager of the department that was needed. Again, the same kind of questions were asked as in section B of the first questionnaire, but leaving more room for descriptive answers. The wording "profile of the person filling the position", was deliberate, so as to urge the respondent to send it to the specific AD practitioner for completion, rather than filling it in merely because he/she is the manager/administrator of the programmes.

2 b).   *What do you think would be the ideal profile of the person referred to in 2 a)?*

Qualification ....

Experience ....

Special skills ....

This question was purposefully included in this second questionnaire, because the researcher was of the opinion, that AD was being done by whoever thought it necessary that learners needed academic support. It would also be interesting to see whether the AD practitioner regarded his/her profile as the ideal profile.

3.   *For this question it might be necessary to focus on the academic skills development tasks rather than counselling, please. It is a task analysis of the position DESCRIBED IN question 2.*
    List major activities in order of frequency that you are involved in, regarding academic skills development.

The researcher presented the respondent with a table, to list and order the frequency of activities. This question corresponded with questions 12 and 13 of the first questionnaire.

4.   *Which methods and/or programmes do you make use of to enhance academic skills development i.e. reading programmes, study skills, special programmes that you follow, etc.*
    (Please attach more information if you have)

Again, the researcher presented the respondent with a table to list, describe and order the frequency. This question corresponded with section C of the first questionnaire, dealing with methods and programmes. However, the researcher requested more information to be attached, because a document or leaflet describing the programmes may already exist and would give her more information with regard to specific programmes or methods.This would also alleviate the respondent of the burden to describe different programmes and methods.

5. *Do you undertake research programmes regarding the value of programmes and methods used to enhance student performance and would you make the results available to other researchers?*   *YES*   *NO*

This question was formulated in a more direct way than the questions of section D of the first questionnaire, with regard to keeping record of student performance. The researcher asked directly whether research was being done with regard to the AD programmes.

6. *Do you run "bridging" programmes for under prepared learners?*
                     YES   *NO*

6.1 *If YES, is it run by your section/self or the different academic departments at your institution?*   *SELF*   *DEPARTMENTS*

6.2 *If YES, briefly describe the different programmes please, or attach leaflets.*

The aim of these questions, was to differentiate between special programmes outside mainstream, dealing with under prepared learners; and methods or programmes applied to assist the general academic development of all learners.

7. *How do you see the influence of Curriculum 2005 on what you are doing presently? Would it have an effect on the way you address academic development?*

This question is similar to the one posed in the first questionnaire, but to clarify the researcher's intention with this question, she added the second sentence. (This was a specific recommendation of Prof. De Wet, the colleague who assisted with the evaluation of the second questionnaire.)

8.   *If the need arises for me to phone you in order to collect more data, please list the names of people I should contact.*

The aim of this question is obvious; the researcher did not want to be in a situation where she could not collect more data from the source, if needed.

A copy of this questionnaire is attached as Addendum B

D   Results

Thirty six questionnaires were sent out and to my utter disappointment, there were only ten responses, not necessarily from the same people who responded in phase one. When discussing this phenomenon with fellow researchers, they assured me that my thirty five percent feedback is excellent compared with the norm of a ten percent feedback usually received.

As in phase one, the feedback will be given according to different institutions as coded in the beginning of this research (A, B, C, AA, BB, etc.).

The organigram (question 1), was interpreted by the researcher and results incorporated in the table, because of the same problems mentioned during phase two.

Phase four:

QUESTION 1:	*Draw a diagram of the composition of your department, indicating the various positions according to tasks.* *Indicate the division dealing with academic development of learners please.*
INSTITUTION C:	The Academic Development Programmes are managed as a centre within the faculty, and is accountable to the dean .
INSTITUTION D:	The Bureau for Academic Support falls under the Vice-Rector for Student Affairs. It is managed by a director and has three sections; counselling, study-guidance and work placement. Study guidance deals with the academic skills development, whereas counselling deals with the personal and social development, inter alia. The function is centralised.
INSTITUTION F:	Academic development falls under the jurisdiction of the Director of the Student Services Bureau. It is managed by a Principle coordinator of the Learning Centre. The SSB is however an integrated bureau, incorporating counselling services, career development, learning development, and school guidance. The bureau has a centralised function.
INSTITUTION H:	The Academic Support Unit is a centralised, independent body, reporting to the Deputy Vice-Chancellor: Academic. It has three sections; Language enrichment, Academic and Life skills and Faculty core subjects. The AS is centralised in its administrative functions, but decentralised in its academic functions.

INSTITUTION J:	Educational Development falls under the jurisdiction of the Vice Principle: Academic, but has a decentralised function within faculties, therefore becomes the responsibility of the deans of faculties with AD-personnel working within faculties.
INSTITUTION P:	The Department of Academic Development is a central unit with AD personnel working across and within faculties. The function is therefore decentralised.
INSTITUTION Q:	The Department of student development reports to the Deputy Vice Chancellor, Academic. It is a centralised unit, split into two sections, Counselling and Academic Skills Development. This institution has distance campuses where the Campus Director is the direct line of authority.
INSTITUTION X:	Two separate departments deal with student development, i.e. Guidance and Counselling and Academic development. They link the functions of student and staff support.
INSTITUTION Y:	The Academic Support Unit is headed by a director and has three divisions: the learning assistance centre, computer managed learning and runs a separate computer laboratory.

QUESTION 2a:	*What is the present profile of the person filling the position that deals with study guidance/academic skills development?* *Qualification...* *Experience...* *Special skills...*

INSTITUTION C:	Qualification:	a) D.Phil., b) Ph.D(Ed.)
	Experience:	a) Twenty years
		b) Fifteen years tertiary teaching, curriculum development and life skills.
	Special skills:	a) Student development, learning and teaching development
		b) Background knowledge of AD, presentation skills, life skills and curriculum design.
INSTITUTION D:	Qualifications:	Degree: Educational
	Experience:	Educational.
	Special skills:	Computer literacy, teaching, people skills.
INSTITUTION F:	Qualifications:	M.Ed.(Psychol..)
	Experience:	Ten years registered as educational psychologist.
	Special skills:	Remedial education, teaching .
INSTITUTION H:	Qualification:	M.A. (Linguistics)
	Experience:	Eight years of teaching and managing in various fields of academic enrichment.
	Special skills:	English second language development and teaching.
INSTITUTION J:	Qualifications:	B.Com.(Hons.), UED (Education)
	Experience:	Five years in AD and fifteen years lecturing.
	Special skills:	AD: Academic literacy, cognitive and English second language development.

INSTITUTION P:	Qualification:	M.Ed.(Psychol..)
	Experience:	Fifteen years in secondary education, specialised education and tertiary education.
	Special skills:	Counselling, study skills, thinking skills.
INSTITUTION Q:	Qualifications:	M.A. (General linguistics), HED.
	Experience:	Lecturing: English language improvement project, Linguistics and English language, Academic Skills coordinator.
	Special skills:	Knowledge of curriculum development and assessment, training and development, teaching and learning, research theories of literacy, cognitive and language acquisition. Being able to "work in transformative paradigm in contrast to many mainstream lecturers who....(work)..in a traditional content-based and/or skills-based paradigm." (Quoted from questionnaire.)
INSTITUTION X:	Qualifications:	M.Ed. (Psychol..)
	Experience:	Fifteen years.
	Special skills:	Learning problems, counsellor and therapist.
INSTITUTION Y:	Qualification:	Masters degree. H.E.D.
	Experience:	Five years lecturing.
	Special skills:	Curriculum development. Former communication lecturer.

QUESTION 2b:	*What do you think would be the ideal profile of the person referred to in 2 a)?* *Qualification* .... *Experience* .... *Special skills*	
INSTITUTION C:	Qualification:	Post graduate, i.e. M- or D-degree. (Both respondents).
	Experience:	a) Eight years.
		b) Fifteen years.
	Special skills:	a) A positive attitude towards AD, being able to work with a diverse group of learners.
		b) Presentation skills, background knowledge of AD, curriculum design and life skills.
INSTITUTION D:	Qualifications:	Educational as well as computer literacy.
	Experience:	Educational, computers.
	Special skills:	Psychological background and computer skills.
INSTITUTION F:	Qualifications:	M.Ed.(Psychol..)
	Experience:	Registered Educational Psychologist.
	Special skills:	Teaching experience.
INSTITUTION H:	Qualifications:	Masters degree.
	Experience:	Teaching enrichment courses, management.
	Special skills:	Strong research background.

INSTITUTION J:	Qualifications:	Masters degree.
	Experience:	Practice and research in AD. Discipline specific cognitive and language development.
	Special skills:	AD, lecturing and teaching.
INSTITUTION P:	Qualification:	Honours/ Masters degree.
	Experience:	Minimum five years in education.
	Special skills:	Counselling, study methods, thinking skills, being empathetic.
INSTITUTION Q:	Qualification:	Person with a Doctorate who can integrate academic literacies in the curriculum and can represent AD in Senate with Academic status"(quoted from questionnaire).
	Experience:	Collaborative published research across a variety of disciplines in the area of academic literacies.
	Special skills:	Should "resist working in an 'add on' manner both outside ..and within the curriculum" (quoted from questionnaire). Should be assertive, therefore.
INSTITUTION X:	Qualifications:	M.A.Counselling / M.Ed. (Psychol..)
	Experience:	Three years.
	Special skills:	Learning skills, counselling, psychotherapy.
INSTITUTION Y:	Qualifications:	D.Ed. (Curriculum development.)
	Experience:	Teaching, lecturing, AD experience.
	Special skills:	Language, Science, Maths background.

QUESTION 3:	*For this question it might be necessary to focus on the academic skills development tasks rather than counselling please. It is a task analysis of the position DESCRIBED IN question 2.* *List major activities in order of frequency that you are involved in, regarding academic skills development.*	
INSTITUTION C:	Daily:	a) Supplemental instruction. b) Only indicated weekly activities.
	Weekly:	a)Implementation of different courses: project-based learning, experiential learning, language skills, computer-based training and career information.
		b) Implementation of credit bearing course in Information Skills, addressing language issues, computer literacy and academic skills.
INSTITUTION D:	Daily:	Study methods, reading courses, note-taking and listening skills, subject-specific remedial courses. (Reading and remedial are computerised.)
	Weekly:	Workshops on all above courses.
	Monthly:	Evaluation of learning style and attitude, reading courses, and training of tutors and mentors in hostels to assist learners with study problems.
INSTITUTION F:	Daily:	Study guidance and reading development
	Weekly:	Stress management and individual counselling.
	Monthly:	Exam writing techniques.

INSTITUTION H:	Daily:	Management of access programs, research, academic and career counselling, materials development.
	Monthly:	Fundraising and conducting workshops, teaching.
INSTITUTION J:	Weekly:	Lecturing with AD-approach: Development of cognitive, social, language, study and metacognitive skills.
INSTITUTION P:	Weekly:	Study methods, time management, mind maps, memory training, learning styles inventories and brain dominance.
	Monthly:	Listening and note taking, exam strategies, critical thinking skills.
	Semester:	Academic goal setting.
INSTITUTION Q:	Daily:	Manage and administrate AD unit. Writing articles and reports, funding proposals.
	Monthly:	Individual mentoring of learners, consultations with staff or learners.
	Semester:	Reading, research.
INSTITUTION X:	Weekly:	Study, writing, concentration.
	Monthly:	Reading, listening.
INSTITUTION Y:	Daily:	Materials development, supervise language laboratory, supervise use of learning support materials.

QUESTION 4:	*Which methods and/or programmes do you make use of to enhance academic skills development i.e. reading programmes, study skills, special programmes that you follow, etc.* *(Please attach more information if you have)*
INSTITUTION C:	Respondent "a" cited the methods as tutoring (discussion groups, cooperative learning); computer based training (E-mail, Internet, word processing); site visits and guest speakers; discussion groups integrating communication skills with content. Respondent "b" included a source document (scientific article, published in 1997) to explain the nature of the programmes presented in her faculty. After reading the document, the following is what I understood from it: An extended, credit-bearing course was developed, addressing academic, social, language and information skills all relevant to the field of study.

	Minimum admission requirements are set for the course. These are lower than the norm for mainstream admission. A selection procedure is followed because only a limited amount of learners can be accommodated. Learners choose the appropriate two major subjects for their intended field of study, as well as the additional enrichment and remedial course (Information Skills) which are included and which has to be successfully completed. This course usually include a language component, with emphasis on academic writing skills based on relevant topics; academic development component including study skills, problem solving and critical thinking; social skills like stress management and working cooperatively in small groups; and communication skills. Information and computer skills are included and integrated within the field of study . The programme need not be extended, provided that the student passes the two major subjects plus the Information Skills course in the first year. Thereafter he/she can register for more subjects in the second and third years of study, in order to complete his/her studies in the prescribed three years as for mainstream.
INSTITUTION D:	The programmes mentioned under activities are either computerised programmes, i.e. Digital and Electronics for Engineers, Mathematics and English; or tape recorders are used for listening and note-taking skills, the content being subject or field-specific. A visograph is used to determine reading speed and fluency.
INSTITUTION F:	Reading strategies and Quantum reading, computerised. Study skills and exam writing workshops or individual counselling. Stress management: computerised programme and individual counselling.

INSTITUTION H:	Access programmes are run within faculties.
	GRASP-programme: Preparation programme for new learners.
	Peer-tutoring programme: runs within mainstream.
	Enrichment workshops for learners, pre- and post-graduate.
	Short courses for staff.
	Individual consultations with learners.
	Language, reading and computer laboratories.
	Organisation of programmes
	Information from source document included in the feedback.
	All learners undergo faculty specific selection tests. Access programmes for learners who did not comply with the minimum requirements of the different faculties are run within five faculties and offer enrichment in the core subjects of the faculty as well as English, academic, study and life skills. Faculty based staff offer teaching in the faculty-specific subjects, whereas staff from the Academic Support Unit offers teaching in language, academic, study and life skills. Depending on the faculty, access programmes run for either one semester, or one year. Upon successful completion of the programme, learners gain access to mainstream programmes.
	The GRASP is a "Get ready for Academic Success Programme", introduced at the beginning of each semester to prepare and introduce learners to "the rigours of tertiary life..." (Quoted from information sheet). It tackles language, academic, study, and life skills.

INSTITUTION J:	AD is incorporated in subjects, lectured by subject as well as AD-specialists, within faculties. Discourse analysis is used for language development and the writing process is developed while lecturing. Discipline content is used to develop cognitive, emotional, social and language skills.
INSTITUTION P:	The methods are used weekly: memory training, strategies for tests and examinations, mind maps and SQ3R; survey, question, read, recite, review. Brain dominance and learning styles inventories are also done weekly.
INSTITUTION Q:	Individual consultations regarding reading and writing for academic purposes. Student writers club. Academic literacies forum for learners (writing centre). SI-programme. **Organisation of programmes** Individual consultations is done with learners who request it, difficulties with the curriculum and learning is addressed through writing of drafts upon which negotiated feedback is given and writing is then used as a process to learn. The Student Writers Club is established with the aim of building journalism capacity with networking. It links literacies with computer literacy, is student driven and aims to produce student publications. Academic literacies forum: Writing Centre run by the Department of English and the Community Computer Centre. Learners learn academic writing skills in an "add on" fashion (quoted from questionnaire).

	SI-programme: A student assistance programme as described in several institutions already. **Problems encountered** Although this question was not asked, the respondent gave the information. Funding. No representation on executive level.
INSTITUTION X:	Individual counselling is done on a daily basis. Weekly assistance is given in groups, either computerised or teacher assisted.
INSTITUTION Y:	A study skills course is currently being developed. Multimedia will be introduced in future.

QUESTION 5:	*Do you undertake research programmes regarding the value of programmes and methods used to enhance student performance and would you make the results available to other researchers?* *YES* *NO*
INSTITUTION C:	Both respondents confirmed that they undertake research projects.
INSTITUTION D:	Affirmative
INSTITUTION F:	Affirmative
INSTITUTION H:	Affirmative
INSTITUTION J:	Yes, the research approach is that of ethnographic, participatory and action research.
INSTITUTION P:	Affirmative

INSTITUTION Q:	Affirmative.
INSTITUTION X:	Affirmative.
INSTITUTION Y:	Affirmative.

QUESTION 6:	*Do you run "bridging" programmes for under prepared learners?"*
	YES *NO*
	6.1 If YES, is it run by your section/self or the different academic departments at your institution?
	SELF *DEPARTMENTS*
	6.2 If YES, briefly describe the different programmes please, or attach leaflets.
INSTITUTION C:	6.1 No 6.2 Yes, but full credit bearing and in mainstream.
INSTITUTION D:	No
INSTITUTION F:	Yes. - Menta/tuta programme.
INSTITUTION H:	The access programmes as described under organisation of programmes.
INSTITUTION J:	Some departments run programmes outside of mainstream, but it is phasing out.
INSTITUTION P:	Yes, it is done jointly by the AD staff and academic departments.
INSTITUTION Q:	One department teaches a communication course adjunct to the curriculum.
INSTITUTION X:	Yes, for new learners and learners who need assistance. It is run by academic departments.

INSTITUTION Y:	A pre-technician course is run for Engineering learners. It includes subjects such as Mathematics, Communication, Physics, Drawing and a Science project. This course is run by the academic department.

QUESTION 7:	*How do you see the influence of Curriculum 2005 on what you are doing presently? Would it have an effect on the way you address academic development?*
INSTITUTION C:	a) "Every prospective student who complies with the admission requirements of the faculty can apply for admission." (quoted from questionnaire.) b) "If the schools equip learners with academic skills, language and information skills- the (AD)-program would eventually disappear as a credit course"(quoted from questionnaire).
INSTITUTION D:	It might be that learners will be better prepared for tertiary studies with the implementation of Curriculum 2005.
INSTITUTION F:	No response. (See first feedback from this institution.)
INSTITUTION H:	"We have been working on the same principles for years. We focus on skills development rather than content knowledge." (Quotation from questionnaire.)
INSTITUTION J:	If implemented properly, it will have a positive impact on higher education, but HE is likely to have under prepared learners for the foreseeable future.
INSTITUTION P:	"In theory it should eliminate the necessity for much of what we cover in our Life Skills course, but what the outcome will be in reality is an unknown quantity at this stage." (Quoted from questionnaire.)

INSTITUTION Q:	AD "needs to be framed within OBE, the SAQA document and principles of the White paper in education; accountability /autonomy, effectiveness, efficiency, democracy, redress /equity etc." (Quoted from questionnaire.)
INSTITUTION X:	The educational crisis is not with the curriculum. The focus should be on the attitudes of the teachers and learners.
INSTITUTION Y:	Skills based courses are presently being developed, following the OBE principle. It is not specifically content based, unless a specific department asks for it.

E   Data analysis method

i) Open coding was done, because the data was analysed by using reasoning strategies like analysis and inductive reasoning, attempting to discover categories or patterns in terms of their properties. This is a method highly suitable to grounded theory (De Vos and Van Zyl, 1998:265). The data was scrutinized for clear and appropriate information that is relevant to the research question, while adhering to thoroughness and comprehensiveness (Schwandt, 1994:122).

ii) The researcher used the metacognitive skills of comprehending, conceptualising and synthesising, while reading through the responses (Morse, 1994:24-43).

iii) Axial coding was done by making connections between categories in terms of interaction, conditions and context.

iv) Trustworthiness:

    * Bracketing was done, in order to achieve an open context or some kind of objectivity as far as the data is concerned (Poggenpoel, 1998: 337). The researcher was therefore wary of pre-conceived ideas about the responses, and read it as it was given. This ensured trustworthiness.

    * Making use of thick descriptions, reflexivity and leaving a clear audit trail further enhanced trustworthiness.

    * Triangulation took place in the form of using various methods (telephonic interviews and open-ended questionnaire).

F   Data interpretation

The data indicated a few issues, which could be categorised according to the results given.

The Structure:

i) The organigrams, for instance, indicated two decentralised units (C and J), against eight centralised units. This may be a pattern indicating that AD is centrally organised and seen as an independent function within institutions.

ii) It was also indicated by three respondents (Q J and H), that the line of authority followed for their unit, ultimately lead to the Vice-Chancellor, Academic. In other instances, these units reported to Student Affairs, however.

iii) In some cases the structure included Counselling as well as Academic Development, in other instances, only AD. The function of AD is therefore separated from counselling.

Profile of the AD practitioner:

iv) The academic profile of the practitioners indicated highly specialised people, all of them post graduates. Of these, educational psychologists (4) were the majority, followed by educational post degrees (3), linguists (2) and one subject expert holding a B. Com. honours degree as well as a higher diploma in education.

v) A wide range of skills and experiences were recorded. Respondents included skills like curriculum design, conducting research, learning and teaching development, computer skills, and remedial teaching. Experience was mostly in lecturing or teaching, language development, management and practising psychology.

Methods and programmes:

vi) The activities seemed to be focussing on the presentation of academic skills like reading, writing, note taking, thinking, study skills, exam writing techniques and language development. In a few cases learners were evaluated for learning style and brain dominance (institutions D and P) in order to assist with study-related problems.

vii) Some of these programmes were intended for orientation of new learners (institution H).

vii) Computer-based training and computer literacy also featured strongly, as did tutoring, either as a formal SI-programme, or included in remedial support and extended courses (institution C).

viii) Extended credit-bearing courses were cited a well as access programmes, of which most are faculty based. In some cases, AD is incorporated in the formal subjects being lectured (institution J).

ix) Social skills and personal skills were addressed by mentor programmes, or by individual counselling. It seems therefore, that the add-on approach of *presenting* learners with skills in order to develop learning is the main focus of most of these programmes.

Research:

x) All the institutions do research of some form.

Bridging programmes:

xi) Most institutions run bridging programmes.

Influence of Curriculum 2005:

xii) Some respondents felt that the effect of curriculum 2005 will eventually lead to the disappearance of access courses and the present problem of having to prepare learners for HE. Others are of the opinion that they have been adhering to outcomes-based education in any case, while still another respondent felt that AD should be aligned with outcomes-

based education! The interpretation to which the researcher came, was that respondents mostly feel that curriculum 2005 might solve the problem of learners being under-prepared for HE.

G   Conclusion

i) The quality of the feedback received was better, compared to that of the first questionnaire and the respondents completed the questionnaire more comprehensively. Useful information on several issues like the profile of academic development practitioners, the structure of the AD units, methods and programmes used, whether or not research is being conducted, and views on the influence of Curriculum 2005 were gathered, slowly indicating the emergence of a grounded theory with regard to the AD practice. The feeling of the researcher was, however, after axial coding of the data, that too few institutions responded, resulting in too little data from which meaningful conclusions, based on categories or patterns that were emerging, could be drawn.

ii) True to critical theory, the researcher reflected on the use of questionnaires in this research, as a method to gather data. Although the questionnaires allowed for descriptive answers, the data received were not of a rich and varied nature. Questionnaires as such, may limit the respondent's ability to give clear and descriptive answers. To prove the validity of this point, the researcher conducted an audit trail, and found evidence amongst the responses, which are thus quoted: "It has been difficult to respond to your questionnaire, ...because of a number of your questions (which) do not apply easily to our institutional structures and context." Another respondent completed the questionnaire, but added a comprehensive letter, giving more detail about their structuring of AD and methods used , also saying: "Your questionnaire is fine, but it doesn't fit neatly into what we do." This indicates the varied field of AD and the fact that every institution has its own way of addressing the academic development of learners.

iii) The fact that only ten questionnaires were received, was problematic and unacceptable to the researcher, because valid research also rests on consistency or dependability of data, and this can be obtained when adequate and more appropriate data is collected in order for saturation of data (Morse, 1994:230). Working towards saturation of data is the researcher's intent, because that

will also facilitate the development of a grounded theory. At this stage the researcher could not give evidence of saturation of data, because no sufficient repetition was found to indicate saturation. The researcher was therefore urged to devise other methods in order for the research to become more trustworthy.

2.2.6 PHASE FIVE

Research question 5
How will the researcher ensure that adequate and more appropriate data can be collected for saturation of data to occur?

A   Specific qualitative research design

The grounded research design was used, embedded in the constructivist theory; the aim being to arrive at a specific constructed reality with regard to AD practices. Basic action research strategies were used, by evaluation of the results, planning the next step and taking action.

B   Sample

Theoretical sampling was done where the researcher "constantly decides what data are to be collected next and where the data should be collected" (De Vos and Van Zyl, 1998:254). This is also a form of deviant case sampling, as the researcher specifically focussed on subjects that would provide information rich data. Making use of various designs and methods of data collection and allowing for interaction between researcher and object of investigation, allows for findings to be created as the investigation proceeds, resulting in a grounded theory to be developed. The decision was therefore made to set up personal interviews with the different respondents.

i) The researcher attempted to arrange interviews with respondents from all technikons and universities in South Africa.

ii) Only 23 universities and technikons gave their cooperation. These institutions were also among those that responded to either the first or second questionnaire

iii) The institutions from whom the researcher had no cooperation, after repeated attempts to identify and arrange interviews with respondents (sending E-mail, telephoning, sending letters), were excluded from the sample for obvious reasons.

iv) The final sample was therefore 23 AD- units/sections/departments at universities and technikons in South Africa.

C   Data collection method

The most appropriate method decided upon, for this phase, was personal, face-to-face interviewing, with the aim of being actively involved with a meaning-making process. The researcher therefore decided to visit each of the institutions in the sample.

i) The visits to these institutions were organised according to geographical locality, first visiting the Gauteng area, then Kwazulu Natal, Bloemfontein, Eastern Cape and Western Cape. Because of the high cost involved in such an exercise, the researcher applied for a research grant from the HSRC. Up to this stage the actual collecting of data had already taken six months of trial and error, but it was time well spent because of the "double loop learning" taking place as the study proceeded. The researcher also realised that with qualitative research, studies have certain life cycles and undergo certain changes, which reflect a better understanding of the setting, thereby heightening the internal validity of the study. Each respondent was sent a questionnaire yet again, upon confirmation of the interview in those cases where feedback was not received.

ii) Interviews were conducted in a semi-structured way, guided by the questionnaire. Questions asked, were built directly on the information received from the questionnaire, but also included further prompting in order to obtain richer data and not to limit the field of enquiry to the questions set in the questionnaire only. This method was also easily integrated in the research context where the role of the researcher is that of an insider, or participant as observer (Schurink,

1998a:260 and De Vos & Fouche, 1998:90). The researcher took great care not to ask leading questions or to refer directly to the research aim. In so doing, respondents were not influenced or being biased, and the researcher could distance herself from her own preconceptions regarding the research question. This was done for trustworthiness to be enhanced.

iii) Three structured, additional questions were asked:

    a)What is the aim of AD at your institution?

    b) Why do you need to have AD programmes at your institution?

    c) Do you believe that the potential of learners will be realised through the implementation of your AD programmes and methods?

By asking these questions, the researcher wanted to establish what the actual aim of AD is.

iv) In the cases where responses were not obtained with regard to the second questionnaire, the researcher went through the questionnaire with the respondent being interviewed, filling it in, in order to gain adequate data from which further coding and bracketing/categorising could be done.

v) The researcher made use of "thick" descriptions, in writing down direct quotes from respondents where necessary. The researcher felt that it would not be useful at this stage to audiotape the interviews, as this method sometimes disturb certain respondents. Audio taping may cause respondents to withhold information, or not to be spontaneous. Since this was the fifth phase of the research, and data had already been collected, indicating certain patterns, the researcher needed to concentrate on new data emerging, thus audio taping of the interviews was not deemed of utmost importance.

vi) Because of the nature of the interviews, the researcher became aware of certain difficulties and problems with which AD practitioners are confronted. The decision was thus made to include this data in the research, since it became clear that it is not isolated and saturation can be obtained from the frequent responses in this regard.

vii) Because of the personal experience of the researcher, namely that infrastructure for AD

programmes is usually a problem, and that even the best programmes cannot be facilitated without the necessary facilities, she requested observation of the facilities available to AD-practitioners as well.

The research setting was relatively easy to penetrate as the researcher is an "insider" speaking the same jargon, understanding the field of inquiry and having empathy with respondent's problems and situations.

D   Results

The results of the organigrams were interpreted by the researcher for inclusion in the tables, because of the previously mentioned difficulties (phase two and four).

Phase five

QUESTION 1:	*Draw a diagram of the composition of your department, indicating the various positions according to tasks. Indicate the division dealing with academic development of learners, please.*
INSTITUTION A:	Academic development is positioned under the Vice-Principle (Academic), within the Directorate Academic Development and divided into two departments; Teaching and learning Development and Co-operative education. Teaching and learning development is again split into two sections, teaching development (dealing with staff development) and learning development (dealing with student development). The function of AD is therefore centralised.
INSTITUTION B:	Academic development is positioned under an Academic Development Committee and then divided into two sections; Staff Development and Student Development and Advice. The academic development of learners is done within faculties by the English Department and the Supplementary Instruction Unit. They are therefore centralised units, but with decentralised function.
INSTITUTION C:	This institution does not have a centralized AD- unit dealing with student development. Individual Faculties are responsible for this task, under jurisdiction of the separate deans. The function is thus decentralised. AD for staff is centralised, however, as is student counselling.

INSTITUTION E:	Learner Support is managed as a central unit and a senior director is responsible for the management of this unit. The manager for student development manages four sections; counselling for special educational needs, job placement, academic support and career guidance. This institution has nine regions, managed by directors and tutor managers, offering assistance to learners regarding academic development. The unit therefore has decentralised activities.
INSTITUTION G:	This institution does not have a centralised AD-unit dealing with student development. Academic development is now the responsibility of faculties. This is a recent development, as AD was previously centralised.
INSTITUTION I:	The Educational Development Unit is a centralised unit, positioned under the Deputy Vice Chancellor: Academic. The actual AD-function regarding learners, is however performed within faculties, therefore, decentralised. The EDU deals with staff development, thereby empowering staff to deal with AD of learners.
INSTITUTION K:	The Academic development Unit is positioned under the Vice-rector: Academic, and divided into three sections: Staff development, Educational development and Curriculum development. A centralised unit, therefore. Educational development deals with AD of learners.
INSTITUTION L:	The Centre for Academic development is in the process of completely being decentralised into the faculties. It will therefore fall under the direct control of the deans of faculties. Previously, AD staff members worked within faculties, incorporating academic development in the curricula.
INSTITUTION M:	The bureau for academic development is managed by three directors and split into three sections, namely: Learning development and student counselling services, Academic personnel development service, Audiovisual service. The service is centralised in as far as programmes and networks are co-coordinated, but decentralised as far as actual functioning in the faculties is concerned.

INSTITUTION N:	Academic development is positioned within the Bureau for Counselling with the director reporting to the Senior Vice-rector: Planning and development. The counselling and AO-function is integrated and centralised.
INSTITUTION O:	The Centre for Organisational and Academic Development forms part of the Executive Management of the institution, headed by a director. The centre has three sections: Organisational development, Student academic development and Staff / Faculty development. It is therefore a centralised unit, but with staff and facilitators working within faculties.(Decentralised function.)
INSTITUTION R:	The Academic Development Department is a central unit, positioned under the auspices of the Vice Rector: Academic. It has a decentralised function, however, in all the academic schools of the institution.
INSTITUTION S:	The Student Services Bureau is a centralised unit , positioned under the auspices of the Vice-Principle: Tuition. The function is seen as integrated with that of academic departments.
INSTITUTION T:	Student Counselling deals with the academic and personal development of learners and is positioned as a central unit, under the auspices of the Vice-Rector: Student Affairs. The Educational Development Unit deals with the development of staff and curricula and falls under the Vice-Rector: Academic.
INSTITUTION U:	The Academic Development Centre (centralised) and faculty based Academic Development Committees (decentralised) is accountable to Senate, through the Academic Development Steering Committee.
INSTITUTION V:	The Section: Academic Development Programmes is a centralised unit reporting to the Vice-Rector: Academic. The function is decentralised, in that AD-committees are present in all faculties.

QUESTION 2a:	*What is the present profile of the person filling the position that deals with study guidance/academic skills development?*
	Qualification...
	Experience...
	Special skills...
INSTITUTION A:	Qualification: BA (Hons. English), HED
	Experience: Tertiary teaching
	Special skills: To be able to facilitate experiential learning and new ways of teaching.
INSTITUTION B:	Qualification: BA (Hons. English) HED
	Experience: Trained in SI-programme in America and experience in the running of the programme.
	Special skills: People and management skills.
INSTITUTION C:	Qualification: D.Sc. (Physics), M.Sc. (Engineering Management).
	Experience: Lecturing, coordinating AD, managing the AD programme (five years in AD).
	Special skills: Fit between faculty culture and inter personal skills, being a generalist, management skills.
INSTITUTION E:	Qualifications: B-tech degree; National Diploma Education.
	Experience: Ten years' teaching experience.
	Special skills: Management, tertiary education, computer skills.

INSTITUTION F:	Qualifications:	Ph.D (Education)
	Experience:	Eighteen years of experience in foundation tertiary education.
	Special skills:	Creativity and flexibility.
INSTITUTION G:	Qualifications:	Ph.D (Education)
	Experience:	Eighteen years of experience in foundation tertiary education.
	Special skills:	Creativity and flexibility.
INSTITUTION I:	Qualifications:	M.Ed.
	Experience:	Educational development within tertiary setting.
	Special skills:	Curriculum development and educational development.
INSTITUTION K:	Qualifications:	B.Ed.
	Experience:	Teaching
	Special skills:	Requirements as for lecturers.
INSTITUTION L:	Qualifications:	M.Ed.
	Experience:	Teaching in tertiary setting.
	Special skills:	Teaching of study skills in commercial setting.
INSTITUTION N:	Qualifications:	M.A.(Counselling Psychology)
	Experience:	Four years in Student Counselling
	Special skills:	Trained in SI, reading development, peer counselling, training skills and admin. skills.

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INSTITUTION O:	Qualifications:	Ph.D(Chemistry).
	Experience:	Collaborative learning, SI-programme, teaching under prepared learners.
	Special skills:	As above.
INSTITUTION R:	Qualifications:	M.Sc.(Clinical Psychology).
	Experience:	Extensive management, teaching, research.
	Special skills:	Management skills.
INSTITUTION S:	Qualification:	M.Phil.(Second language studies). Linguist.
	Experience:	Ten years in academic development programmes.
	Special skills:	Visionary ability.
INSTITUTION T:	Qualification:	M.A.(Psychology)
	Experience:	Career and academic counselling.
	Special skills:	Counselling, life skills, facilitating workshops and group discussions.
INSTITUTION U:	Qualifications:	M.Phil. TTHD(education).
	Experience:	Academic literacy, Language project coordinator.
	Special skills:	Action research, language policy, academic literacy teaching, AD policy.
INSTITUTION V:	Qualifications:	M.Ed.
	Experience:	Academic development and teaching.
	Special skills:	Linguistic skills.

QUESTION 2b:	*What do you think would be the ideal profile of the person referred to in 2 a)?*
	Qualification ....
	Experience ....
	Special skills ....
INSTITUTION A:	Qualification: An Honours degree plus teaching qualification.
	Experience: Tertiary teaching
	Special skills: Needs a specific personality; being able to work with people, empathy, open.
INSTITUTION B:	Qualification: Any degree.
	Experience: Teaching.
	Special skills: Management skills; time, self, organisational and budget.
INSTITUTION C:	Qualification: Post graduate, i.e. M- or D-degree.
	Experience: Must understand the culture of the field of study, (i.e. Science or Humanities) academic experience, learning modes and basic subject knowledge.
	Special skills: Inter-personal skills, empathy, respect for people, culture tolerance.
INSTITUTION E:	Qualifications: Honours degree.
	Experience: At least three years in the field.
	Special skills: Management and computer literacy.
INSTITUTION G:	As above.

INSTITUTION I:	Qualifications:	Post graduate in Education or Languages.
	Experience:	In educational development.
	Special skills:	Skills gained in tertiary education.
INSTITUTION K:	Qualifications:	Educational Qualification on higher level, B.Ed, M.Ed.
	Experience:	Teaching.
	Special skills:	People skills.
INSTITUTION L:	Qualifications:	M.Ed. And/or Applied Linguist/ Masters in Literature.
	Experience:	Dealing with learners that do not have essential communication abilities.
	Special skills:	Communicate in the vernacular of most learners. Should be able to develop logical thinking, communication and numeracy skills.
INSTITUTION N:	Qualifications:	Appropriate Masters or Doctorate (Education)
	Experience:	Tertiary education.
	Special skills:	Excellent admin skills, planning and training skills, ability to work with groups.
INSTITUTION O:	Qualifications:	Post degree.
	Experience:	In education.
	Special skills:	Good facilitation skills, communication skills.
INSTITUTION R:	Qualifications:	At least at Masters level.
	Experience:	Teaching and management.
	Special skills:	Teaching, research.

INSTITUTION S:	Qualifications:	Ph.D
	Experience:	Language background.
	Special skills:	A "visionary facilitator, Fox terrier"mentality. (Quoted from questionnaire.) A person with social skills and who can persevere.
INSTITUTION T:	Qualifications:	M.A./Ph.D.(Psychology).
	Experience:	Three years in the field.
	Special skills:	Counselling, group work and workshop skills, managerial skills.
INSTITUTION U:	Qualifications:	Ph.D (In AD field)
	Experience:	Tertiary teaching, AD in institutional setting.
	Special skills:	Integrating student, staff, curriculum and organisational development.
INSTITUTION V:	Qualifications:	Ph.D (Education).
	Experience:	Knowledge of curriculum development and cognitive psychology.
	Special skills:	Empathy with learners - shouldn't be an "Elitist".(Interview.)

| QUESTION 3: | *For this question it might be necessary to focus on the academic skills development tasks rather than counselling please. It is a task analysis of the position DESCRIBED IN question 2.*
 List major activities in order of frequency that you are involved in, regarding academic skills development. |

INSTITUTION A:	Daily:	Teaching life skills. Doing research on ESL (English second language) development of learners.
	Semester:	Presenting staff development sessions.
		Editing an in-house publication on teaching and learning development.
INSTITUTION B:	Daily:	The respondent sees her management tasks as the most relevant.
	Twice weekly:	SI-sessions with facilitators and learners. Feedback and control.
	Weekly:	Team meetings for further training of facilitators. (The "how".)
		Subject meetings regarding the content. (The "what".)
INSTITUTION C:	Weekly:	Implementation of Science orientation programme.
	Monthly:	Review of programmes and progress of learners. Student advice.
	Semester/Annual:	Planning of courses, negotiating between faculties and departments for adjustments to programmes, selection of learners. Limited involvement in presentation of courses.
INSTITUTION E:	Daily	Tutoring service, offering individual assistance with any subject or study-related problems.
	Weekly:	Workshops to orientate first years into the tertiary setting, for personal development, communication and study skills .
INSTITUTION G:	Daily:	Student development: Following special programme.
	Weekly:	Materials development and administration.
	Monthly:	Curriculum development, staff development, tutor training workshops and peer reviews.
	Semester:	Course review: Curriculum, staff, materials development.

INSTITUTION I:	Daily:	Management, ongoing curriculum development.
	Weekly:	Training of tutors, staff development and curriculum development.
	Semester:	Development of core-courses, evaluation of courses with staff.
INSTITUTION K:	Daily:	Administration of AD programmes.
	Weekly:	Lecturing, training and supporting tutors.
INSTITUTION L:	(This was done up to the present, but will change in future.)	
	Daily:	Language and reading development, Supplementary instruction.
	Weekly:	Lecturing study skills, life skills, academic skills.
	Semester:	Curriculum development.
INSTITUTION N:	Daily:	Reading development (supervision only).
	Weekly:	Supervision of SI-leaders.
	Monthly:	Remuneration of SI-leaders.
	Semester:	Design of SI-programme, selection appointment and training of SI-leaders. Report to Academic Board.
INSTITUTION O:	Daily:	Co-ordination of SI-programme. Lecturing.
	Weekly:	Ongoing training of SI-leaders, feedback and planning meetings with AD-staff.
	Semester:	Initial recruitment and training of SI-leaders.
INSTITUTION R:	Daily:	Co-ordination of AD programmes. Individual consultations.

INSTITUTION S:	Daily:	Administration, planning, writing of development programmes.
	Weekly:	Tutorials.
	Monthly:	Workshops on academic skills and career development.
INSTITUTION T:	Daily:	Individual counselling and development of learners.
	Monthly:	Workshops in academic skills, life skills, exam anxiety and preparedness, stress management, time-management and motivation and self-management.
INSTITUTION U:	Daily:	Policy making, committee work. Administration of Department.
	Weekly:	Post graduate supervision.
	Semester:	Teaching.
INSTITUTION V:	Daily:	Planning and administration of AD programmes.
	Weekly:	Coordination of foundation programmes , tutorials, and teaching.
	Semester:	Implementation of orientation programmes.

| QUESTION 4: | *Of which methods and/or programmes do you make use to enhance academic skills development i.e. reading programmes, study skills, special programmes that you follow, etc.*
 (Please attach more information if you have) |

INSTITUTION A:	**Methods or programmes used** Life-skills programme being lectured in co-operative groups. **Organisation of programmes** The "life skills"programme includes study skills, thinking skills, life skills such as community involvement, AIDS awareness, self-management skills, religion and curriculum 2005, exam preparation, environmental awareness and second language strategies. The presentation takes place in co-operative groups where learners are motivated to be actively involved in the learning process. The eight critical outcomes as stated by the new Curriculum 2005 (Dept. of Education, 1997:16) is used to guide the programme. Lecturers are being trained to integrate these critical outcomes into their courses.
INSTITUTION B:	**Methods or programmes used** Supplemental Instruction-programme. Three day orientation programme for first years and follow- up sessions by counsellors and mentors. Reading, communication and learning skills. (Incorporated in the English Department.)

Organisation of programmes

The SI-programme works on the premise that senior learners can be trained as facilitators to assist first year learners with the "historically difficult" subjects such as Chemistry, Physics, Mathematics. It is important to note that the programme is not targeted at "high risk" learners but at "high risk" courses. "Learners feel they are targeted when told they are high risk learners, therefore all learners are eligible to attend the sessions, voluntarily" (quoted from interview). Senior learners who have been successful and who are willing to assist with the programme, are trained to facilitate group work with first year learners. The training is continuous. Facilitators should attend all the lectures in the specific subject for first years, prepare the session to be conducted with the group according to the contents as well as the learning of the subject. In other words, the "what" and the "how". Facilitators should therefore work out specific problems for groups to practise problem solving skills. The co-operative learning model is utilised. The SI-sessions mainly take place during evenings as most learners are in hostels and there is no time in the normal time table to slot in extra SI-periods. The facilitators are paid for their work, but 50% of what they earn is paid back into their student accounts.

INSTITUTION C:	**Methods or programmes used**
	Extended, credit-bearing courses developed within faculties, addressing academic, language, computer and problem solving skills.
	Organisation of programmes
	Respondent a): The focus is on problem solving techniques and decision making. Learning styles are tested, for the learners to take note of different learning styles. Goal setting, study methods, handling of stress, communication skills (reading and writing) focussing on the subject content are all included in the extended, credit bearing course. All learners enrolled for the AD programme have bursaries. The learners get more time on task, doing fewer subjects per year, more periods scheduled, although the subject content is the same as for that of the main stream. A tutor system is in place, facilitating small group cooperative learning.
	Respondent b): The feedback in phase two covered most of the information, as the respondent included a source document explaining the organisation of the programmes.
	Respondent c): Minimum admission requirements are set for the faculty. These are lower than the norm for mainstream admission. A selection procedure is followed because only a limited number of learners can be accommodated. Career guidance is offered to new learners The Science orientation programme focusses on enhancing problem solving skills, language development by reading subject specific articles and writing essays. Communication skills are deemed important.

INSTITUTION D:	**Organisation of programmes**
	Academic skills:
	Learners either report for assistance on their own, or a whole class is sent to the laboratory for evaluation of learning skills, i.e. study attitudes and style, reading index, spelling, self evaluation. as well as English proficiency. Mathematics, digital and electronics programmes for Engineers are computerised, remedial programmes. Feedback is given to the lecturer who motivates learners to make use of the study laboratory. Regular workshops are given in study methods, applicable to field of study or even subjects. Individual assistance is also given. The service is free of charge and learners work in their free time, individually or in groups with tutors. Tutors are trained to facilitate study skills like time-management, study methods exam writing, etc.
INSTITUTION E:	**Methods and programmes used**
	The HELP-programme, Tutor-programme, study centres, decentralised libraries and computer centres.

Organisation of programmes

The HELP-programme is aimed at first year learners. All first years may attend the workshops free of charge. It is presented in five modules, one of which is before the examination, to prepare learners in exam writing techniques. The modules cover a wide variety of life skills, information on the administration of the institution, study skills, problem solving, cultural awareness, basic English orientation, to name but a few.

The Tutoring service assists learners with study-related problems, specific subject-related problems, give feedback on assignments, starts study groups in different areas, offers workshops as requested. Tutors are practitioners in their field, experts in their subjects.

Study centres are being made available in all regions, as learners find it difficult to find suitable study space for group discussions and workshops.

Decentralised library facilities have been made available for learners, whereby they can get books at their regional library through co-operation agreements between regional and main library.

Computer access is available to learners.

INSTITUTION F:	**Organisation of programmes** All first year learners undergo diagnostic testing (standardised psychological tests) to establish potential and areas where development is needed. Learners not complying with the minimum admission requirements may be allowed into mainstream if recommended by counsellors and accepted by the dean of the specific faculty. Otherwise, some learners may be advised to follow an extended programme, enrolling for fewer subjects over a longer period normally prescribed to the requirements for the course. They are compelled, however to attend the individual and group sessions presented by the learning centre. The computerised programmes are aimed at developing individual needs i.e. a student develops his own reading proficiency and competency in retrieval strategies. Workshops are offered in the learning centre, on a daily and weekly basis to address study-related problems and to present learners with study techniques, i.e. mind-mapping , time-management, writing skills etc. but also with social skills. The tutor programme is implemented in faculties. Student-assistants are trained to assist learners with subject-specific problems, within co-operative groups. Deans refer learners to attend these sessions. The Mentor programme runs within the hostels mainly. Senior learners act as mentors to juniors, are trained in life skills such as time-management and exam techniques, which they facilitate in small co-operative groups. They also assist first years with the orientation into the tertiary environment, as well as on an individual, personal level .

INSTITUTION G:	**Methods and programmes used**
	Extended programme: Take first academic year over two years, full credit bearing courses.
	Tutor-system. In mainstream, support first years with academic related problems. In extended programme, facilitate learning in small co-operative groups. AD-tutors are not student assistants, they are specially selected for the purpose.
	Organisation of the programmes
	Since 1996, the institute decided to give the AD-portfolios to the faculties, because of the change in student demographics. A centralised AD-Unit could no longer meet the demands of an increasing population of learners needing academic support. A bridging year, year 0 was introduced to prepare learners for their mainstream studies. This is now replaced by an extended programme as described above. A " College of Science" was established, meaning an undergraduate programme within the institutional set-up. Learners have to meet with the minimum requirements set for the college and selection takes place, as there is only limited available space. Learners enroll for three courses in their first year of study and for three courses in the second year. They have a choice of courses, depending on the career they want to pursue. The teaching method differs from that of mainstream teaching in that tutors facilitate the learning process in small co-operative groups. Learners get more time on task and more individual attention. *The most important difference is that the life skills, study skills, thinking skills problem-solving and other cognitive skills are all incorporated within the content.* Curriculum development is done for this purpose. Small group teaching has the added advantage that learners develop social and personal skills as well. Some of the skills included are generic, whereas others are subject-specific.

INSTITUTION H:	**Organisation of programmes**
	All learners undergo faculty specific selection tests. Access programmes for learners who didn't comply with the minimum requirements of the different faculties are run within five faculties and offer enrichment in the core subjects of the faculty as well as English, academic, study and life skills. The student is guaranteed access to the department of choice (related to the bridging course) upon passing all the subjects offered in the special AD course. The methodology is small group tutoring. The GRASP is a "Get ready for Academic Success Programme". It is intensive and sessions are run for full days, during the beginning of semesters. Social skills are presented by a social worker and deals with assertiveness, stress management and career guidance. The GRASP programme aims at building confidence. Attendance of the Peer Tutoring Programme is voluntarily, but lecturers also refer learners to attend these classes. The time table for peer tutoring is planned to fit into the main time table of the institution. **The future vision is to support learners on Masters and Doctorate level as well, including writing skills, logical thinking and research skills.**

INSTITUTION I:	**Methods or programmes used**
	Training of lecturing staff to deal with academic development of learners, within faculties/departments.
	Training of tutors to deal with subject specific assistance.
	Organisation of programmes
	The approach of this institution needs explaining in order to understand the organisation of the AD function. It is reasoned, that if lecturing staff undergo a paradigm shift from a teaching- entered approach to a learner-centred approach, (learner takes responsibility for his own learning, is actively and metacognitively involved in the learning process and the role of the lecturer is that of facilitator), then academic development of learners will follow naturally. If lecturing staff are trained in the development of academic skills and it is incorporated in the mainstream courses through curriculum development, then AD of learners will follow naturally. The history of AD up to 1996 was that AD-practitioners worked within faculties facilitating above mentioned paradigm shift. Money was made available by a development trust to run this programme, but in 1996 it was withdrawn. The AD-function is therefore the sole responsibility of the faculties and the centralised unit (EDU) is responsible for ongoing curriculum development and staff development. Faculties may request the expertise of an AD-practitioner when the need arises.
	Tutors are used in some departments for subject specific assistance, and they are trained by AD-practitioners.
	Extended programmes are offered within faculties. For instance a three year degree spread over four years; some have additional courses alongside the degree courses for enrichment, whereas one faculty runs an augmented programme.

INSTITUTION J:	**Organisation of programmes**
	In some faculties, Academic Development is integrated in the programmes that learners enroll for in that it is an extra subject that they take and get marks for. It is, however not a compulsory subject. The focus of the course is to develop thinking, language, learning and social skills. The learners are also required to be metacognitively involved in above process. Discourse analysis also takes place i.e. learning through the communication process of experiencing something, talking about it, writing about it and reflecting on your actions. Discourse takes place within the personal, academic and discipline specific context. Linguists within the EDC develops material to this effect. Discipline content is also used to enhance AD.
	Services offered to learners (from the counselling division), include study skills, life skills, stress management, exam writing and time management.
	A computerised Open Learning Centre offers enrichment programmes in science (Plato).
INSTITUTION K:	**Methods or programmes used**
	SI-programme: Tutors assist learners in historically difficult subjects. (For concept of SI, see institution B). A writing centre is also in place, for learners to practise the academic and scientific writing skills required for tertiary education. A computer laboratory with enrichment programmes (Plato) is also in place.

	Organisation of programmes Tutors co-ordinate the SI-programme. They are members of staff (seven in total) and officially trained in the SI-programme. Senior learners are appointed and internally trained to facilitate support to learners having difficulty with traditionally difficult subjects. The aim is to also train senior learners as SI-tutors, in order for them to gain AD-knowledge. It is important to note that AD-coordinators (tutors) have a lecturing load in the normal mainstream activities as well, in order to keep in touch with learners' problems and subject content. Time is scheduled on the time table for all learners to get subject specific support. *The management of this institution takes on the responsibility of AD, therefore supporting it and funding the programmes.* For the future, it is foreseen that a generic core curriculum will be developed, incorporating the critical outcomes, i.e. academic literacy skills, computer literacy, communication skills, information retrieval, etc. Learners can utilise the writing centre and computer-based programmes for further enrichment.
INSTITUTION L:	**Methods or programmes used** As the institution is in a transformational situation, each faculty will decide how and if AD will be implemented. Tutors previously worked within faculties, according to the SI-programme. **Organisation of programmes** Subject based supplemental instruction is done within faculties. Study and life skills presented to staff and learners .

INSTITUTION M:	**Organisation of programmes**
	Extended programmes are run within faculties. The institution has an extended network of learning facilitators and tutors working in the faculties and trained by Student counselling and Staff training dept. Study methods are also presented by these people. Small group or individual guidance takes place where there is a need for professional support, i.e. stress handling, motivation, problems with concentration. This is dealt with by counsellors. For the future it is envisaged that foundation courses will be introduced where communication skills, numeric skills, study and life skills are built into the mainstream programme. Of these skills, language and numeric skills are the most important.
INSTITUTION N:	**Methods or programmes used** SI-programme (described previously, institution B), study skills courses, reading development, orientation programme, peer counselling. Extended programme run within one department. **Organisation of programmes** The SI-programme is run and organised by the Academic Unit within the Bureau for Counselling. Ten "problem subjects" are being identified and subsequently, ten SI-leaders are selected from the ranks of senior learners (third year or B.Tech.) and trained to facilitate small group problem solving within the subject. Time for these sessions is allocated within the mainstream time table. The SI-leaders are also trained in the learner-centered paradigm, where the student needs to become an active responsible learner. SI-leaders are paid for their services through the central budget of the institution.

	An extended programme is run in one department only (four years instead of three). Workshops on study methods are being presented by counsellors from the Bureau, reading development on computerised programmes by the AO-division, an orientation programme for all first years jointly by the AO and counselling divisions, and a Peer Counselling programme is run jointly as well. Peer counsellors are senior learners, trained in counselling skills in order to assist learners with personal problems, or to refer them to the counsellors. For the future two scenarios are envisaged: a) Learners that are at risk should take four to five subjects that are central for first years, according to faculties. If these foundation subjects are successfully completed, then the student will gain access to the institution. b) Identify 100-200 learners who have not complied with the entrance requirements and put in normal mainstream, but with subject enrichment within the subjects that they choose to take, i.e. problem solving, communication, life skills. It will not be extended programmes, but more time on task will be given.
INSTITUTION O:	**Methods or programmes used** SI-programme, Science extended programme, University preparation programme, Year-0 course and Video supplemental instruction.

Organisation of programmes

This institution makes extensive use of the SI-programme; it is run in each faculty. Each faculty has part-time appointed AD-coordinators who, in partnership with the central Student Academic Development unit, administrates the programme. Each academic department takes the responsibility of planning subject specific AD-enrichment. SI-leaders are recruited according to an extensive process: they have to apply, going to a lot of trouble to fill in all the needed information, attend individual interviews, undergo training, after which the final SI-leaders are selected. Ongoing training of SI-leaders takes place to ensure that subject related skills as well as "learning to learn" skills are being facilitated. It is a completely voluntarily programme and individual departments organise times that suit their learners. The spin-offs from this programme are "the sharing across departments and faculties which has been most beneficial and the interdisciplinary interaction is wonderful." (Quoted from interview.) The programme is centrally funded from the budget of the institution. There is also a full time researcher for AD across the institution.

The science extended programme: Learners are given the option to complete the course in 4/5 years. Subjects are taught in augmented form, therefore more periods per week per subject than mainstream. The approach is to integrate all subjects, i.e. Chemistry, Maths, English and Computer literacy. Learners choose one first year subject plus the additional language, mathematical and computer enrichment. The teaching is interactive. During the second year, learners choose another two first year subjects plus another augmented course and the SI-programme will now also be implemented. An Executive Committee (Deans and senior staff), committee of lecturing staff and the AD-coordinator meet regularly to develop and evaluate the extended course curriculum.

INSTITUTION P:	**Organisation of programmes** The Pre-technician programme is a six month programme for under prepared learners. It consists of the following subjects: Mathematics 1 (a credit course), Physics, Technical English, Life skills and Chemistry or Technology. Extended courses (Academic support programme) are offered in one of the engineering departments as well as in the School of Management, by lecturers from the departments as well as AD-staff. Mainstream subjects are taken as well as enrichment courses by AD-staff. The fact that some of the subjects taken are credit bearing, alleviates the financial burden, as the institution is subsidised for these learners and the learners will be eligible for bursaries.
INSTITUTION R:	**Methods or programmes used** Integrated first year experience (IFYE) is targeted at all first years. Student tutor service. The writing centre. Language unit. Individual consultations. Extended curricula are planned for all learners who do not reach the specific requirements as set by the faculties (Schools).

Organisation of programmes

The IFYE was developed with the focus on basic skills necessary for all learners, i.e. listening, note taking and time management. Lecturers are being trained in the courses and these are presented throughout the institution, in every first year class. The reason is to move away from the add-on approach and to integrate AD skills into the subject content.

The ADD runs a tutor service with the purpose to support teaching and learning. Senior learners are recruited according to personality traits, i.e. caring, committed communicative, people's persons, and are trained in collaborative learning and teaching skills, i.e. creating the optimal learning environment in small groups. The aim is to "shift from a student, to a teacher mind set" (quoted from interview). Supervision, observation, training and evaluation is ongoing and done by the manager of the service. Tutors are also assisting learners in the various practicals laboratories (Engineering and computers).

The Writing Centre aims at developing academic writing skills in small group sessions as well as on computers, to integrate computer skills with the actual writing skills (reports, essays, research reports, etc.). Assignments given in class are brainstormed in the small group whereafter the first draft is written by the student. Follow-up feedback sessions assist with the learning process. Tutors facilitate the process. Tutors from the institution are being remunerated from funds sponsored from outside.

For the future it is envisaged that extended programmes will be introduced for learners who do not comply with the requirements.

INSTITUTION S:	**Methods or programmes used**
	Orientation cassettes and pamphlets; multimedia programmes; workshops in academic skills; booklets on effective study methods, and profile of the student for the specific institution; writing camp for Honours learners; tutorials at a learning centre; integrated AD in all departments.
	Organisation of programmes
	As this is a distance learning institution, most programmes are designed for this purpose; in written or audio-visual format, or on cassettes and radio stations.
	For the first year student, effective study methods and a pre-enrollment yearbook equips him/her with the necessary skills and profile required for a first year student. Aspects like time management, essay writing, stress management and general study methods are covered. A year planner is also issued each year, assisting the student with effective time management. Workshops are held on a regular basis for face to face interaction.
	A writing camp for Honours learners is established with the purpose of facilitating scientific writing skills for research projects.
	Learning Centres are situated throughout the country where tutors facilitate additional and supplementary support. Important to note, is that AD is seen as multidisciplinary. The institution has an integrated approach whereby the learning approach is integrated within the subject. "Learners need to reflect on how they learn, metalearning is being experienced. At tertiary level, learners are confronted with new paradigms that influence their way of thinking. AD is therefore what happens intrinsically with a person on tertiary level: going through a development process of adaptation and change." (Quoted from interview.)

INSTITUTION T:	**Methods or programmes used**
	Individual counselling and workshops.
	Organisation of programmes
	Learners with study or personal problems report to the counsellors and receive individual attention according to their needs. Workshops are marketed and offered on the request of academic departments in the above-mentioned skills. The workshops follow a logical and hierarchical order, i.e. time-management, study skills, exam techniques, stress management. Attendance is voluntary.
	At this institution, the role of AD is that of developing staff in order to facilitate academic development of learners.

INSTITUTION U:	**Methods or programmes used**
	Foundation programmes, i.e. English for Educational Development.
	Computer support education. The Writing Centre. The self-access learning centre. Curriculum and teaching development. Course and material development. Professional development courses and workshops.
	Organisation of programmes
	Foundation programmes are run within and across faculties and departments. Two other faculties have foundation courses in place: Arts faculty to improve language proficiency and its affect on learning, and Health Sciences to meet the needs of a new approach to the discipline (Community Health) which relates to the world of work. This is a one year course. AD Coordinators assist with the course design and development as well as the teaching thereof.
	Computer support programmes focus on the developing of staff, to develop computer based course ware and test ware. Student assistants help learners with the technicalities of computers, but the aim is, for learners to be able to do course work on computers.
	The Writing Centre aims at developing academic writing skills in order to write scientific assignments. Feedback from lecturers on the problems that learners have in this area of academic skills, gives an indication of the assistance needed. One -on-one consultations, workshops and computer literacy training is dealt with in this project.

INSTITUTION V:	**Methods and programmes used**
	Orientation programmes; foundation programmes with tutors and mentors; extended programmes; enrichment programmes for schools and matriculants.
	Organisation of programmes
	Two orientation programmes are run early in the year, four weeks before the official commencement of the academic programmes.
	Foundation programmes are one year programmes and run in all faculties (except Theology and Education , being post degree studies.) These programmes are run for learners who do not comply with the entrance requirements, but have the potential to succeed. Different programmes are run by the different faculties. Some are extended programmes where the academic first year is spread over two years, and in other faculties, learners need to take less first year subjects plus an additional enrichment programme comprising of critical thinking, academic writing skills and communication skills. The aim is to have integrated curricula where AD methodology is integrated in all programmes, is credited and not "add-on". Other foundation programmes make use of tutors , facilitating subject specific support to learners. Mentors see to the social and personal needs of learners and are trained by the Counselling Department.

QUESTION 5:	*Do you undertake research programmes regarding the value of programmes and methods used to enhance student performance and would you make the results available to other researchers?* *YES* *NO*
INSTITUTION A:	Yes
INSTITUTION B:	Yes
INSTITUTION C:	Yes
INSTITUTION D:	Yes
INSTITUTION E:	Yes
INSTITUTION F:	Yes
INSTITUTION G:	Yes
INSTITUTION H:	Yes
INSTITUTION I:	Yes
INSTITUTION J:	Yes
INSTITUTION K:	Yes
INSTITUTION L:	Yes
INSTITUTION M:	Yes
INSTITUTION N:	Yes
INSTITUTION O:	Yes

INSTITUTION P:	Yes
INSTITUTION Q:	Yes
INSTITUTION R:	Yes
INSTITUTION S:	Yes
INSTITUTION T:	Yes
INSTITUTION U:	Yes
INSTITUTION V:	Yes
INSTITUTION W:	Yes

QUESTION 6:	*Do you run "bridging" programmes for under prepared learners?*
	YES *NO*
	6.1 If YES, is it run by your section/self or the different academic departments at your institution?
	SELF *DEPARTMENTS*
	6.2 If YES, briefly describe the different programmes please, or attach leaflets.

INSTITUTION A:	Only for Engineering learners. The programme consists of subjects relevant to the engineering field as well as the life skills programme. Influence of Curriculum 2005 "It will take some time for tertiary education to reap the benefits of the new OBE approach. It is very promising in terms of acting as a guideline for the integration of knowledge, skills and attitudes"(quoted from interview).
INSTITUTION B:	Bridging courses in Physics, Chemistry and Maths.
INSTITUTION C:	The extended programmes fulfil this need, but in some departments certain "problem subjects" are being "bridged" to allow entry into the mainstream, like Maths, Chemistry, Physics and Computer Science.
INSTITUTION D:	Departments run bridging courses , usually for the duration of the academic year, to prepare learners who did not comply with the minimum entry requirements for mainstream studies. These courses are run outside of mainstream activities.
INSTITUTION E:	Academic departments run bridging programmes within a bureau administrating it. "All bridging is subject specific. In other words it is aimed at developing the subject background before learners can follow the normal directions" (quoted from the completed questionnaire).
INSTITUTION F:	The Learning Centre activities all evolve around this aim.
INSTITUTION G:	The above programmes fulfil this need.
INSTITUTION I:	The extended programmes, as explained above, fulfil this function.
INSTITUTION K:	No special programmes, SI is seen as fulfilling this function.
INSTITUTION L:	One faculty runs a one year bridging course outside of mainstream. It is funded from sources outside the institution.

INSTITUTION M:	Access programmes are run outside institution. Learners who do not comply with the minimum academic requirements of the institution undergo a guidance programme, comprising of psychometric testing and a guidance interview, taking into account the cultural background and language proficiency, in order to assess the potential of the student. Learners are then either referred to the mainstream (very few), an extended programme or to the access programme run by an outside college. For the access programme, learners need to enroll for English, computer literacy, two semester subjects of the institution, in the field of study, and a course in life skills and personal development. The course runs for a full year and learners must pass two semester subjects, English, computer literacy as well as life skills in order to be allowed entrance into the institution. Subject credits are thus given by the institution for the two semester courses.
INSTITUTION N:	An access programme is run by a College outside of the institution. Learners who do not comply with the minimum requirements of the institution after undergoing a selection procedure, are being channelled to this course. It is a career preparation programme where learners enroll for communication skills, computer practice, life skills and four institutional-credited semester subjects. Upon successful completion of the access year, learners are allowed entry into mainstream courses offered by the institution. Credits are thus given for semester subjects of the institution.
INSTITUTION O:	The University Preparation Programme is a bridging course run in two faculties, for learners who do not meet the entrance requirements of the programmes. The Year-0 course is run by three faculties as foundational courses and the duration is one year. The access policy of the institution is to have multiple access routes as all above courses indicate.

INSTITUTION P:	Enrichment programmes as depicted above, although the difference from other similar programmes is, that learners take at least one credited course from the institution.(It is not only bridging.)
INSTITUTION R:	No bridging programmes are run.
INSTITUTION S:	Access programmes are operational. Themes covered in the access course are, for instance; the culture of learning, career development and personal development, including self analysis, career choice, job search, individual, couple, group and family development. Academic skills are dealt with in a second module: time planning and goal setting, memory techniques, the study process, library usage, mind mapping and the writing process.
INSTITUTION T:	Access programmes are run by an independent centre outside the institutional programmes. Learners who successfully complete these programmes, can apply for entrance to the mainstream programmes. Life skills are built into these programmes and the duration is usually six moths. The institution has a working relationship with the centre that offers certificates applicable to the fields of study offered at the institution. Learners need to have an average pass rate of 60% to be allowed into the institution's mainstream activities. This institution has therefore out sourced their access programmes.
INSTITUTION U:	The "English for Educational Development" course serves this purpose, as well as an Academic Literacy for Science project which is run outside of mainstream curricula.
INSTITUTION V:	Support programmes run parallel with mainstream programmes in many departments to address this issue. Foundation programmes as described.

QUESTION 7:	*How do you see the influence of Curriculum 2005 on what you are doing presently? Would it have an effect on the way you address academic development?*
INSTITUTION B:	No comment.
INSTITUTION C:	The feedback from respondents a) and b) were given in phase two. Respondent c): "As courses; Physics and Chemistry etc. are owned and presented by departments, limited influence is available. There is a significant lack of interest amongst academies regarding non-standard learners and realities at school level" (quoted from questionnaire).
INSTITUTION D:	Our courses are very suitable and should be utilised by schools to prepare learners.
INSTITUTION E:	It will not have an effect on this institution's way of academic skills development, as "we have been in line with its technological-based type of learning." (Quoted from questionnaire.)
INSTITUTION G:	"We are beginning to look at the implications of C2005 on our practice. We will begin by considering what our outcomes are (in both 'critical' and 'specific' categories), and match them with the prescribed outcomes." (Quoted from questionnaire.)
INSTITUTION L:	No comment.
INSTITUTION M:	Outcomes based education is already introduced in the access and extended courses.
INSTITUTION N:	"The Bureau for Counselling is presently investigating alternative ways of selecting new learners...One of the possible models includes the Cambridge model. (Post matric, or A-levels.) This may have an influence on the academic development programmes.." (Quoted from the second questionnaire as handed to me at the interview.)

INSTITUTION O:	It will have a major impact on the learning environment at tertiary institutions. It "will be necessary to examine the way teaching and learning takes place. New and innovative approaches must be developed." (Quoted from questionnaire.)
INSTITUTION R:	Courses need to be designed with OBE in mind, and the idea of foundation programmes is being investigated.
INSTITUTION S:	This is a speculation, view of the future.
INSTITUTION T:	"The emphasis on outcomes rather than content of subjects at secondary school level might encourage learning with understanding rather than rote learning. This may help improve adjustment to higher education where learners are expected to work more independently. Inclusion of Life Orientation as a special area will also help this transition which has been found to affect academic performance of most first year learners." (Quoted from questionnaire.)
INSTITUTION U:	The shift in outcomes based education will result in a change in the training programmes for teachers.
INSTITUTION V:	It resulted in the programme approach of the institution, where an integrated approach is followed; enrichment integrated in programmes in order for the outcomes to be the same, no matter at what level the student entered.

QUESTION 8:	*Which problems do you encounter?*
INSTITUTION A:	Personnel only have contract appointments."One needs to assess the effectiveness of the life skills programme, but it is very difficult because of too many variables !" {Quoted from interview).
INSTITUTION B:	Funding.
INSTITUTION C:	It seems as though the problems regarding finances have been solved, by curricula which are credit-bearing and part of the subsidy formula of the institution. (Extract from article by respondent, made available to me in phase two.)

INSTITUTION D:	Learners attend voluntarily and not all learners who can benefit from this support can be reached. Funding and upkeep of laboratory.
INSTITUTION E:	Decentralising of all services. Establishing exam centres within walking distance of most learners. Funding.
INSTITUTION F:	Learners can not be forced to attend the Learning Centre, and even if they were, it is still up to the individual to make the decision to get support.
INSTITUTION G:	Human resources, coupled with financial constraints. Structuring and organising effective AD programmes. Programme managers have to fundraise to keep the programmes running.
INSTITUTION H:	Funding. Has to fundraise to keep unit going. Tutors are, for instance, paid from these funds.
INSTITUTION I:	Serious lack of funding. The ability to make an impact diminishes as AD-staff is being downsized due to lack of funds.
INSTITUTION J:	Institutional transformation: AD is not done in all faculties.
INSTITUTION K:	Need all lecturers to be aware of AD.
INSTITUTION L:	Finances and decentralisation into faculties, with out coordination from central unit.
INSTITUTION M:	Faculties have to finance for AD or rely on donations.
INSTITUTION N:	None.
INSTITUTION O:	Cannot reach all learners with SI-programme, as it is voluntarily.
INSTITUTION P:	Space problem, due to all the special programmes that need to be run. This problem is solved through franchising of support programmes to an outside college.

INSTITUTION R:	Although the services is available to all learners, it is not compulsory.
INSTITUTION T:	Have to render service on invitation basis, not all departments and learners are reached.
INSTITUTION U:	Lecturing staff needs to be motivated to undergo professional training (new teaching paradigms).
INSTITUTION V:	Funding from donations. Most AD staff members are contract appointments.

QUESTION 9:	*What is the aim of academic development programmes?*	
INSTITUTION A:	To develop learners in a holistic way: academic, environment, language, in order to integrate successfully into the Technikon culture.	
INSTITUTION B:	To increase student performance.	
INSTITUTION C:	Respondent a):	Development is focussed on the cognitive, namely thinking skills and academic skills, the social, personal, technological and professional skills.
	Respondent b):	The creation of an environment conducive to learning and to maximizing the academic performance of under prepared learners.
	Respondent c):	To accommodate learners with potential who could not gain access through normal channels, within the arena of the institutional culture. To initiate various routes for learners to follow in order to achieve their goal of following a degree course.
INSTITUTION D:	To optimise academic development.	
INSTITUTION E:	To improve the pass rate - throughput.	

INSTITUTION F:	Seeing that the "Bureau" as depicted under "structure", has integrated activities, the aim is to support learners in totality: "Academic, emotional, intellectual support....in order for learners to maximise their potential" (quoted from questionnaire) and to facilitate maturation and career development.
INSTITUTION G:	To increase access with quality and success. Quality graduates is important.
INSTITUTION H:	To increase the retention and graduation rates of learners. To provide access; increased opportunities. To promote a quality, student-centred environment that fosters maximum learning by each student, enabling him or her to enjoy continuous learning.
INSTITUTION I:	AD is seen holistically; "to develop the capacity of academic staff, in order to address the needs of the full range of learners that they deal with" (quotation from interview). To enhance the success of all learners.
INSTITUTION J:	To facilitate the social, cognitive and affective development of all learners in order to cope with the demands of higher education.
INSTITUTION K:	"To address student throughput and institutional development" (quoted from interview).
INSTITUTION L:	To enhance the pass rate. To incorporate/orientate learners into the tertiary setting. To develop learners to be fully integrated social beings.
INSTITUTION M:	To develop learners in the following areas: high level cognitive abilities, i.e. critical and analytical thinking; academic and scientific language usage (high level); high level potential. In other words to develop learners to a level where they can cope with the demands laid down by the tertiary environment.
INSTITUTION N:	To enhance the throughput and pass rates. Learners need to develop self knowledge, they need to realise their own shortcomings and take responsibility for their own development.

INSTITUTION O:	"To improve the learning environment, staff and student development, in order for learners to be more successful." (Quoted from interview.)
INSTITUTION P:	To prepare learners for entry into mainstream courses; for access, in other words.
INSTITUTION R:	To create a climate that is sensitive to learners' academic and non-academic needs.
INSTITUTION S:	To make learners aware of the intrinsic academic development that takes place within themselves., being a normal development process, that they have to reflect on, metacognitively.
INSTITUTION T:	To develop learners on a personal level in order to improve their academic performance.
INSTITUTION U:	Development in four areas: Organisational, staff, student and curriculum. To promote AD as a professional field of knowledge.
INSTITUTION V:	To increase the throughput and decrease the attrition rate. To induce a mind shift towards professionalism in education (teaching). To establish a learning culture where learners are also metacognitively involved in their learning processes.

QUESTION 10:	*What needs do academic development programmes address?*
INSTITUTION A:	Work on a needs-assessment basis, including learners, lecturers and AD. The need seems primarily to be the a lack of academic skills, language and life skills.
INSTITUTION B:	There are very difficult courses at this institution. (A specialist institution.)

INSTITUTION C:	Respondent a): For development and increased access for under prepared learners. Respondent b): For access and redress. "we are responsible for the imbalances of the past" (quoted from interview). Respondent c): To serve the needs of the community.
INSTITUTION D:	Learners lack study skills, they don't understand the content and language proficiency is poor.
INSTITUTION E:	Academic support for learners is necessary.
INSTITUTION F:	Learners lack basic skills needed for tertiary education. These problems are not addressed at school level.
INSTITUTION G:	High failure rates and disadvantaged learners wanting to succeed at tertiary level. The old model needed to be replaced.
INSTITUTION H:	The change in demographics, language policy and high failure rates as well as to keep the academic standards high.
INSTITUTION I:	The curriculum was inappropriate for the 1990's, "the institution needed a paradigm shift for the student demography of the 1990's." (Quoted from interview.)
INSTITUTION J:	Under prepared learners lack the skills incorporated in the AD- courses. Language proficiency is crucial to be successful at HE and most learners are learning in second or third language.
INSTITUTION K:	To keep up the standards and quality of programmes. To increase the throughput.
INSTITUTION L:	The changing demographic situation at institutions.
INSTITUTION M:	Under prepared learners. Unsatisfactory language proficiency.
INSTITUTION N:	Lack of language proficiency as well as additional skills (life, study, personal, social).

INSTITUTION O:	Learners that are under prepared has an extensive need for AD. "For the survival of tertiary institutions, we need to do AD across the board." (Quoted from interview.)
INSTITUTION P:	The high failure rate of first years needs to be addressed. Learners are inadequately prepared for tertiary studies on personal, social and cognitive levels.
INSTITUTION R:	It is a macro problem of transformation of the educational system and AD needs to address this.
INSTITUTION S:	Learners are entering a field of higher education, the demands on them are high, and AD is part of the "Academic Apprenticeship"(interviewer's own words) which learners have to undergo.
INSTITUTION T:	Learners from disadvantaged backgrounds need to be supported through "a critical stage of development in themselves" as well as through a transformational period in teaching and learning.
INSTITUTION U:	Traditionally, lecturers at tertiary institutions haven't been trained to deal with the new "disadvantaged student". Learners need assistance in academic skills. Curricula need to change for a new society. Institutional change needs to take place and the four areas of AD needs to be linked.
INSTITUTION V:	For access and redress.

QUESTION 11:	*Would learners be able to realise their potential through academic development programs?*
INSTITUTION A:	The respondent puts a question mark .
INSTITUTION B:	It will definitely help learners in realising their potential.

INSTITUTION C:	Respondents a) and b): Yes, definitely as it forms part of the aim of the courses: Respondent c): The programmes give the student the opportunity to be in a more sympathetic situation, but to realise his/her potential, more time is needed.
INSTITUTION D:	Learners develop an *awareness* of their potential, and improve in academic proficiency.
INSTITUTION E:	Yes, statistics prove that learners have improved their performance.
INSTITUTION F:	Yes, learners will realise their potential through attending the totality of programmes presented. Research is being done to establish this fact.
INSTITUTION G:	Yes, learners will realise their potential, as statistical data already indicates this.
INSTITUTION H:	Yes, learners will fulfil their potential. The programmes do make a difference in that the pass rate has increased.
INSTITUTION I:	Not sure whether it will happen.
INSTITUTION J:	If AD becomes integrated in the curriculum of mainstream programmes it might help, but the add-on programs will not achieve this goal.
INSTITUTION K:	"Yes- unquestionably!" (Quoted from interview.)
INSTITUTION L:	It is only an attempt towards this aim.
INSTITUTION M:	Yes, learners who take part in the programmes will realise their potential, but all learners will not be reached.
INSTITUTION N:	These kinds of programmes that we offer will not necessarily maximise potential, it is only an attempt towards that goal. Reading programmes might assist learners in realising their potential.

INSTITUTION O:	"Yes, we are striving towards that. We have a dynamic approach, will change until we are successful." (Quoted from interview.)
INSTITUTION P:	A certain percentage of learners will eventually realise their potential.
INSTITUTION R:	"Not necessarily. In some aspects may be." (Quoted from interview.)
INSTITUTION S:	Yes, definitely.
INSTITUTION T:	Yes, certainly.
INSTITUTION U:	"The extent to which potential will be realised, depends on the extend to which the institution is able to change towards the new directions." (Quoted from interview.)
INSTITUTION V:	"It is difficult to say. We are experiencing exponential growth in technology and the world of work and AD needs to keep up with the trends. Learners need to learn to think!" (Quoted from interview.)

E Data analysis method

The researcher made use of *reasoning strategies*, when analysing the data.

i) In analysing the data, the researcher adhered to the criteria of thoroughness and comprehensiveness, in an attempt to distill from the questionnaires and the interviews, adequate and appropriate information. The aim was to *understand, conceptualise* and *synthesise* the data and for trustworthiness to be accomplished (Schwandt, 1994: 122).

ii) While analysing the data, the researcher made use of *interpretation* of the responses, as well as *reflection* upon personal experience while conducting the research, meditating upon it and searching for *salient* aspects. This refers to open coding, or making comparisons and asking questions pertaining to the data. It is therefore adhering to the grounded theory method of constant comparative analysis: discovering, naming and developing categories (De Vos and Van Zyl, 1998:271-272).

iii) *Bracketing* of data was done, in other words the data was categorised in meaningful clusters as it emerged from the open coding method, by identifying patterns and describing the categories/clusters or themes (Straus and Corbin, 1990:62-64). This was done under separate headings to ensure clarity and comprehensiveness.

iv) Open coding and bracketing was followed by *axial coding*. In this case, by making connections between categories, by considering causal conditions, context, interaction effects and consequences. In this way, the researcher was still concerned with the development of a category, but "development beyond properties and dimensions" (De Vos and Van Zyl, 1998:273-274).

v) Trustworthiness was heightened by utilising the following methods:
* The researcher made use of *thick descriptions* when conducting the interviews.
* *Triangulation* occurred by making use of multiple data sources and methods (design, collection and analysis methods).

* *Participant checks*: After phase five, the researcher engaged in *participant checks*, by sending the interpreted data as well as the transcribed questionnaires and interviews to a sample of respondents (12), requesting their evaluation of the correctness of the data. This request was E-mailed to the respondents, presenting each with all the data interpretations (relating to their responses), from phase two up to phase five.

* *Peer examination* was done by a colleague, knowledgeable in academic and personal development of learners and not involved in the research, (Ms. B. Pretorius). She was asked to perform the role of a critical reader or *peer examiner*. The researcher also had numerous discussions with her and other colleagues with regard to the research under way.

* By using the *reasoning strategies* as described under this heading, the researcher distanced herself from own preconceptions, thereby ensuring trustworthiness.

* By leaving a clear *audit trail*, the data can be traced and audited, ensuring trustworthiness.

F   Data interpretation

Generally, information regarding the organisation of the different programmes and methods used, as well as the underlying assumptions of what AD is, was more readily constructed after conducting the interviews with the respondents of the different institutions, than after analysing the responses of the questionnaires in phases two and four. This fact refers directly to the constructivist paradigm which guides this research: The mind is always active in constructing knowledge. Knowing is not passive, but active, and previously held constructions are continuously tested and modified in the light of new experience (Schwandt, 1994:125-126). This action would also lead to the development of a grounded theory with regard to AD practices at HEI's in South Africa.

* **Structuring of AD units**

i) *Centralised versus decentralised AD-units.*

It seems that most AD-units are independent *centralised* structures, managed by a director/head who coordinates AD and reports to an *academic orientated* executive committee member (Vice Rector, Vice Chancellor). In some cases AD forms part of a larger structure, dealing with student development. The *activities* are, however, mostly *decentralised* into faculties, with AD staff or faculty staff presenting the programmes. There are only three institutions which indicated that AD is totally decentralised into faculties (institution C, G and L). The centralising of AD-units seems to function well in the sense that AD becomes a coordinated, purposeful, integrated and researched activity within the institutions. The Executive, or Management Committee of an institution should however, be directly involved and motivated to implement AD programmes, for it to have a meaningful impact, according to respondent Q. During many interviews it was mentioned that the effectiveness of AD

s depends on the positive attitude of the management, be it the dean of the faculty, or the rectorate. Respondents say that support from management will eventually result in funds being made available for AD activities. It can also result in time tables being revised so as to include AD activities on the official time table of the institution, as in the case of institutions U and W, who also made the once voluntarily attending of AD programmes compulsory, enhancing the effectiveness of the programmes. When deans are not interested to become involved in AD activities, it is usually lecturers with the empathy and personal interest that would take on the task of AD, which is the case with institution H, according to the respondent. One respondent indicated that AD staff are very marginalised and have no real representation on management, therefore it can not be a transformative practice incorporating learners, curriculum, staff and the institution. Some units have either been closed down because of management decisions, (i.e. institution L), leaving it up to departments to devise means of supporting learners, while at some institutions the unit has been greatly rationalised (i.e. institution I). Resulting from the structuring of AD units/sections/departments, some have access to funding, while most experience serious problems in this regard.

ii) *Lack of funding*

AD units battle with funding and have to rely on grants, sponsorships etc. Some mostly make use of contract staff. Where an institution has AD representation on the executive, it seems as though they have more "teeth" and this results in access to funds. They also have minor problems regarding the funding of their programmes, as provision is made for their needs in the central budget (institutions O, K, N, U, P). This is also a result of some of the AD units earning subsidy, by enrolling learners for credited courses within an extended or foundation course, thus generating some funds.

*   The profile of the AD practitioner

i) *Educational profile*

A different picture emerged from the data gathered during this phase, compared with that from phase four, in that most AD practitioners have *educational degrees* on post graduate level. The finding of phase four was that most practitioners held post degrees in *educational psychology*. It was also an interesting finding of this phase, that the second highest number of AD-practitioners held post degrees in linguistics, followed by practitioners with post degrees in psychology. Having educational degrees on post graduate level and expertise in the educational field, are also the most *preferred* profile regarding AD practitioners. This phenomenon highlights the importance of collecting more data in order to reach saturation and to be able to identify emerging issues.

ii) *Experience and specialisation*

It seems that most practitioners have teaching experience and a wide variety of skills from managerial to facilitating AD activities, to people skills. Curriculum development and conducting research is also viewed as important experience/skills. Counselling skills coupled with educational psychology degrees are less frequent, but an interesting phenomenon is that quite a few practitioners are linguists or emphasise the importance of linguistic qualifications, and experience or skills in the development of language proficiency, as the preferred profile. This phenomenon

might indicate the awareness of the importance of language as the ultimate tool for a student to express himself and that second and third language users need development in the academic use of language. It also might indicate that *most* learners need development in the art of communication, because not one of the AD programmes did not include language or communication skills.

iii) *The importance of social skills*

Preferred skills for practitioners are mostly related to the social skills, i.e. to relate to learners' problems in an emphatic way. Being creative and having visionary qualities was mentioned only once.

iv) *Activities of AD-practitioners*

The activities of AD practitioners also reflect their position, educational profile, experience and competencies. Most activities are teaching related; in other words teaching life skills, study skills, and the like; management and administrative; and the assessing, planning and curriculation of new AD programmes. When reflecting on her own practice, the researcher realised that these are also the activities that take up most of her time.

* Transformation of AD methods and programmes

The transformation that AD is undergoing both as concept and in the implementation thereof, became quite clear while conducting the research, as continual development of AD practices and policies take place. AD-practitioners adapt and change their programmes and curriculate continuously with the aim of developing more effective programmes. As one respondent put it: "It doesn't matter at which level the student enters the institution, we should ensure that the outcomes are eventually the same" (institution V).

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i) *The ambulance service*

The SAAAD report (1997:5) states that AD programmes have historically been associated with *access programmes* for disadvantaged learners, and has since been "criticised for its peripheral attempts to address the needs of learners and its failure to influence institutions to change the way in which they disseminate knowledge and assess learners." This interpretation of AD can be described as an "ambulance service" for under prepared learners. This is *a major concern* of the researcher, because according to this research, it is *still found* that most institutions focus on the remedial, quick-fix approach to AD. They run orientation, access and foundation programmes for under prepared learners focussing on problem subjects or "high risk" courses and the remedial aspects of how to "get the learners ready" for the mainstream, adding to it, life skills, study skills and the like as an add-on, and not integrated into the subjects offered for the programme. The problem is also that learners can attend the workshops or even classes, voluntarily.

ii) *Integrated approach*

Transformation is, however, slowly catching on. As the SAAAD report (1997:5) accurately states: "Change is the current dynamic of AD." Many institutions have taken on the challenge of enrolling "at risk" learners for mainstream courses (extended credit-bearing programmes), adapting their approach to that of developing learners in a more holistic way (institutions C, S, O, P). Learners are given more time-on-task, more individual attention in small group tutorials and the various academic, social and personal competencies are *incorporated* into the programmes, but sometimes still in an add-on fashion. The most recent changes, it seems, are towards an *integrated* approach to AD, where the academic, reading and writing, computer, language, life, social, personal and study skills are *integrated in the subject content*, relating to the field of study. This then constitutes an integrated approach to AD. (Institutions G, J, O, P, R, S and V) Two institutions (M and N), have indicated that their future plans are to have an integrated approach to AD.

iii) *All-inclusive approach*

Yet another approach is to include *all* learners in AD related courses and not only "at risk" learners (English for first years at institution U, and tutorials for all learners at institution K and institution G). This viewpoint was also raised by the respondent of institution Q when she remarked that *all* learners should be included in AD programmes.

iv) *Wider focus of AD*

The developmental, transformational change can also be seen in the fact that SAAAD has as recently as April 1998, changed its name to IHEDSA (Institute for Higher Education Development in South Africa). This indicates a change in focus which includes not only the academic development of *learners*, but also that of higher education, namely: staff, curriculum, institution and learners.

v) *Changing concept of AD*

It seems as if there is a change in the concept of AD, a shift, from being an intervention to support under prepared learners, to the development of *all* learners , where staff, curricula and institutions have to undergo a paradigm shift in order to acknowledge the fact that *all* learners can benefit by the explicit development of generic skills such as writing, critical thinking, communication, computer literacy, numeracy, study skills and self-developmental skills *within the mainstream programmes*.

vi) *AD as an intrinsic developmental stage*

Another very interesting view was that of respondents S and T, who stated that academic development is intrinsic to the developmental stage of the student entering the tertiary environment in any case, and that AD practitioners should facilitate the natural process of becoming metacognitively involved in their own development process, reflecting on it and acting on it. AD is therefore not seen as remedial, but as developmental! Personally, it was an exiting

discovery, that at least two respondents looked beyond the "support" syndrome when discussing AD. This view is, interestingly, cited by two practitioners who are working at institutions situated within the same city. They obviously share their experiences and views, resulting in "cross-pollination".

*   The effect of "Cross Pollination"

It was very interesting to note that a certain amount of "cross pollination" is taking place in certain geographical areas, indicating *concerted action* on the issue of addressing AD.

i) *Colleges dealing with preparation programmes*

In the case of institutions M and N, situated in the same city, they both make use of an outside college to address the need for credited foundation/ access programmes in order for under prepared learners to have access to the institutions. Both these institutions are also planning for integrated AD programmes in the near future.

ii) *Writing centres*

The Writing Centre concept, as described under institution Q, is adopted by most institutions in the Cape province (mostly English institutions), one English institution in Gauteng and one English institution in Kwazulu Natal.

iii) *Enhanced professionalism*

The importance of addressing the professionalism of lecturing staff was strongly advocated in institution V, W and U , (situated close to each other). To illustrate, the respondent from institution V stated that "a mind shift is needed, adopting a professional attitude towards education." What they mean, is that lecturers should not only be subject specialists, but professional educators as well. This view was also raised by the respondent from institution H, when he concluded that most of their problems lie in the fact that lecturers have experience in

their field, (subject expertise) but lack teaching experience and/or training. This is a very good reason for AD to become involved in staff development!

iv) *The SI-programme*

The running of a specific programme like the SI-programme (extensively discussed under institution B and O), also indicates to what extent AD units cooperate in an effort to find effective ways to deal with the problems that they face. (Six institutions indicated that they are running this programme.)

v) *Decentralised approach*

There were only three institutions having a *totally decentralised* approach to AD, and two of them are situated in Gauteng.

The researcher found most AD units to be very cooperative and eager to share what they do, also wanting to learn from other institutions. No "academic politics" to take note of!

*   **Concepts frequently used**

The following concepts will be discussed because of their *high frequency* when analysing the data. (This kind of data analysis was proposed by Prof. T. De Wet, as triangulation effort.)

i) *Voluntary attending of AD courses*

In many instances the problem was stated that learners cannot be forced to attend the AD interventions like tutorials, reading labs, writing centres, etc. In some instances the AD courses are not credit-bearing and therefore learners may or may not attend it. All learners are not reached therefore, and all learners do not benefit by the programmes. This is especially a serious problem

that the researcher has to deal with in her own practice. Learners need to realise that these programmes are as important as their chosen career courses, and that without it, they will run into serious problems.

ii) *More time-on-task*

This concept was mostly used when extended and foundation programmes were discussed. It is a well known theory, that given enough time, most learners will master the learning task. According to Carroll (Langdon, 1988:157), the rationale is that a learner's aptitude correlates with the time needed to master the learning task . It also relates to the rationale of outcomes based education, that learners need to progress at their own pace in order for them to be successful. Extended programmes are therefore very successful in allowing learners more time on task, resulting in mastery. Most institutions have research findings to prove this statement.

iii) *Cooperative small group tutoring*

In all cases where the SI-programme is being conducted, or a tutor-system is in place, this concept is used. According to respondents, the rationale is that:

a) learning is an individualised, yet cooperative act;

b) learners are compelled to participate in the discussions;

d) learners learn to communicate effectively, (logic reasoning and academic expression of thoughts);

e) the social skills of working together in a group are developed ;

f) personal development also takes place in the small cooperative group, as the student develops self-esteem, assertiveness and responsibility in an atmosphere of cohesion and interdependency.

Tutors on the other hand benefit from "tutoring", by having to reflect on the learning task, and finding novel ways of facilitating problem solving and critical thinking. Tutors, chosen from amongst the senior student population, are in the advantageous position where they have very recently, experienced the same problems as their "learners", but having mastered the tasks

themselves and also, being peers, mostly of the same cultural background, they can make a very valuable contribution to assisting learners with "problem subjects". They have the advantage, therefore, to understand the problems learners have (empathy), and being able to assist from a position of personal experience.

iv) *Language development - the common denominator*

There is *not one* AD programme that does not include language development, whether it is an add-on approach, or an integrated approach, it appears everywhere. Language is seen as the *most important* "skill" (institution M) needed to enhance learners' academic success. Institution U went so far as to introduce a course in English which will in future be compulsory for all first years. Foundation courses that include English and Afrikaans are introduced at institution V while the writing centres and reading laboratories give learners the opportunity of developing the practical skills related to language proficiency. The fact that many AD practitioners are indeed linguists and that the preferred profile also indicate the importance of language development skills, is noteworthy. Many learners from previously disadvantaged backgrounds have to study in their second, sometimes even third language, (English) and this is partly to blame for the lack of progress that most of these learners show. When respondents were asked what they regarded as the major problem regarding the poor performance of learners at their institution, the most frequent answer was that learners' language proficiency is very poor, resulting in lack of understanding, lack of expression, lack of academic writing skills, in other words, the communication process is not being optimised.

Research undertaken in the researcher's own practice indicated that reading enhances general academic performance. Reading programmes develop fluency, speed, vocabulary and comprehension, therefore general language proficiency.

v) *Skills: academic, thinking, study, life, social, personal*

These skills are always referred to when discussing methods used for AD of learners.

a) Academic skills constitute those competencies associated with a cognitive orientation, and can include listening, reading, writing (for academic purposes), study and thinking skills.

b) Study skills are usually presented with the aim to familiarise learners with methods that can be useful when studying and includes cognitive, metacognitive and resource management strategies.

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Cognitive strategies include:

* rehearsal strategies like note taking, identifying keywords and underlining text;

* elaboration strategies like paraphrasing, summarising, and creating analogies;

* organisational strategies like clustering, selecting main ideas and hierarchical ordering.

Metacognitive strategies include:

* planning (setting goals, selecting strategies);

* monitoring (self-testing, evaluate own progress); and

* regulating (adjusting strategies, reviewing).

Resource management strategies include:

* time management (the scheduling of study time table);

* study environment management (defined, quiet, organised area);

* effort management (self- reinforcement, persistence, self -talk); and

* support of others (seeking help from peers, teachers, tutors).

Exam writing strategies and stress handling usually accompany the whole "package".

c) Thinking skills may include lateral thinking and creative thinking as described by Gilhooly (1996), critical thinking as well as problem solving strategies.

d) Life skills are ill-defined and can include all the academic, social and personal skills.

e) Social skills are mostly enhanced by the small cooperative groups as described earlier.

f) Personal skills refer to the development of self-motivation, self-esteem, stress handling and assertiveness training.

When reflecting on own experience, it is mainly the skills as depicted under this heading that are presented as AD interventions to support learners. It is either presented as add-on skills to develop, or sometimes integrated in subject content.

vi) *The world of work*

Interestingly, three of the respondents specifically mentioned the fact that learners need to be prepared for the world of work. The respondent from institution U referred to a programme in health sciences that is addressing the changing demands in the world of work; respondent F regarded the influence of Curriculum 2005 as producing learners who will know more about the world of work and respondent V refers to the exponential growth in technology and the world of work, therefore learners need to keep up with these demands.

*   **Aim of AD and the need for AD**

i) The aim of AD can be summarised in the following categories:
   a) holistic development of learners in order to be successful in their studies;
   b) maintaining academic standards and quality assurance;
   c) to increase student performance and the throughput figures; and
   d) to provide access and redress for previously disadvantaged groups.

ii) The need for AD was mostly attributed to:
   a) the lack of academic, language and life skills in most learners from historically disadvantaged backgrounds;
   b) the high failure rate amongst first years;
   c) access and redress; and
   d) the language policy (English and to a lesser extent Afrikaans as the only languages used in higher education) is also mentioned.

iii) Three views need mentioning because of their unique focus when compared to the aims of most of the institutions.

a) Respondent Q felt that the aim should be to "transform teaching and learning and to support models that aim at transformation on a wide scale at the level of curriculum and educational research development".

b) Two respondents felt that the aim should include the promotion of AD as a professional field of knowledge (U and V).

c) The most interesting aim is that of respondent S: "To make learners aware of the intrinsic development within themselves...they must reflect on it, metacognitively".

iv) The aim usually corresponds with the way in which AD is perceived: as remedial, or as a developmental process.

v) Only one respondent declared that their aim is "to support learners on the academic, emotional and intellectual levels in order for them to realise their potential optimally" (respondent F).

* **Influence of Curriculum 2005**

i) Interestingly, two respondents were of the opinion that AD programmes will not be needed if the new curriculum is well implemented. Learners will then have the necessary skills to become lifelong learners.

ii) On the same lines, some respondents felt that learners will be better prepared for tertiary studies and the world of work (respondent F).

iii) Quite a few respondents (seven) indicated that they are already aligning their programmes towards outcomes based education (or have always worked on the principles of skills development, respondent H).

iv) Two respondents indicated that it is too early to predict any impact.

v) Important to note, is the feedback from respondent V, indicating that the rationale for the new Curriculum for schools (outcomes based) resulted in the transformation of institutions:Enrichment and access programmes had to be introduced, for outcomes to be the same at the exit level, no matter at which point the student entered.

* **Realising of potential**

Only two institutions indicated that they present AD programmes in order for learners to realise their potential. These institutions do research on potential (institutions C and F).

The feedback of respondent S is well worth paying attention to. She says that AD interventions should be directed at the *facilitation of an awareness* of the intrinsic development that learners at institutions of higher education undergo, as part of the developmental stage in which they find themselves (developmental psychology). Learners at this stage of their development are being confronted with conflicting paradigms, self-directed learning, challenging learning tasks, and having to plan their own learning. The AD practitioner should therefore facilitate the process of metacognition; a process, according to the respondent, that happens in the life of a tertiary student in any case. This is then the opportunity for AD practitioners to exploit the metacognitive awareness of the student and enhance the process by offering some information on study methods, the monitoring of the study process, reflecting on the effectiveness of the methods used, and changing strategies if necessary. This process is ongoing, as the goal of reaching total effectiveness is never reached.

G   Conclusion

The researcher was satisfied that the data obtained on AD during this phase, was credible, rich and illuminative. Many aspects which were not clearly indicated and described during phases two to four, now became clear. Through axial coding, the researcher was now able to put the data together in new ways by making connections between categories and their subsections.

The researcher felt at this stage of the research, however, that credibility, consistency and transferability of data should be enhanced, in order to further heighten the validity and trustworthiness of the research. The data should reach a stage where the researcher can detect even more saturation of data. A next phase was therefore implemented.

2.2.7 PHASE SIX

Research question 6

How can the researcher further ensure that credibility, consistency and transferability of data are obtained and enhanced? Will saturation of data eventually lead to this goal?

A Specific qualitative research design

The researcher again made use of the grounded theory design, as systematic procedures were used for data collection and analysis, in order to form a grounded theory of the field of investigation.

B Sample

While conducting the interviews, some respondents made source documents available for further reading and to expand on the information given during the interviews. This phase will therefore deal with the data distilled from the source documents; data which is complementary to data already captured in the previous phases. This sampling method can also be described as confirming and disconfirming cases, because the researcher studied the source documents, with the aim of looking for information that would support or challenge her understanding of the phenomena (Schurink, 1998a:256).

Fifteen institutions made a variety of source documents available for further reading. The twenty six source documents constitute the sample.

C   Data collection method

The researcher made use of the interpretation of documents and records, a renown qualitative data collection method (De Vos and Fouche, 1998:90).

i) By adding these sources of data, the researcher engaged in multiple methods of data gathering *(triangulation)*, thus enhancing trustworthiness in the form of credibility, transferability and consistency of data.

ii) The researcher made use of text data analysis, while source documents were carefully read with the aim to establish whether new or additional information could be found in relation to the information already gathered during the first four phases. While reading the documents, the researcher could also establish whether saturation was taking place.

D   Results

The source documents were studied and the following results were documented, adhering to comprehensiveness, thoroughness and coherence.

i) Source documents: Study guides for Education learners

The organisation of programmes: According to the study guide received from this institution, first year learners in the Education Department of this institution are presented with a one year course in Philosophy of Life and Life Skills *as part of their curriculum*. Evaluation takes the form of tests, assignments, as well as practical presentations of life skills sessions by learners. The AD personnel present and curriculate this course.

ii) Source document: Information regarding the SI-programme

The SI-programme: In keeping records of student performance it is clear that they benefit from the programme. Graphs indicate an increase in the number of learners attending the SI-

programme as well as an increase in the performance of these learners. The source document also includes personal reports from learners indicating the positive influence of the SI-programme on their studies. Other benefits from this programme is described in a staff development newsletter: "When seniors 'facilitate' junior learners' learning in 'historically difficult' courses, the facilitators gain learning skills. Also staff who interact with facilitators get insight into student problems. The junior learners begin to 'own' learning skills, e.g. time management and dialogue, that will serve them in all courses".

iii) Source documents: Leaflets regarding the extended courses offered.

Two faculties are represented in the feedback.

Faculty 1

Five year engineering programme: The purpose of the five year engineering programme is given as "to create a learning environment for learners with academic potential, who can be described as high-risk learners because they were educationally disadvantaged at school" (quoted from leaflet) and the goal is to assist these learners to successfully complete their studies. Professional orientation forms part of the credit bearing extended course as depicted in phase three (respondent a) and includes projects, CBT-Cadkey (computer training including the Internet and E-mail), language skills, site visits, career planning, and study skills. This enrichment course was started in 1994 already, but developed from a general life skills and language development programme to the present programme described. Faculty based tutors are selected and trained and a holistic approach is followed to include cognitive, social and personal development of learners. For promotion, learners need to enroll for 60 credits of the first year mainstream programme and have to pass all credits.

Faculty 2

Extended courses: In this faculty a half year course is presented over a full year with additional enrichment including laboratory work, computer aided instruction, seminars and small group tutorials. Ordinary first year courses are taken but more time on task is awarded, as well as tutorials. The Science orientation courses present learning opportunities in English and Afrikaans

with components in professional practise, the use of scientific language and computer based problem solving. Credits obtained in theses courses are transferred to the chosen mainstream programme.

Bridging courses are run to allow entry into certain subjects.

iv) Source document: Restructuring document of the section for counselling and study guidance.

Personal and social development: The Counselling Section deals with personal and social development of learners, through workshops. Several academic departments have requested life skills and personal management skills to be conducted within the normal time table as an enrichment course for all their learners, and this is also conducted by the Counselling Section. In one faculty, a new learner-centred approach to teaching and learning is followed, focusing on problem solving in small cooperative groups. Personal and professional development regarding the field of study also takes place.

Mathematics and Science project: A special course in Mathematics and Science is conducted where learners have the opportunity to repeat grade twelve in these two subjects and write the official grade twelve exam. This enables prospective learners to obtain better marks for gaining entry into tertiary institutions.

v) Source documents: Information leaflets regarding student support.

Programmes used for student support are called HELP-programmes and aims to "help ensure learner progress... it is an integrated, personalised student support programme that will assist with the skills and knowledge needed to progress in distance learning." (Quoted from leaflet.) Other services include career guidance, personal counselling, job placement and workshops to prepare learners for the job search.

vi) Source document: Information booklet regarding the extended programme, called the College of Science programme.

The word 'college' is used to describe an undergraduate programme of a university. There are also special admission requirements for the College. All learners enrolling for the College programme study Mathematics 1 and Physical Sciences 1. In addition they choose one of the following subjects: Biological Sciences, Earth Sciences, or Engineering Sciences, thus giving them a broad education in Science. All courses within the College are credit bearing. Learners who have successfully completed two years in the College programme, can enter the applicable second year BSc.-programme. If a student leaves the College after at least one year, he/she will receive a document of certification which lists the subjects passed. These may be accredited at some Technikons or Colleges of Education.

A counsellor is available for learners who need to plan their career path

vii) Source document: Information booklet regarding a career preparation programme.

Access programmes: These are run by an outside college and are credited by the institution for entrance into mainstream programmes. The courses presented in the programme include: Technical studies, Business studies, basic university credited subjects, and courses related to the needs of vocational colleges and technikons. Courses are composed of a number of building blocks (subjects) and include Computer Practice, Communication, Personal, Learning and Leadership Development, as well as four university credited semesters. Career counselling and planning is facilitated by a professional counsellor. To be allowed to register at the university, learners need to pass two of the four university accredited subjects, attend 75% of the development courses, achieve a year mark of at least 40% for Communication as well as Computer Practice. This source document is the same for two institutions situated in the same city.

viii) Source documents: Annual report of the Academic Development Programme (Jan. 1998) and a brochure of the Pre-technician Course run by the institution.

Organisation of the different programmes: Programmes presented for academic development of learners are clearly described in these documents. The Pre-technician programme is a six months course and prepares learners for courses in Science and Engineering. It is recognised fully by the faculties which it serves. Mathematics 1 is a full credited subject in the course. A special approach is followed whereby more time on task is given and remedial work included. The emphasis is on problem solving rather than acquisition of knowledge. A holistic integrated approach is followed, meaning that the natural overlap in skills and knowledge from one subject to another is highlighted and transfer of knowledge thus encouraged.

Diploma-specific enrichment programmes are run in one faculty and is organised as extended programmes, because the normal duration of the programme is extended by one year. This is an alternate route for learners who did not comply with the entrance requirements. Learners admitted to this course have to enroll for and complete five subjects: three enrichment subjects and two credit bearing subjects. Due to space problems with the intake of more learners on the AD programmes, the institution has franchised the enrichment programmes to a training centre. Strict control over standards are kept, however.

ix) Source documents: Information leaflets regarding the activities of the AD-department.

The Integrated First Year Experience (IFYE): This programme was developed by the Educational Development Resource Centre, which has a functional linkage with the AD-department. The aim is to integrate the necessary academic skills into various aspects of the existing curriculum. This constitutes a broad programme of academic development for all first year learners and is the responsibility of every academic department. Modules were developed (centrally) for this purpose and lecturers were provided the opportunity to familiarise themselves with the modules to be presented, but were not tied down to any specific method of presentation.

The Language Unit, Student Tutor Service and The Writing Centre al forms part of the AD-department. The following courses are offered at the Language Unit: listening skills, note taking and filing, time management, reading skills, study skills, exam and test preparation and academic writing skills.

x) Source documents: Information leaflets, brochures and booklets regarding student orientation and certificate programmes.

Methods of student support: Workshops focus on the orientation of new learners towards effective studying, maintaining motivation and time management. It also includes academic skills like making notes and writing assignments, exam preparation and CV-writing.

Various Certificate courses are offered and learners who are in possession of a senior certificate and who complete the course successfully, may apply for exemption in some courses in order to register for degree studies at the institution. A Certificate in Student Development is also specifically designed for access purposes. Access examinations are written by prospective learners who do not qualify for direct admission. Learners must pass two access examinations, or one plus one first year accredited examination, to be allowed entry into mainstream courses. Access exams are written in i.e. English (applied to the field of study), reasoning and life skills, mathematics and subject specific study skills.

Subject specific assistance is given, in small interactive groups where learners develop self confidence, independent learning and a critical approach. Academic departments of the institution select, approve and employ the tutors, being experts in their field.

An exam preparation leaflet is made available to learners to assist them with practical advice and to prepare them mentally for exams.

xi) Source document: Information booklet regarding the Centre for Continuing Education.

Franchising access courses: The said document contains information regarding the Centre which franchises the bridging or preparation courses for the institution. The Centre was established to redress the educational imbalances of the past and it encourages adults to improve their education through part-time studies. The institution awards certificates to learners who successfully complete their courses at the Centre. Applicable courses from the Centre will be credited for further studies at the institution.

xii) Source document: Annual report of the AD Centre.

Additional information regarding the structure: The Academic Development Steering Committee oversees work in the ADC and the faculties, recommends AD appointments and allocates available funds. AD thus has representation on executive level.

Programmes: English for Educational Development "is to be taken by all incoming learners to improve throughput rates" (quoted from annual report).

The Self-Access Learning Centre is a walk-in centre assisting learners with educational videos. This can be "one way of dealing with the problem of large classes. Learners can interact with self-access materials in ways that the classroom setting does not allow for." (Quoted from Annual Report.)

"A major threat to the AD programme ...is... an overemphasis on foundation courses and tutorial programmes as the major AD initiative, leading to a neglect of curriculum, management, policy and teaching development issues"(quoted from Annual Report). Therefore in future, the more integrated approach will be followed where access courses focussing on academic literacy will become "a compulsory integrated course in 1999 for all first years" in certain faculties.

AD "aims to assist educationally disadvantaged learners to gain access to higher education and succeed in their studies....to nurture and use the abilities of all the university community and to encourage and provide opportunities for lifelong learning through programmes and courses"(quoted from Annual report).

xiii) **Source document: News letter of the Academic Development Programme.**

Methods enhancing the AD of learners: During an intensive four week orientation programme, learners from historically disadvantaged schools who do have matriculation exemption, but have not reached the desired grade and want to enroll for degree courses in the Sciences, Applied Sciences, Economic and Management Sciences and Law, are prepared for student life in general, but specifically for the academic work culture and mathematics. Further enrichment is done through the presentation of study and thinking skills, computer literacy, English and Afrikaans proficiency. Another orientation programme is run within the Faculty of Arts. All enrolled learners for this faculty are invited to take part in the programme. Focus areas are: development of a distinctive working culture, of listening, reading and writing skills, of self-esteem, of critical thinking skills and to become interactive learners in class. Computer literacy and language components are also included.

In the Mission Statement of the ADP they state that they render a service to the community at large as well, by addressing educational disadvantages at school level. Recruitment of quality learners from disadvantaged schools take place through a Science and Maths Winter School in order to amend the cultural composition of the institution. Enrichment programmes for teachers in the areas of management, contextual language proficiency and maths and science as implemented in Curriculum 2005, are being presented. The AD programme also strives towards the highest possible academic standards and play an active role in broadening access to all learners with potential to succeed at the institution.

xiv) Source document: Letter from the senior AD-coordinator and future plan for AD

For this feedback I relied on written feedback from one of the senior AD coordinators at the institution, in reply to my second questionnaire. Since there was nobody available for a personal interview on the day of my visit to this region, the respondent supplied the feedback by posting a letter to me and including a comprehensive source document on their future planning for AD at the institution. The feedback is very comprehensive, though, as can be seen from the results.

The structure

The Academic Development Programme is coordinating AD activities which take place within faculties. AD staff coordinates the AD programmes, therefore a decentralised function.

Profile of practitioners: (A general overview for the institution.)

Qualifications:	Educational and Subject specific Masters degrees.
Experience:	Science education, language development, assessment and testing for placement in appropriate courses, course design, curriculum development, materials design and policy development. Post-secondary teaching.
Special skills:	Educational research, action research.

Ideal profile of practitioner

As listed above.

Activities in order of frequency

Daily:	Student consultations, administration and planning.
Weekly/Monthly:	Teaching, design learning tasks, assessment tasks, new courses, assist with the evaluation of courses, run staff workshops, engaged with programme planning, policy documents and institutional restructuring.

Methods or programmes used

Supplementary tutorial programmes; separate language-based courses; introductory courses; extended courses; foundation courses; adjunct writing intensive programmes; educational development integrated in mainstream courses; senior level core courses.

Organisation of programmes

Supplementary tutorial programmes are additional weekly tutorials or workshops within a mainstream course, focussing on study and writing skills, clarifying content and concepts and which is voluntary and not credit-bearing.

Separate language-based courses are "credit-bearing (first year courses) which focus on critical reading and writing skills and concept formation using material related to learners' field of studies; allows for *"time-on- task", practice, deeper learning."* (Quoted from document received from institution.)

Introductory courses are offered in a similar fashion to the language-based courses, but with the focus on a particular discipline or field of study.

Extended courses spread first year teaching over two years, adding essential background knowledge and developing necessary skills. The first semester may be devoted to preparation courses entirely, with mainstream first year courses starting in the second semester only . This practice results in a "catch-net" for learners who failed the mainstream first semester and can then be referred to the extended programme, repeating the semester subject.

Foundation Year: "A 'bridging' year of fixed components (courses), with rest of degree left intact (fix-it-all model)." (Quoted from document.) Foundation programmes are a combination of enrichment courses with regular mainstream courses.

Adjunct writing-intensive programmes aim at developing reading and writing skills around tasks in the discipline and mainstream course, also at different year levels.

Senior-level "Core" courses "rationalise teaching of skills, theory and method at second and/or third year; co-requisite courses articulate with 'core' courses to reinforce what is being learnt and promote transfer." (Quoted from document.)

The Writing Centre is a walk-in facility for learners needing assistance in academic writing. Seminars and workshops are also presented .

The Computer Literacy Project is aimed at learners who need basic computer skills that will benefit their academic studies.

Educational development is integrated in all mainstream courses, since the "adoption of an Academic Planning Framework that requires all its programmes (curricula) to focus on the explicit development of 'generic' (core) skills such as writing, critical thinking, communication, numeracy and computer literacy." (Quoted from letter.)

Problems encountered

Not all faculties have yet introduced an integrated AD programme.

Preparation programmes for under prepared learners

The foundation year fulfils this purpose, as well as the language-based courses.

Influence of Curriculum 2005

No comment.

The aim of AD was given in the first phase.

Need for AD

To accommodate learners from disadvantaged backgrounds. To provide different entry levels. To allow for differential rates of progress through the curriculum.

Future plans

This institution has a vision for the future planning and implementation of AD. It includes meeting the global educational challenges, while still meeting the ongoing need for equity and redress.

E   Data analysis method

i) The data was analysed by thoroughly reading through the source documents, using the *constant comparative method* (Poggenpoel, 1998:338-340), comparing them with the data already gathered, in order to establish credibility and whether data saturation was reached. This was also done with the development of a grounded theory in mind.

ii) The researcher also aimed, at this stage, to *synthesize* the data, by reflecting on the emerging patterns and categories which have already been established during phase four, and whether these patterns were *reinforced* during the analysis of data in this phase, heightening the credibility of this research through consistency of the data. This could then result in a general, synthesized picture emerging, to which the researcher was sensitive while reading. This method is also called selective coding (De Vos and Van Zyl, 1998:274).

iii) The occurrence of new data was recorded.

iv) At this stage, the researcher decided to compare the findings of this research with that of another recent investigation already done with regard to AD in South African institutions of higher education, namely the SAAAD-report (1997). This was done to accomplish *transferability* of data, heightening the dependability of this research.

v) Trustworthiness was obtained by:
* Triangulation; making use of multiple sources and methods.
* Thick descriptions.
* Reflexivity; continuously reflecting on the data and its relationships and meaning.
* Audit trail.

* The occurrence of data saturation.

* Searching for negative evidence that might not fit in the emerging categories.

* Bracketing, in the sense of eliminating preconceptions.

F   Data interpretation

After analysing the data, the researcher felt that saturation of data had been obtained, resulting in the identification of certain patterns as discussed under the next heading. The findings of the SAAAD Needs Assessment and Audit of Academic Development in South Africa (1997), were juxtaposed against the findings of this research at this point, in order to indicate to what extent the data of this research is transferable and credible. A grounded theory of the current state of AD was therefore eminent.

*   Saturation

At this stage of the research, it could be detected that certain patterns were positively emerging.

i) *Structure of AD-units*

AD-units are structured as *central, independent units*, reporting to the Vice-rector/chancellor *Academic*, and coordinating its *functions throughout* the institutions.

This finding coincides with that of the SAAAD report (1997), stating that "there is considerable support for HEI's retaining a central academic development unit which would be staffed by a core of specialists in AD and educational development" (SAAAD, 1997:65). As far as functioning throughout the institution, the SAAAD report (1997:60) states:

> *From the data, it seems clear that greater devolution of AD functions to faculties and departments could contribute immensely in increasing the impact of AD. However, the retention of a central AD unit to coordinate all work conducted under the AD umbrella seems the most appropriate way forward, especially in the light of the current expansion in higher education combined with the growing pressures to review and strengthen*

quality assurance in teaching and learning -- both of which are likely to intensify the
calls made on the services and expertise of AD staff.

ii) *Profile of AD-practitioners*

The profile of most practitioners is related to the *educational field of expertise* and the skills/experience relate to teaching, curriculum development, academic development (in the broad sense), people skills and management. The SAAAD findings (1997:45-46) state that AD staff largely consists of senior lecturers and lecturers, having between one and ten years experience in AD. The report further states, that AD tasks, in future, would be to *advise* on matters relating to teaching, learning and assessment, to coordinate and monitor programmes and be involved with curriculum development (SAAAD, 1997:65).

iii) *Programmes and Methods*

Programmes and methods used, mostly relate to the *add-on approach* of non-credit bearing *enrichment* in the form of academic, social and personal skills. According to the SAAAD findings (1997:56-57), generic programmes which include orientation, counselling, mentoring, tutoring, and study skills form part of AD-practices.

Credit bearing courses (access, bridging, foundation courses) include certain *subjects* that are credited, i.e. institution P, but the AD interventions namely the presentation and development of different skills are usually not credit bearing. According to SAAAD findings, (1997:57), bridging, foundation and access courses, are all AD-activities, designed and presented by AD staff in cooperation with staff in the department concerned with the particular field of study (SAAAD, 1997:57). It is therefore still an add-on activity, and only intended for certain learners.

Extended courses are becoming quite popular, as the rationale of more time on task results in student performance to increase (i.e. institution C). The *changing focus* of AD practices from purely adding-on skills, to the extended programmes that integrate AD in the course material which are being credited, are becoming more prominent in a few institutions, though. According

to the SAAAD (1997:63) findings, "The majority of respondents expressed a *desire to move away* from an 'add-on' approach to student development: instead they wished to see it integrated into mainstream teaching activities". This underlines the view of the researcher, that an add-on, remedial approach is being utilised by most institutions at *present,* although the *desire* is there to change.

iv) *The aim of AD*

The aim of most institutions with regard to AD, is to support under prepared learners to be successful in their studies, for access to be attainable to previously disadvantaged groups, and to maintain academic standards. The SAAAD report (1997) found that 73,3% of AD practitioners stated that "their aim was to help learners from disadvantaged backgrounds" (SAAAD, 1997:63).

The data was at this stage found to be saturated, because very little new data emerged from phase five. It also compared favourably with the findings of other recent research in the same field, and can therefore be acknowledged as transferable and dependable.

*   New data

New data that emerged from this phase, is discussed under the following headings:

i) *Structure*

Institution U has AD *representation on executive level.* The only other institution with this structure is P.

ii) *Integrated approach*

The respondent of institution W, indicated that their institution is in the process of establishing a Centre for Higher Education Development which will incorporate AD units and assist *all faculties* to introduce AD as an integrated activity for *all programmes* (curricula). In the annual

report of yet another institution (U), foundation courses are being criticised for their peripheral approach to AD. It is stated that AD should adopt a transformative approach which includes four areas for development: institution, learners, staff and curriculum. English is to be *a compulsory subject for all courses in the first year* at this institution (U) and academic literacy will be a *compulsory integrated course as from 1999.*

The findings in this section coincides with that of the SAAAD report (1997). In sketching a scenario of student development *for the future*, the SAAAD report indicated that the majority of respondents felt that student development "*should* be integrated into every faculty and department, becoming part of every student's academic programme" (SAAAD, 1997:64), although it is not presently the case yet.

iii) *Professional development*

The professional development of learners in their field of study, is not explicit in most programmes offered as AD programmes, they mostly focus on academic, social and personal skills. Only institutions D and C explicitly states that they also prepare learners to relate to their chosen profession: Institute C conducts experiential learning in their AD programmes, as learners have to visit sites in the real job situation and simulations of real problems are presented, for meaningful problem solving to be practised. Institution D has special small group tutorials where the development of professional conduct and ethics is enhanced. This can be seen as an important, proactive development towards preparing learners for the realities of the world of work.

iv) *Community involvement*

Institutions D and V indicated that they are also involved in developing their immediate communities, by getting involved at secondary school level. Winter school projects and development of teachers at institution V, and Maths and Science programmes at institution D indicate this fact. This is done, in order for learners to be better prepared for tertiary studies, when leaving school.

v) *Senior level AD*

Institution W has indicated that AD practices will be implemented at second and third year level as well, reinforcing previous knowledge and the transfer of knowledge and skills acquired.

vi) *New approach to AD*

Institution W reported having a new aim and vision for AD, namely to meet global educational challenges. This is the first proactive approach towards AD which the researcher could detect when comparing it with the aims of other institutions.

G   Conclusion

The conclusion could be made that data saturation has been obtained, resulting in the fact that certain patterns could be identified. After scrutinizing the data, however, the researcher realised that as certain patterns were emerging, some information was still needed, for clearer comprehension and for more or less definite patterns to be established. At the time of conducting the interviews, the researcher was not yet aware of these patterns and the importance of establishing clarity with regard to these facts. She therefore had to establish where there was still missing information, deemed necessary to add to the patterns that seemed to be emerging, and contact these respondents to get the information, where it was not made quite clear during the interview, or on the questionnaires, thus contributing to the saturation of data. These issues are:

i) Credit bearing courses. It seems that there is a tendency to develop credit bearing AD courses as opposed to non-credit bearing interventions. Not all institutions indicated whether their courses include any credits.

ii) The line of authority was not always clearly indicated in the organigrams. The pattern emerging is that the vice-rector/chancellor *academic*, is the most senior person to which AD reports. The researcher therefore had to establish whether this is true of those institutions where it was not clearly indicated.

iii) A decentralised structure was found in only three institutions. The pattern therefore seemed

to be centralised structures. One institution did, however, not clearly indicate whether the structure is centralised or decentralised, and the researcher had to get this information to add to the emerging pattern.

iv) One respondent (institution Q) cancelled the interview when the researcher was at her institution, therefore certain questions, which were specifically dealt with at the interviews, still needed to be asked and answers received.

The researcher therefore had to "confirm or disconfirm" the emerging patterns (Schurink, 1998a:255).

2.2.8 PHASE SEVEN

Research question 7

How will the researcher ensure as complete a picture as possible, and clear comprehension with regard to the patterns that have emerged during phase five of the data analysis?

A   Specific design

By constantly reflecting on the data and employing systematic techniques of sampling and data analysis, the researcher made use of the grounded theory method, in a basic action research mode.

B   Sample

After scrutinizing the data, to establish where certain information was missing or of importance to the emerging patterns, the researcher identified nine institutions which she had to contact, in order to clarify the issues as described under the conclusion of the previous phase. The sampling method used, is that of confirming and disconfirming cases (Schurink, 1998a:255).

C   Data collection method

The method decided upon, was structured interviews. Respondents were contacted either telephonically or via E-mail to gather missing information which could clarify certain issues as discussed above.

D   Results

i) Credits for AD courses

During a telephonic conversation, it was established that not all first years are compelled to attend the Life Skills course at institution A. It is credit bearing for learners in the Department of Education (teachers' training) only. The bridging course for Engineering learners is not credit bearing. It prepares learners for the mainstream. It was not clear whether the access programmes at institution H are credit bearing or not. During a telephonic conversation it was indicated that the pre-tech courses are not credit bearing.

ii) Structure: Line of authority

It was not indicated on the questionnaire of institution H, what the line of authority is when the structure of AD was given. A telephonic conversation clarified this issue. Academic Development structures report to the Vice-rector: Academic.

The questionnaire feedback of institution M did not indicated what line of authority is followed by the AD section. Interestingly, when I discussed this with the director of the Unit, he indicated that they were in the process of changing the line of authority from that of Student Affairs to that of Academic Affairs.

A telephonic discussion clarified that the AD department within institution P reports to the Academic Development Forum, chaired by the Vice-rector: Academic.

At institution V, a telephonic conversation clarified that the director of the Academic Development Programme reports to the Vice-rector: Academic.

A telephonic conversation with the respondent of institution W clarified that the AD unit reports to the Deputy Vice-Chancellor: Academic.

iii) Decentralised structure

The structure of AD at institution J was not very clear and it was therefore necessary to contact the respondent telephonically to discuss the structure. Academic development is totally decentralised, meaning that it is the responsibility of the deans of faculties. Academic skills are presently being presented in the Science Faculty and the Faculty of Commerce. In some departments, linguists take on the responsibility of AD. The AD programmes are presented as add-on skills and is not credit bearing. The lecturers make use of the discipline, however, to present the different skills.

INSTITUTION Q

As the interview with this institution was cancelled as previously reported, the researcher requested information still needed (which was dealt with, while interviewing the other respondents), through E-mail. This was the response:

Aim of AD
"To transform teaching and learning. To support models that aim at transformation on a wide scale at the level of curriculum and educational research development." (Quoted from E-mail correspondence.)

Need for AD
There is a need "for content lecturers and academic (language and literacy) development practitioners to engage in participatory cross-disciplinary research in the areas of curriculum development and classroom-based research... To assist lecturers in developing classroom practices and theories in use....to assist in according formal access to knowledge and particular academic

discourses to all learners in order to democratise education...To conceive ...student/staff/curriculum and research development as connected practices." (Quoted from E-mail correspondence.)

Realising of potential

Only if all learners are involved and the aim and needs as depicted above are met. A high level of commitment and support by the Executive of the institution is necessary .

E   Data analysis method

i) The data was analysed by open coding, therefore conceptualising it, and then categorising it into the *existing* categories. This was done by reading through the responses received by E-mail, or the written notes made by the researcher while in telephonic contact with the respondent.

ii) Trustworthiness:

  *The aim while reading, was to establish if consistency of data was reached, implicating dependability and trustworthiness. Reflexive and critical thinking was employed.

  *The recurrence of data implicated data saturation, also an indication of trustworthiness.

  *Triangulation was again done, by making use of various methods of data analysis, sources and researchers. At this stage, the researcher requested Prof. T. de Wet, the qualitative research expert, to act as critical reader of this chapter.

  *By outlining the exact steps in data collection, an audit trail was done.

F   Data interpretation

i) Analysis of the results showed a clear pattern of AD units reporting to Academic Affairs and not Student Affairs.

ii) It is also now established that there are *four* institutions (the previous phases indicated three) with totally decentralised AD programmes. AD staff report to the dean of the specific faculty and work independently in departments. There is not a centralised unit coordinating the programmes and functions.

iii) AD programmes are not credited in most cases, and still fulfil a marginal role in many institutions, being add-on programmes. This coincides with the researcher's own experience. There is, however, a change towards an integrated, holistic approach (institution U and W).

iv) The transformation of AD to include the institution as well as the lecturing staff was yet again highlighted as previously indicated by respondent U and W.

G   Conclusion

Consistency and dependability of data are thus reached, because most of the information received at this stage indicates a pattern. Recurrence of data implicates saturation. The researcher was therefore satisfied that this research was trustworthy in all aspects of the word, as described in chapter 1.

2.3 CONCLUSION OF THIS CHAPTER

In this chapter the researcher described the research process and recorded the data as it was presented in the questionnaires and source documents, or by respondents during the interviews and conversations. The researcher analysed the data through the use of various cognitive processes; reading and interpretation of the texts, analysing, inductive reasoning and synthesising This resulted in understanding of underlying issues, referring to specific and indirect feedback and adhering to comprehensiveness and thoroughness. The data was then reduced, by identifying certain patterns that emerged from the data and by describing the categories (open coding, bracketing, axial coding, selective coding and intuiting). In adhering to the criteria for validating this research, different data sources were used, namely feedback from questionnaires and interviews, source documents, transcriptions of telephonic conversations and personal letters or e-mail messages from respondents. This was done as a form of triangulation, heightening the credibility and dependability of this research. Different forms of data collecting were used, namely; open-ended questionnaires, semi-structured interviews, observation and recording of behaviours, written records of AD-practices, for instance documents and correspondence, and transcriptions of telephonic and e-mail conversations. By using various forms of data collection, and collecting

data throughout the study, the researcher gained a better understanding of the setting, thereby heightening the internal validity (trustworthiness) of the research (Huberman and Miles, 1994:431). Consistency or dependability of the data was obtained when saturation of data occurred (refer to conclusion of phase seven).

The researcher was satisfied, that a grounded theory with regard to the current state of AD at universities and technikons in South Africa has been developed, describing the practice of AD.

It seems, when interpreting the data, reflecting on the salient issues that seemed to emerge, that:

i) AD is mostly a centralised activity and regarded as an *academic issue*, the structuring of AD units indicate that the line of authority leads to the vice-rector/chancellor, academic.

ii) AD practitioners are *professional people*, trained in the fields of education, psychology and language. In some instances these practitioners are lecturers, dealing with AD practices, integrated within their field of expertise.

iii) AD is still, in many institutions, regarded as an *ambulance service* for under prepared learners. The programmes and methods focus on remedial support. These programmes are:

 a) Orientation programmes for first entry learners, with the aim of determining potential, giving information, and presenting academic related skills like study skills, exam techniques, writing skills, and life skills.

 b) Foundation or bridging courses for learners who do not meet the entrance requirements. These courses are characterised by the presentation of some of the subjects needed for the intended course, supplemented by various skills, similar to those presented in orientation programmes.

 c) Support programmes for learners to attend voluntarily. Many of these are computerised, remedial programmes. Some are counselling-oriented, where mentor and tutor programmes are run.

d) Extended courses, for the same reason as above, offered with special remedial interventions to assist learners to cope and giving learners more time in which to finish the mainstream course.

e) Integrated credit bearing programmes sometimes replace the bridging courses where AD is integrated in the mainstream subjects and courses. This approach seems to aim at the inclusion of all learners. It can be said that this is a move towards a holistic approach to AD of learners, addressing the "problems" within and across subjects.

The question could be asked, whether the development of the student as a whole human being is taken into consideration, and whether the aim is to prepare them for the future, or are AD practitioners only interested in the *academic success* or conforming with the new curriculum, when introducing AD programmes?

iv) The *facilitation* of the programmes seems to differ from institution to institution. Mostly, however, an add-on approach is followed, presenting learners with the required skills aiming at improving their performance.

v) When analysing the *aims* of AD units at the various institutions, being the crux of what practitioners intend with their interventions and programmes, it seems as if AD focusses on *supporting* learners to gain *access* to tertiary institutions, to *maintain set standards* at these institutions and to *increase* student *performance and throughput*. A purely academic, remedial approach.

vi) Positive is, however, the fact that one institution is transforming the old view of AD as an ambulance service, into a post-modern approach. They intend to focus on "changing global and societal needs" with regard to education, generally, and AD specifically.

The main concern of the researcher is whether AD practices are proactive. Do they aim to prepare learners for the demands that the future, and especially the world of work in this rapidly changing environment, will place on learners? From the data analysis, it does not seem as if either the AD practitioners, or the SAAAD report, have taken the demands of the future into

consideration, when reporting on and planning for transformation of AD at higher education institutions.

In the next chapter therefore, the changes and accompanying demands of the future will be scrutinised, focussing on the needs of the world of work and reflecting on what learners should be prepared for, if they want to be employable citizens, and lead fulfilling lives.

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CHAPTER 3

What are the demands of the future ?

Every transformation...has rested on a new metaphysical and ideological base; or rather , upon deeper stirrings and intuitions whose rationalized expression takes the form of a new picture of the cosmos and the nature of man.

Lewis Mumford

(Harman, 1988:1)

3.1   INTRODUCTION

In order for us to establish what AD practitioners should be doing in practice, we need to make a study of what the demands of the future are, since this is what we prepare our learners for.

The researcher has done literature research in order to establish what attributes, competencies and attitudes, inter alia, will be required for learners to be successfully prepared for the future world of work. Although literature research traditionally refers to the past, the researcher studied the works of philosophers, visionaries, scenario planners and futurists, in order to get a picture of changes, trends and predictions that are likely to become realities in future.

The researcher has realised, after doing extensive bibliographical research, that in order to understand and describe the demands of the future, one only has to look at the realities of the changing world around us, to realise that there are indeed dramatic changes taking place, with continuous new challenges to be met in all aspects of life. It has become clear to the researcher, that these continuous changes have a reciprocal effect on each other, engulfing man in all his most basic and fundamental relationships, namely:

   a) Man and his intrapersonal relationship (mind and consciousness).

   b)Man and his interpersonal relationship (social /political).

c) Man and his relationship with the natural world (science and technology).

d) Man and the outcome of his relationships (labour and economy).

The researcher focussed on the above areas because they are not only the most basic and fundamental, but they also encompass man's experiences in this world and impacts on the meaningfulness of man's existence, namely work. The reciprocal effect which these changes have on each other can be explained as follows:

a) The changes described in this chapter have an effect on man's internal belief system in that man struggles to get to grips with all these new challenges. These changes result in certain symptoms which can be seen in modern life, like psychological stress, depression and social problems like drug abuse, which usually accompany adaptation to change. b) Decline in morality, break-up of the nuclear family and escalating violence within society, which are all symptoms of our day and age, are but a few of the symptoms of man's struggle to keep interpersonal relationships sound and healthy amidst contradicting and changing values.

c) Environmental changes are also taking place, because of the decline of natural resources which are being exploited by man, who is always aiming to expand the economy through science and technology. This, for instance, results in the present green-house effect, which causes imbalances in nature.

d) The world of work has undergone major structural and organisational changes, causing man to continuously adapt, be re-trained and change his focus. This fact results in high unemployment figures which trigger the whole cycle again, man having intra-personal problems and feelings of not being able to cope. These feelings spill over into his/her social relationships. Science and technology drives more and more changes; and the world of work needs to keep up with these challenges, demanding more from the workforce.

The fact that changes are taking place does not seem strange or new at all, because change is part and parcel of our lives and has always been. But the world as we see it presently, presents us with problems that are unique and radical, which cannot be solved by traditional ways or the existing world view (Land and Jarman, 1992:95). The researcher will investigate the major changes that took place from around 1100, when the first major "revolution" in man's history took place,

namely the agricultural revolution, up to the present - 2000 A.D. Futurists' philosophers' and scenario planners' views of what is anticipated for the future, made it possible for the researcher to assess what these changes are and how it impacts on man in all his relationships.

3.2 THE CHANGES FACING MANKIND

In the following paragraphs, the researcher endeavours to indicate the major changes that are taking place and which keep on perpetuating. In these turbulent times it seems as if change is the only constant, the only reality which man can count on, with dramatic implications of drastically new challenges which face man of the 21st century.

These changes are discussed according to the four waves theory of Toffler and Toffler (1995 & 1999), Maynard and Mehrtens (1993) and Mehrtens, (1999); the growth curves of Land and Jarman, (1992); a theory of cognition (Capra, 1996 and Harman, 1988); political and social change (Sunter, 1992 and 1996 and Toffler & Toffler 1995 and 1999); theories with regard to man's view of the natural world and science, (Capra 1996, Harman, 1988, Bowers, 1993, and Bateson, 1979); and changes in work and the economy (Sunter, 1992 and 1996; Harvey, Geall and Moon, 1997; Carruthers, 1997).

3.2.1 THE FOUR WAVES OF CHANGE

When one looks at the main events related to man, Toffler and Toffler (1995:19) point out that the human race has undergone two great "Waves of Change" and the "Third Wave" is "sweeping across history" at this present moment, with the "Fourth Wave" already on the horizon (Toffler, 1999). Land and Jarman (1992) refer to these changes as growth curves. Similar to the pattern of growth of all living systems - plants, animals, humans - which develop from a state of disorder, to increasing states of order, up to a point where a decline again takes place, the products of human consciousness and energy - their cultures, societies and civilisations - also follow this pattern of growth and decline (Mehrtens, 1999:25). These growth curves overlap each other. When one curve is on the decline, another has already started to emerge. This is what Land and Jarman (1992:9, 40-51) call "breakpoint change", when things start to "breakdown" others start

to "breakthrough". According to this theory, the world is presently on a growth curve that is now on the decline indicating that a fourth wave is looming. This is indicated in figure 3.1.

Figure 3.1   **Growth curves**
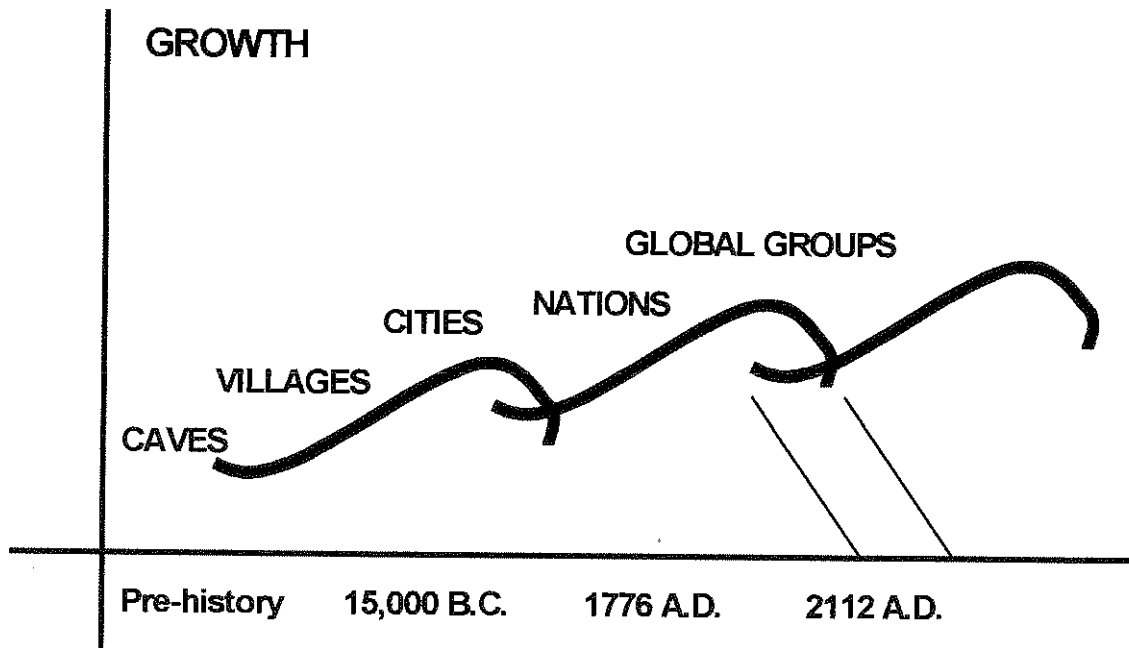
Mehrtens, 1999:25

According to Toffler and Toffler, the first wave refers to the agricultural revolution that took place around 1100-1700 A.D. when man started to develop means of cultivating the land in order to store food and later to trade in agricultural products. This era or " First Wave" took thousands of years to play itself out and to make way for the "Second Wave", or second curve, namely the rise of the industrial revolution during the seventeenth century. This wave lasted from approximately 1600 A.D. up until the present, according to Toffler and Toffler (1995:19), but the "Third Wave" has already gradually started during the nineteen fifties with the astounding advancements in technology and the accompanying "information explosion". Characteristics of the third wave have been described by several authors (Barker, 1992; Land & Jarman, 1992; Sunter, 1992; Schwan & Spady and Toffler & Toffler, 1995), and vast differences can be detected from those of the previous waves.

The change from the first to the second wave was gradual, and took centuries to play itself out, but "today history is even more accelerative, and it is likely that the third wave will sweep across history and complete itself in a few decades" (Toffler and Toffler, 1995:19). The idea of a "Fourth Wave" already emerging is imminent, and as Debold (1998:1) remarks:

...each wave is behaving as a tighter and shorter bell curve relative to time, (therefore) the third wave might very well be cresting NOW. And one would logically ask, just what might be taking its place in the same fashion that the industrial age has given way to the information wave?

Maynard and Mehrtens (1993:xiv), indicate that the emergence of the Fourth Wave is already visible. They summarise the major trends of the different waves as follows:

The Second Wave is rooted in materialism and the supremacy of man. From this orientation flows a stress on competition, self-preservation, and consumption, which has led to such current problems as pollution, solid-waste disposal, crime, family violence, and international terrorism. The Third Wave manifests growing concern for balance and sustainability. As the Third Wave unfolds, we become more sensitive to the issues of conservation, sanctity of life, and cooperation. By the time of the Fourth Wave, integration of all dimensions of life and responsibility for the whole will have become the central foci of our society. The recognition of the identity of all living systems will rise to new ways of relating and interacting that nourish both humans and non-humans.

It is of paramount importance that educators and AD practitioners take note of these changes, because they have an immense impact on how learners should be prepared to face the demands which these changes constitute. For the future, man not only needs to survive in the new waves, but must be prepared and *exceed* himself, lest it should not overcome him. Man therefore needs to be cognisant of continuous changes that impact life and living dramatically.

3.2.2   MAN AND HIS INTRAPERSONAL RELATIONSHIPS

As stated under 2.1, the researcher will explain the current changes firstly by referring to man's intra-personal relationships, leading to the investigation of new theories in the cognitive sciences, as well as referring to the mind and consciousness. Intra-personal relationship refers to man's inner world; how and what he thinks, feels, knows and understands about himself, in other words, what his personal paradigm, character and motives are, and how he relates to it. According to Webster's encyclopedic dictionary (1989), cognition is: " 1) The act or process of knowing or perception; 2) The product of such a process." Cognitive science therefore refers to the study of the process/product of knowing/perception. This process can be on the conscious or unconscious level. Mind is the process of cognition (Capra, 1996:171) and encompass conscious and unconscious knowing. Man forms mental constructions of what and how he feels, perceives and knows, through experiences from the outside world, but can also consciously experience what goes on inside of him. Harman (1988:85) describes consciousness as follows:

> *Ordinary conscious awareness may be thought of as a narrow "visible spectrum" between the subconscious (for example, instinctual drives, repressed memories, autonomic functioning) and the supra conscious (for example, creative imagination, intuitive judgement, aesthetic sense, spiritual sensibility).*

Intra-personal relationship therefore refers to conscious and unconscious knowing and is studied by cognitive sciences.

3.2.2.1   New developments in the cognitive sciences

The emphasis during the scientific revolution, which was dominant during the second wave, was on cognition or what can be known; objective experience, or the study of phenomena as they present themselves without giving personal meaning to them; and phenomena were reduced to minute particles which were studied as such. It has influenced the internal belief system about reality being only that which presents itself to man and which he *consciously* perceives, to be real (the positivist, reductionalist view).

The important relationship between cognitive sciences and the *mind* as reflecting the totality of human experience: thinking, feeling, acting, body, soul and spirit, was not acknowledged. This view, therefore, resulted in an ambivalence between our inner world, religion and science; it could not be reconciled. Insofar as phenomena like extrasensory perception, precognition (to know about up-coming events), psychic healing, could not be explained by the known laws of physics and chemistry, they ought not to happen! (Harman, 1988:56). People therefore had to live their religious and spiritual lives apart from what science was telling them about reality. According to Maslow (Harman, 1988:78), this resulted in the many psychological problems which people are experiencing in modern times. He explains:

> *We have been taught not to risk exploring the unconscious mind....(and this resulted in the fact that)...We find another kind of resistance, a denying of our best side, of our talents, of our finest impulse, of our highest potentialities, of our creativeness....It is precisely the god-like in ourselves that we are ambivalent about, fascinated by and fearful of, motivated to and defensive against.*

The prevailing paradigm of the second wave (which includes the scientific revolution and the industrial revolution), limited the mind to "mass-thinking" and as being apart from the "soul" and spiritual experiences. It did not acknowledge the fact that man's thoughts and actions are rooted within his/her unconscious mind. It could not give answers to the questions relating to relationships between mind and matter and could not explain the role of intuitive knowing, and the meditative nature of the subconscious mind. These unanswered questions urged scientists and researchers to find answers by exploring these phenomena in using new, innovative ways. They started looking in a different direction, from a different angle and as a result, had no choice but to see things they had never seen before!

It led to new theories about cognition (Capra, 1996:156-157 and Bateson 1979) which implied a *new concept of mind* where separation between mind and matter disappeared.

3.2.2.2   A new theory of cognition

During 1991, two Chilean scientists, Maturana and Varela (Capra, 1996:170) developed a systems theory of cognition (the Santiago theory) where cognition, the process of knowing, is identified with the process of life. The new concept of cognition, according to the Santiago theory (Capra, 1996:170), involves more than thinking; it also involves *perception, emotion and action.* This is a major breakthrough, being the "first coherent scientific framework that really overcomes the Cartesian split between mind and matter" (Capra, 1996:170).

As Capra says (1996:168):

> *According to the theory of living systems, mind is not a thing but a process - the very process of life. In other words, the organising activity of living systems, at all levels of life, is mental activity. The interactions of a living organism -plant, animal, or human- with its environment are cognitive, or mental interactions. Thus life and cognition become inseparably connected. Mind - or more accurately, mental process - is immanent in matter at all levels of life.*

This theory relates to a new concept of mind, which was described by Bateson (1979), Capra (1996) and Harman(1988).

3.2.2.3   A new concept of mind

Descarte, the seventeenth century French philosopher, scientist and mathematician, wrote "rules for the direction of the mind" in 1628, advocating rationalism and describing the mind as the "thinking thing". The main objections to his views are that they center in exaltation of abstract reasoning to the neglect of sense experience and the excessive rigidity of its dualism between mind and body (Encyclopaedia International, 1971:558 and Capra, 1996:171).

In sharp contrast, late twentieth century scientists all over the Western World like Maturana and Valera in Chile, Progogine in Belgium, Haken and Eigen in Germany, Lovelock in England and

Bateson and Margulis in the United States, have indicated that mind is inseparably connected with the concept of life, and that seeing the pattern, rather than the substance of phenomena are important. Life and cognition become inseparably connected, because "mind - or, more accurately, mental process - is immanent in matter at all levels in life" (Capra, 1996: 168-169).

Bateson's (1979) primary interest is to demonstrate that the foundations of modern Western thought are based on Cartesianism (mind versus matter, body Venus soul) which manifests in basic misunderstandings about the nature of the individual (Bowers, 1993:158). Bateson (1979:89) emphasized that mind is manifest not only in individual organisms but also in social systems and ecosystems. It was therefore clear to him "that the phenomenon of mind is inseparably connected with the phenomenon of life" (Capra, 1996:169). Similarly, Harman (1988:10) negates the dominant view of the scientific revolution, that mind and matter are to be studied separately. He, as well as other researchers have pointed out quite a few dramatic changes with regard to the dominant views held by natural scientists about how reality is perceived. Some of these research findings are worth mentioning.

a)   The power of consciousness

Roger Sperry, a Neuro-scientist and 1981 Nobel Prize winner in Physiology or Medicine studied patients whose brains had been divided and pointed out the important differences between the left and the right hemisphere. He actually went further and wrote a paper entitled "Changing Priorities" (Harman, 1988:11), where he stressed the importance of subjective experience and suggested a direct break with behaviourist and "materialist doctrine" which ignored consciousness. Sperry gives full recognition to "inner conscious awareness as a causal reality" (Harman, 1988:11). In other words, a person's inner decision to act, causes things to happen as opposed to the behaviourist view that "things" that happen cause a person to act (behave). This is a powerful shift from being *reactive* to becoming *proactive!* It suggests a true fundamental shift that influences a person's world view dramatically. From the scientific world-view perspective, science was alienated from theology, philosophy and poetry; it did not probe into mind and spirit; it was therefore *fragmented.* What this new paradigm suggests is wholeness, interrelatedness of all sciences, an awareness of consciousness as a power from within, that has to be researched,

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and above all, that there need not be incompatibility between science and religion.

Whereas Roger Sperry's findings were related to Neuro-science, similar findings are described by Harman, while doing research in the Noetic Sciences and Psychology, and following along the same lines of thinking as Sperry.

b) Consciousness gives rise to matter

The fundamental change that is taking place today, according to Harman(1988:34) can be described along the following metaphysical perspectives: There are three "basically different kinds of implicit metaphysic":

* M-1   The universe is made up of *matter-energy*. We learn about reality from studying the *measurable world*. This refers to the positivist assumption that this is the only way we can learn. This metaphysic postulates that "consciousness emerges out of matter (that is, the brain) ....." (Harman, 1988:34). Therefore consciousness is related to the *physical brain* and what we can study about it. This view was firmly held by the early twentieth century scientists.

* M-2   A *dualistic* metaphysic, postulating that "There are two fundamentally different kinds of basic stuff in the universe: matter-energy and mind-spirit stuff" (Harman, 1988:34). Two complementary kinds of knowledge develop from this metaphysic where objective science as well as subjective exploration is acknowledged. This view emerged some two decades ago (1970's) when scientists recognised that the extreme positivist position does not square with human experience.

* M-3   This metaphysic finds "the ultimate stuff of the universe to be *consciousness*. Mind or consciousness is primary and matter-energy arises in some sense out of mind" (Harman, 1988:34). The way we *perceive* reality consciously or unconsciously, is therefore what is true. This implies however, that reality will be perceived through different "cultural windows" because embedded in man's world view are his cultural

experiences. This view is presently held by a number of scientists who find that the M-3 metaphysic fits best, when they take their *total experience* into account.

The following table (3.1) will briefly summarize the three basic metaphysical perspectives:

TABLE 3.1   Metaphysical perspectives

THREE METAPHYSICAL PERSPECTIVES

• M-1 MATERIALISTIC MONISM
(Matter giving rise to mind)

• M-2 DUALISM
(Matter plus mind)

• M-3 TRANSCENDENTAL MONISM
(Mind giving rise to matter)

(Harman, 1988:35)

According to Harman (1988:35), the fundamental change which is happening in Western Society today, is from M-1 to M-3 metaphysic. "Whereas the original Copernican revolution reordered our concepts of *outer* space, this one is concerned with our understanding of *inner* space" (Harman, 1988:37). The question to be asked is not which one of the metaphysics is true, but "which one seems to fit" best with the *totality* of human experience. The M-3 metaphysic reconciles science and religion, in recognising that *mind can give rise to matter*.

This indeed constitutes a hundred and eighty degree mind change, which affects the way one perceives reality, and which is in direct opposition to the views of the scientific revolution. Man is compelled to see his cognitive processes as part of his whole experience of life. Emotions, actions, thoughts (subconscious and conscious) are all integrated and forms part of *man's potential*. It is futile to only rely on cognitive abilities, only depend on realities as they manifest

in the objective world. Man is challenged to develop *intuitive knowing*, explore and utilise *creative potential* and rely on his *internal wisdom*. Harman(1988:86) concludes that:

> *...there is a creative/intuitive/spiritual mind which is not limited in ways we might expect the mind to be limited. Access to it , and indeed identification with this deep Centre, can be facilitated by various meditative disciplines, again to an extent that is ultimately unlimited. Man's deepest ecological, humane, moral and spiritual commitments are all rooted in this realm of human experience.*

One can conclude, therefore, in saying that there is an undeniable link between man's thinking, perceiving, feelings, spirit, soul and his behaviour. Cognition arises from inner wisdom, it is not presented by outside stimuli or so-called reality. If it were, why then, are there so many different views of the world, held by individuals and cultures? This new concept of the integration of man's thoughts and actions are indeed one of the most important changes taking place right now and its reciprocal impact becomes clear as the research proceeded.

3.2.3 MAN AND HIS INTERPERSONAL RELATIONSHIPS

The profound changes which are taking place in the minds/views of man, as described under 3.2.2 and which impact on his subconscious/inner world, are bound to have a reciprocal effect on man's interpersonal relationships. The researcher concentrated on the social order and, to a lesser degree, political changes, depicting how these changes affect interpersonal relationships.

3.2.3.1 Social order

The social order during the first wave was that of extended family systems, where three to four generations worked and stayed together, in a supportive and caring community based system. Interpersonal relationships were tight and close, with the patriarch having all authority.

The extended family system of the agricultural era was replaced by the nuclear family (father,

mother, children) during the industrial revolution, because family members were now mostly working outside their home environment, becoming financially independent. They were therefore no longer dependent on people outside the immediate family for support. In the eighteenth century, people fulfilled their calling through work. They kept to a strict work ethic of thriftiness, diligence, honesty and set working hours. Characteristic of the nineteenth century, was the self-disciplined, self-made man (not woman) who lived in frugality in order to generate wealth, because he saw it as his responsibility to provide for the next generation. Success was the ultimate drive and people pursued the "will to win" attitude, including competence, self-confidence and high energy levels.(Harman, 1988:133-143). The unemployment problem following the depression after World War II, resulted in a chain reaction of mass production, mass employment, mass distribution of purchasing power, resulting in a *consumer society* where frugality was not valued anymore and it actually resulted in becoming the *"waste society"* we know today.

In modern society, today, psychological health is linked to being employed. Unemployment brings societal problems like drug abuse, crime, ill health and family violence. Yet, decision makers still stick to the paradigm of boosting the economy in order to produce more, consume more, employ more, waste more, in an ongoing, vicious, snowball effect, instead of acknowledging the fact that fundamental changes are taking place now, which need fundamental re-form. The problems facing the world today, are multi-faceted, and impact vastly on society. According to Harman (1988:142-143):

* Economic growth cannot continue to generate enough jobs for the growing population.

*The quality of available jobs is not suitable for the growing numbers of highly educated people, resulting in under-employment and a dissatisfied workforce.

*Technology takes on the jobs previously done by people.

*Education is no longer a sure route to a fulfilling career, as it doesn't ensure status, high income or power.

These facts have indeed serious implications for man. When the social order (including work) changes, man needs to change as well. The reciprocal effect between social order, economy, politics, work, etc. can be seen in the fact that social philosophies are also changing. According to Sunter (1996:109-111), the industrial era was characterised by strict class-based identity and collectivist philosophies. These philosophies underlined the view that the individual's freedom of choice was restricted, based on social distinction. Social domination by class distinction, which characterised the second wave, has gradually changed during the third wave/curve, to a dominant "middle class", with individual rights and individual freedom as important philosophies. This philosophy is dominant today and can be seen in the vast number of minority groups advocating their rights (minority language users, gays and lesbians, environmental activists, the physically handicapped, to name a few).

The feminist movement which started during the nineteen sixties, advocated the rights of women. This lead to a social order which is eminent today, of women being active in the work force, on the same level and in nearly the same numbers as men. This impacts on man's interpersonal relations:

a) Family order has changed in that parents' roles are interchangeable. The man takes over many household chores and the woman's time is now divided between work related and family related activities. This has vast implications for both men, women and children, who have to adapt to the changing roles.

b) The social institution of marriage has been affected. It is no longer deemed necessary to enter into lawful marriage. Increasingly people are living together, in order to keep their own freedom, for economic reasons, and because of power relations between men and women.

c) Relationships in the work environment have changed. It is no longer strange to have women managers with men having to report to them, something which was not even contemplated some decades ago!

d) The ever increasing entrance of women to the job market has a reciprocal effect on organisation culture, which again impacts on interpersonal relations. This phenomenon is described by Sunter (1992:19):

Gender representation in the job market has changed dramatically in the last few decades, 70% of American "housewives" are presently working and this has had a profound influence on the business culture.

This phenomenon is depicted in figure 3.2

Figure 3.2 Influence on the business culture through women entering the workforce

Male

Female

Performance & growth
Rational, analytical decision making
Technology dominates
Big is best
Achievement & interdependence
Hierarchy works best

Quality of life not quantity
Intuition, empathy
Interpersonal skills dominate
Small is valuable
Interdependence, co-operation
Groups, egalitarian cultures
works best

Manufacturing culture

Service culture

Sunter, 1992:85

These are dramatic changes in the social order and need re- orientation which seriously impacts on man's intra-personal as well as interpersonal relationships.

3.2.3.2 Political change

The changes in the political systems from the first wave to the present third wave, can simplistically be described as from the autocratic authoritarian system, to the democratic majority rule system, to what Toffler and Toffler describes as the "configurative society based on twenty first century democracy, with recognition of *minority power* and decision division. All over the world (and in South Africa), minority groups are entering the political arena: Green parties,

feminist-orientated parties, as well as gay and lesbian parties are amongst these new minority groups (Beeld, 1998:4). The aim of these groups, according to the report (Beeld, 1998:4), is to establish a visible political front, with a specific identity. It therefore underlines the philosophy of individual rights and freedom described in the previous paragraph (Sunter, 1996:111) and shows how the "new" wave affects all spheres of reality.

In South Africa, vast changes have occurred with the change of government in 1994 from Nationalist Party rule to the government of national unity where the ANC plays a dominating role, although initially allowing for minorities to form part of this government. There has been changes in all spheres of South African life, driven by new political philosophies. People therefore have to re-orientate themselves to these vast changes, especially with regard to interpersonal relationships. Where South Africa had a society divided by race, integration is now eminent, and people have to get to grips with each other's cultural needs.

This scenario is true in all countries where drastic change in political structures and philosophies take place, and it happens all over the world, today, i.e. the fall of communism and subsequent reform in Eastern Europe during the nineteen nineties.

People therefore are no longer expected to be mass thinkers, influenced by authoritarian political and/or social leaders, nor are they excluded from certain activities and privileges through class distinctions. People of the nineties are enjoying more freedom, which includes freedom of speech, choice, views and religion. This implicates therefore, that the challenge is for people to be informed in order to make choices, they need to develop responsibility in order to deal with all this freedom and above all, need to develop a certain broad-mindedness and tolerance towards the views of their fellow human beings. This is a total change from the robot-like mass-thinker of the second wave.

3.2.4 MAN AND HIS RELATIONSHIP WITH THE NATURAL WORLD

In the following paragraphs, the researcher endeavours to indicate changes which have been brought to the fore through research in the natural sciences. The phenomenal impact of technology will also be dealt with, as it impacts greatly on man's relationship with the natural world.

Developments in the natural sciences have been described by various authors (Harman, 1988; Capra, 1996; Bateson, 1979; and Hofmeyer, 2000) and these have vast implications for modern man. Along the same lines, as the Wave Theory of Toffler and Toffler, (1995), Harman (1988:9) states that some changes are taking place all the time, *but* that there seem to be particular periods in history when more fundamental changes take place. Mumford (Harman, 1988:9) claims that there have not been more than four or five of such "transformations" in the entire history of Western Civilization. One of these transformations, the "Scientific Revolution", is described in more detail in the following paragraphs, because it had a profound influence on the thought patterns and the way man perceived the universe. (This era corresponds with the second wave as described by Toffler and Toffler (1995).)

3.2.4.1 The Scientific Revolution - (1500 - 1900 AD)

Since the scientific revolution, which started around the sixteenth century and was initiated by Copernicus' ideas that the earth rotates daily on its axis and revolves around the sun once a year, the world has experienced profound shock. It required a complete change in the conception of the universe and influenced the philosophical views of the academics of the day - Earth and man were not the centre of the Universe anymore! (Harman, 1988:9).The scientific revolution influenced the world view in such a way that the role of "Providence" and "Divine intervention" gradually made way for "rationality" where the scientific method was the means of verifying and validating knowledge. The truth lay in the empirical: Through scientific inquiry, observation and experimentation, scientists found what was perceived to be "true". In other words, according to Slabbert (1998:7), only that which could be objectively observed and measured was regarded as true, and it lead to the belief that everything was made up of tiny particles which could exist

independently of whatever exists around it. Harman (1988:33) describes this view as "materialistic monism", a fragmented view of the world.

a)   Fragmentation

Slabbert (1998:7), explains this fragmented world view as essentially:

> *positivistic (we learn about reality by studying only what can be measured: it is logical and predictable), objectivistic (what is to be learned exists externally and the learner can be objective towards it), deterministic (every action is determined by external forces acting on the will), reductionistic (everything can be reduced to the particles it consists of and it can be studied as such) and mechanistic (everything exists independently and although they might interact, it does not alter their essential natures). It is essentially a fragmented world view with our conception of knowledge compartmentalised.*

When tracing the history of Western science, it seems that there has always been a tension between the study of substance and the study of form, leading to fragmentation (Capra, 1996:80).

b)   Substance and Form

The meaning of and differences between substance and form, can be described in table 3.2.

TABLE 3.2   Difference between substance and form

SUBSTANCE	FORM
Usually the question is asked: What is it made of ?	Usually the question is asked: What is its pattern?
To be measured and weighed	To map a configuration of relationships
Involves quantities	Involves qualities

Natural scientists have since Greek antiquity asked questions about substance. Four fundamental

elements were amongst those identified, i.e. earth, air, fire and water. In modern times, these have been recast into the chemical elements, of which there are more than 100, and "out of which all matter was thought to be made" (Capra, 1996:80). The rise of atomic and nuclear physics followed in the twentieth century and the atoms were further reduced to subatomic particles.

Biology followed a similar pattern of fragmentation (Capra, 1996:80). The basic elements were first organisms, which were developed into classification schemes for plants and animals during the eighteenth century. The focus shifted from organisms to cells after it was discovered that cells were the common elements in all organisms. Finally, biologists focussed their research on the breaking down of the cell in its macromolecules and molecular biology developed as the frontier of research. The question that was always asked, though, was that of substance. To use the words of Capra (1996:81):

> ..*the study of pattern was always present... However, for most of the time the study of pattern was eclipsed by the study of substance until it re-emerged forcefully in our century, when it was recognised by systems thinkers as essential to the understanding of life....the key to a comprehensive theory of living systems lies in the synthesis of those two very different approaches, the study of substance (or structure) and the study of form (or pattern).*

It was expected from man of the eighteenth century to change his thought patterns from the mythic ontological, spirit guided world view, to a more functionalistic, fragmented view, objectively studying life. This world view dominated the world of science and scientific research until deep into the twentieth century, overflowing into all sections of life. The curricula used in schools, even up to the present, represent a fragmented view, in that subjects are studied, with no link between them; man was studied as being apart from nature, apart from animals, even from each other in cultural and ethnic groups, and man himself was studied in particles. The differences were highlighted rather than the similarities, and everything needed to be compartmentalised, quantified, measured and broken up into minute particles, in order for it to be studied. The change demanded from man, was therefore, for his thought patterns to be changed. From a subjective view of intertwined spiritual and natural life during the first wave, it changed to that of

fragmentation, functionalism and objectivity. Indeed, a dramatic change for man, which took quite a number of centuries to be gradually accepted and integrated in man's thought patterns.

As opposition to this fragmentation, systems thinking developed around the nineteen fifties/sixties as an alternative to analytical thinking (the reductionalist, atomistic, mechanistic thinking), with the emphasis on the whole, (the pattern) rather than on the parts (the structure). The changes which it brought about, are quite substantial and radical. They are discussed next.

3.2.4.2   Systems thinking and being connected

Whereas scientists were breaking down structures into its smallest parts (macromolecules and sub-atoms), poets during the romantic era described Earth as an integrated whole, a living being. To use the words of Goethe (Capra, 1996:21):

> *Nature has a moving order - form is a pattern of relationships within an organised whole.*

Systems thinking which developed during the second half of the twentieth century, focusses on the fact that particles have no meaning in itself, but can only be understood as interconnections between other processes, Capra (1996:29).This can be seen as a natural reaction to the extremity of the reductionalist views.

a)   The interconnection between parts

Bateson, (1979:11) who studied and observed nature intensely, reflects that living things are distinguished not by quantity, but by quality. When studying the parts, one sees similarity in nature as well as in man. For instance, leaves of flowers have a similar pattern to leaves of trees; flying insects have similar parts; as have crawling insects. It is not the size or amount of the different parts which is important, but the *similar relations* between the parts, i.e. in man it can be seen in toes and fingers, arms and legs, elbows and knees. This, according to Bateson, (1979: 10) is how we should think about all living things. He calls it: "the pattern which connects".

b)　　The interconnection between living parts

Bateson's main aim was to discover the *pattern of organisation common* to all living creatures and according to him, relationships are the essence of the living world. He would ask for instance, what pattern connects the crab with the lobster (similar parts) and the horse with a man, and all of them with each other. In Bateson's (1979:17) own words :

> *We should define things according to their relationships, i.e. a stem is not a cylindrical thing, but that which bears leaves ...a leaf is not a flat open thing, but that which has a bud in its angle.*

Figure 3.3 is a schematic representation of Bateson's theory of the pattern that connects all living things.

In accordance with Bateson's approach of observing nature intensely, Land and Jarman (1992:93) reflect that previously, scientists described how nature *ought* to work. Twentieth century scientists, however, observe nature closely and attempt to explain how she *really* works. It is for instance found, according to Land and Jarman (1992:93), that atoms are not separate, individual hard particles, but that they are intimately and powerfully connected with other atoms around them. Reductionalist scientists fail to grasp the importance of pattern when they reduce all living organisms to atoms and molecules. In Capra's words (1996:81):

> *The study of pattern is crucial to the understanding of living systems because systematic properties, as we have seen, arise from a configuration of ordered relationships. Systematic properties are properties of a pattern. What is destroyed when a living organism is dissected, is its pattern. The components are still there, but the configuration of relationships between them - the pattern - is destroyed, and thus the organism dies.*

Figure 3.3   Pattern of organisation of living things

THE PATTERN THAT CONNECTS

Serial homology - symmetry

crab   horse   man   flower
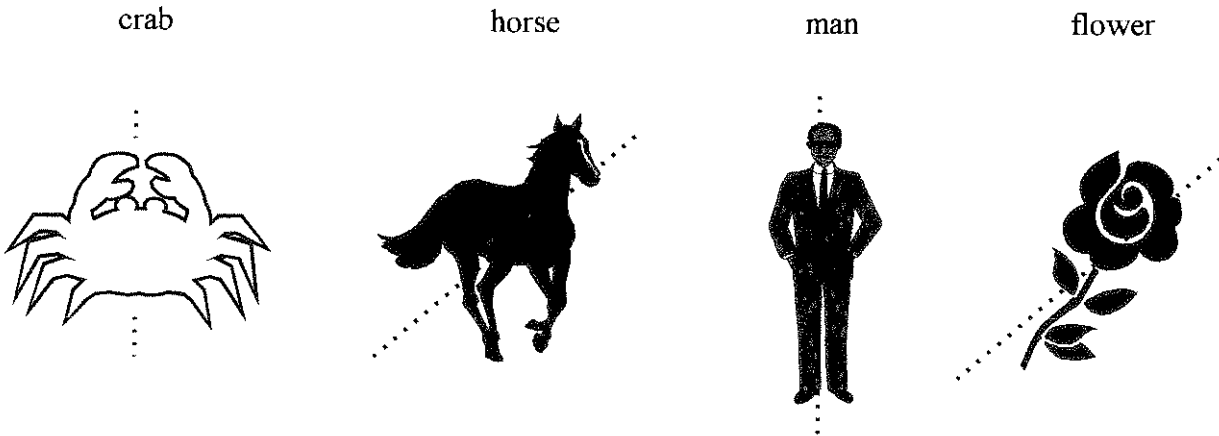
Phylogenic homology

Second order connections   Second order connections

Relationships   Relationships

crab   lobster   horse   man

Crustacea - Segmented   *Mammals - 4 Limbs*

Third order connections

Crab and Lobster   Man and Horse
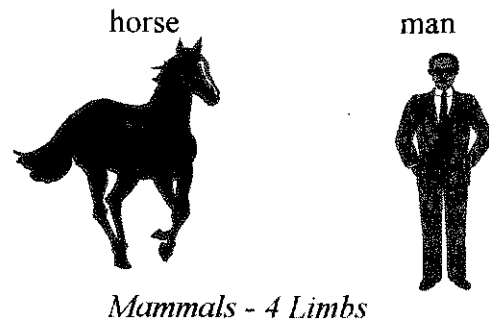
All living systems
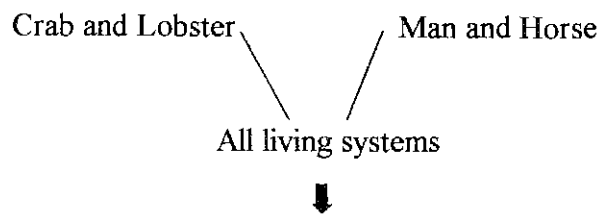
Forming a metapattern

Bateson, 1979

Life, therefore is a pattern of relationships. No man is an island! Nothing in the Universe should therefore be studied solely with the goal to identify its particles, but rather to see how it fits in the whole pattern of the universe and how it organises itself.

Systems thinking closely relates with the views of Cybernetics, a powerful intellectual movement which also developed during the second half of this century, as a unified approach to problems of communication and control.

3.2.4.3 Cybernetics - self-regulation and self-organisation

This movement was "concerned with a different level of description concentrating on patterns of communication, especially in closed loops and networks" (Capra, 1996:51). The concept of a feedback loop which results in *self-regulation* and later *self-organisation* of a living system, became crucial to enable a full scientific description of life. Cybernetics thinking influenced a wide range of scientific fields: i.e. Biology, Physics, Chemistry, Mathematics, Ecology, Social and Cognitive sciences, to name but a few (Capra, 1996:84), and therefore, combined research from these fields resulted in all sciences becoming interconnected, instead of fragmented.

Two scientists in Biology, Maturana and Varela, developed a theory describing the key characteristics of a living system, which they identify as pattern, structure and process (Capra, 1996:167). They state (like Bateson, 1979:10), that there is a pattern of organisation, common to all living systems. According to them, all living systems arrange their components in a network fashion of feedback loops and metabolic processes. There are three criteria of a living system, namely: the pattern of organisation, structure and process (Capra, 1996:156). A new dimension has thus been added, to structure and form, namely process.

a) The pattern of organisation of living things

In explaining the *pattern of organisation* of living systems, Maturana and Valera (Capra, 1996:158) refer to a process of autopoieses, or *self-making*, which is a "network pattern in which the function of each component is to participate in the production or transformation of other

components in the network. In this way, the network continually makes itself" (Capra, 1996:158). To explain this concept, they refer to the typical plant cell, which is enclosed by the membrane and in which a network of metabolic processes are taking place, (like feedback loops), reproducing themselves. The cell membrane does not close the network, but partakes in the whole process by selecting raw material from the 'outside' environment and also filtering waste to the environment. Thus, "the autopoietic network creates its own boundary, which defines the cell as a distinct system, while being an active part of the network" (Capra, 1996:163). The pattern of organisation of a living system is therefore one of a self-organising system, in the sense that its order and behaviour is not imposed by the environment, but are established by the system itself. Living systems are therefore autonomous, although they interact with the environment through a continual exchange of energy and matter. Living systems also continually maintain and renew themselves; they have the ability to form new structures and new patterns of behaviour and are therefore *evolutionary* in the creation of *novelty* (Capra, 1996:163).

The *structure* of a living system is both open and closed. It is open to the flow of energy and matter, but organisationally closed - matter can flow through it, but the structure maintains a stable form, autonomously, through self-organisation. Living structures, such as an organism, needs a continual flow of air, water and food from the environment in order to stay alive and maintain its order, but the vast networks of metabolic processes and feedback loops within a system, keeps the system in a state far from equilibrium, therefore always urging it to develop and evolve (Capra, 1996:167). There is therefore a strong component of *interdependency*.

The *process* criterium of a living structure is implicit in both the pattern of organisation and the structure. It refers to the activity involved in the continual embodiment of the system's pattern of organisation. The process is therefore the link between pattern and structure (Capra, 1996:167).

In South Africa, Prof. Jannie Hofmeyer of the University of Stellenbosch, researcher in biochemistry, is also advocating the need for an integrative approach to understanding living systems (National Research Foundation, 2000:3). He says:

> *...although biochemists had elucidated the pathways of metabolism and had studied the*

individual reactions and their enzymes, the living cell still suffered from the "Humpty Dumpty Dilemma": having taken the cell apart and studied each bit in the finest detail, biochemists, just like the King's horses and men, did not know how to put it together again.

He further states, though:

As scientists, we live in a most exciting age: for the first time we are getting some grip on the complexities of nature; we are beginning to understand the functioning of both physical and biological complex systems as a whole, as opposed to understanding only simple idealised systems or isolated parts of complex systems.

This is a clear indication that there is a dramatic move in the natural sciences, away from the atomistic, reductionalistic, fragmented views and that recent research findings and thinking about science and nature are contradicting to that of the scientific revolution. This is also true when studying the human body.

b)   Interconnectedness in the human body

Similarly, in studying the human body, Systems Theory as well as Cybernetics describe the interconnectedness of the different systems. The nervous system (brain, spinal cord), described by Neuro-science and which *includes emotion*, the endocrine system (regulatory system), described by endocrinology, and the immune system (defence and healing), described by immunology, are now seen as a single psychosomatic network, which communicates with each other, coordinating activities and interlinking *emotional* and *biological* activities (Capra, 1996:275). Fragmentation of sciences and the study of structure only, (as was done by reductionalists) are thus replaced by a fundamental new concept, of an interdependence between different scientific fields and the study of structure, processes as well as pattern, forming a coherent relationship.

The deterministic view that behaviour is determined by external forces therefore holds no water.

Subsequently the view that man learns by reacting on external forces, is rejected. The process of autopoiesis also manifests in man, through the psychosomatic network and an interrelatedness between "internal and external environments", which forms part of man's experience of reality. This interconnectedness does not only apply to living things, *but also to non-living things*, according to the Gaia theory (Capra, 1996:104).

c)   The interconnection of non-living things with living things

During the nineteen seventies and nineteen eighties, two scientists, Lovelock and Margulis (Capra, 1996:104) have developed the Gaia theory, whereby they identified a network of feedback loops, which bring about the self-regulation of the planetary system. This theory shows that there is a "tight interlocking between the planet's living parts - plants, micro-organisms and animals - *and its nonliving parts* - rocks, oceans and the atmosphere" (Capra, 1996:104). According to the Gaia theory, life creates the conditions for its own existence. In the words of Lynn Margulis (Capra, 1996:106):

> *Simply stated, the (Gaia) hypothesis say that the surface of the Earth, which we've always considered to be the environment of life, is really part of life. The blanket of air - the troposphere - should be considered a circulatory system, produced and sustained by life....When scientists tell us that life adapts to an essentially passive environment of chemistry, physics and rocks, they perpetuate a severely distorted view. Life actually makes and forms and changes the environment to which it adapts. Then that 'environment' feeds back on the life that is changing and acting and growing in it. There are constant cyclical interactions.*

Figure 3.4 is a schematic representation of the Gaia theory.

Figure 3.4   The Gaia theory

Volcano's spew out CO^2

Plants animals] Recycle CO^2

Photosynthesis
Respiration
decay

Excess CO^2 recycled

CO2 gets pumped out of atmosphere

CO^2 Spewed out by Volcano's again

Rock Weathring Through rainwater + CO^2 = carbonates

Soil bacteria + increases rock weathering

Carbonates wash down in to oceans

Feedback loop
Contributing to regulating the
Earth's temperature

Algae absorb Carbonates and form shells = Calcium carbonate

Algae die- shells fall down to ocean floor forming Limestone = calcium carbonate

Limestone = heavy Gradually sink into mantle of Earth

Systems thinking and Cybernetics can therefore be seen as in direct opposition to the reductionist, mechanistic view, which states that everything exists independently, and has no influence on one another, although they may interact. Systems theories have indicated through research that all living systems form networks of metabolic processes which are interconnected *within* systems as well as with the external environment. This constitutes a fundamental change in the description of the organisational patterns of living systems, which include man. The Gaia theory has indicated an *interconnectedness between living and non-living things, therefore implying that everything in the universe is interconnected*!

Sir James Jeans, an astronomer, has rightfully remarked, nearly sixty years ago, that Creation resembles an enormous idea/thought, rather than an enormous machine! (Joubert, 1997:6). This view negates the mechanistic view and proposes a "humanised", holistic view.

The advancements in technology today, has brought another kind of interconnectedness. The whole universe is now interconnected through highly sophisticated communication networks. Satellites tell us more about outer space and the earth, whereas people all over the world are connected via the Internet and other telecommunications networks.

The picture of man's relationship with the natural world will not be complete if the role that technology plays is not included. The most advanced breakthrough in the scientific field of this century can be seen in technological development. Technology is advancing in leaps and bounds at a rate that is astounding and very hard to keep up with. Yesterday's breakthrough technology is today's outdated technology! This phenomenon has to be studied to determine the impact on man and his relationships.

3.2.4.4　　　　Technology

During the First Wave, technology was virtually non-existent. During the Second Wave, however, the advancements in technology became more important, with the invention of the printing press, the telephone, technological processes in the huge factories, etc.

It was expected from man to learn to operate the machines, follow instructions and being confined to the office/factory, without having any deeper knowledge of the how and why. They were trained for a specific skill/career, and were expected to pursue it for life.

Technological advancements, amongst others, have indirectly or directly brought about major changes in many aspects of life during the last few decades. To use the words of Land and Jarman (1992:70), "we are being pushed into the third phase (meaning the "birth" of a new wave) by technology". The power of new technologies has influenced the world of work in such a dramatic way, that we are now entering the stage of the "virtual workplace" (Schwan and Spady, 1998:10 and Carruthers, 1997:45); meaning that being empowered by new technologies, a person can now work outside of the conventional job schedules and structures in a virtual work place, deciding on flexible schedules, job-sharing and off-site locations to perform his/her work. The lap top computer, cell phone and programmes that organise the workday, like "reminding" the worker of meetings, appointments and even birthdays, make it possible to work anywhere, any time and without secretarial support. This means that all employees need to become literate as far as technology is concerned, in order for productivity to be enhanced.

Land and Jarman (1992:4) cites an example of the fundamental changes which are brought about by technology, when they say: "Change itself has changed!" The example cited is that of the cellular telephone which is a fundamentally new concept of communication networks. Previously, there were modifications to the telephone itself in order to increase its effectiveness and range, but the cellular phone is a breakpoint change, using new rules and fundamentally new thinking! Similarly, the concept of mind work in contrast with mindless work (Toffler and Toffler, 1995:60), constitutes a fundamental shift. Computers can now take over second-level thinking (logic, linear, deductive thinking) which urges man to focus on first-level, innovative thinking, manifested in the unconscious mind (Welmans, 1997:12).

According to Toffler and Toffler (1995:30), the influence of technology re-empowers (re-unites) the family and home-life. With electronic networking, schooling of children can take place at home, work can be done from your "virtual organisation" at home (Carruthers, 1997:45) and even shopping and banking can be done from your computer-centre at home (Boshoff, 1997:11).

The described changes which technology is causing today, are reflected in the economy, labour and the corporate world.

3.2.5 MAN AND THE OUTCOME OF HIS RELATIONSHIPS

The changing relationships with which man is challenged , as described under the previous headings, impact dramatically on the economy, labour and the corporate world. They actually determine the extend to which man has to adapt to ever changing demands from the world of work. The outcome of man's changing relationships (intrapersonal, interpersonal and with the natural world) is therefore visible in the three sections mentioned, which include markets and production as well as organisation structure.

3.2.5.1 Changes in the economy and labour

The first wave/curve was characterised by manual work or hard labour, mainly in order to gather food. Later, these activities developed into farming, where organised planting, harvesting and storing of food was deemed important. Stock farming was also included in these activities, raising and keeping cattle, sheep, chickens, etc. for food and wealth (Toffler and Toffler, 1995:19).

During the agricultural revolution, the economy centred around land assets. The fight for land was important, landowners became land-barons, resulting in the feudal system and class distinction based upon *land assets*, the goal being to have a good harvest or yield of stock farming (Toffler and Toffler, 1995:19).

The industrial revolution or second wave, was characterised on the level of economy and work, by small enterprises where people combined their skills and knowledge in order to produce products on a large scale and of a greater variety. For instance, the tanner combined his skills and knowledge with that of the shoemaker and dressmaker, and together they could trade in fashion! Another example is that of the invention of the printing press, producing printed matter at an astounding rate (for the time), enabling more people to share in education and information. The industrial era eventually developed into the characteristic smokestack factories of the late nineteenth century which carried on well into the twentieth century.

The change from the previous agricultural era was that the world of work was now characterised by low skilled workers on the assembly line, engaged in mass production. High productivity in the manufacturing sector was (is sometimes still) seen as of the utmost importance. Assets were tangible in the form of property, which could be land, buildings, goods or raw material. Human resources in the form of labour (either highly specialised or mostly unskilled), mass manufacturing accompanied by usefulness of machines and products, were the order of the day. This resulted in mass education of workers needing to do routine, hand operated tasks. This, in turn, resulted in homogeneity, standardisation of products and processes, and eventually in man's own thinking ability, individuality or autonomy and freedom to choose, being severely handicapped.

Workers didn't need to use their minds in order to perform their jobs, machines did it for them. Muscle power and productivity were important. These were also seen as *assets*.

During the Second Wave, exhaustible factors like land, labour, and raw materials were central economic resources. During the third wave/curve changes in the economy and the world of work are taking place and can be seen (amongst others), in the *value placed on assets* (Toffler and Toffler 1995:42-48). The major changes which we are experiencing during the last decade or two, are that assets have now become *intangible*. A *knowledge base* of data, information, images, symbols, culture, ideology and values has become the central resource in the third wave. This knowledge base, as major resource, therefore constitutes a fundamental change, and in fact, a global revolution with regard to what is perceived as assets by the economy and the world of work (Toffler and Toffler, 1995:36). A "growing body of knowledge" (Barker, 1992:200) and productive *mind work* has thus become important. Referring to mind work, Toffler and Toffler (1995:36) call it, the "super-symbolic" economy of the Third Wave. This concept can be explained in Toffler and Toffler's own words (1995:42-43):

> *While the value of a Second Wave company might be measured in terms of its hard assets like buildings, machines, stocks and inventory, the value of successful Third Wave firms increasingly lies in their capacity for acquiring, generating, distributing and applying knowledge strategically and operationally.*

The real value of companies..... depends more on the ideas, insights and information in the heads of their employees and in the data banks and patents these companies control than on the trucks, assembly lines and other physical assets they may have. Thus capital itself is now increasingly based on intangibles.

Along the same lines, Schwan and Spady (1998:6) refer to "competence as capital", and "knowledge as power". In the present decade, an organisation's greatest asset is its people's expertise, creative minds and commitment. Competencies and characteristics of the human resources required in the Third Wave changed dramatically, from the "mediocre to the innovative" (Barker, 1992:135), from muscle power, uneducated, unskilled, replaceable workers, to educated, skilled workers performing mental tasks (Land and Jarman, 1992:64), from predictable mass thinkers to innovative thinking, individualistic risk-takers, the demands are therefore, from *mindless work* to *mind work* (Toffler and Toffler, 1995:56). Whereas during the second wave individual growth and innovative thinking were restricted in the work place, the Third Wave companies *demand* from workers to use their minds, initiative, problem solving skills, individual competencies and knowledge, creatively.

The changes in the world of work and the economy, closely relates to changes that characterise the production trends and markets of the various waves/curves.

3.2.5.2   Markets and production

During the first wave/curve, man only produced what he needed to survive, or bartered own goods in exchange for much needed goods. Manual labour was demanded from man. It is only during the second wave/curve that man started producing for profit, utilising machinery.

Mass production of goods characterised the second wave/curve, as factories started a new era of assembly lines, manufacturing on large scale, resulting in uniform products, leaving very little choice to the buyer.

Massification of products which characterised the Second Wave, is being replaced by de-massification in the Third Wave (Toffler and Toffler, 1995:43 and Land and Jarman, 1992:64). Products are customised to individual demands, thanks to highly sophisticated technology. The shift is towards individualised markets: microelectronics enable smaller units of production, resulting in customized products with endless variation and at low cost (Sunter, 1992:58 and Toffler and Toffler, !995:36). When buying a car, a person can, for instance, request certain changes to be made to suit his/her taste and life style. (This is, however, possible with certain luxury models only!) Factory-like standardisation, centralisation and maximisation during the second wave have been replaced in the third wave by customised innovation, which is a fundamentally new concept in the market. Advertising is now targeted at smaller and smaller markets; "they no longer focus on 'segments', but on 'particles' of the market (Toffler and Toffler, 1995:43). For instance, the fashion industry can focus on a segment of the market, namely women. A particle of this market would be: focussing on girls in their teens, fashions designed for the larger sizes, for pregnancy, or for small girls. To summarise this phenomenon, Barker (1992:135) and Land and Jarman (1992:64) refer to the change from a capacity driven, factory-output product focus, to a customer driven manufacturing sector. This phenomenon reinforces the idea that the Third Wave constitutes a major shift with regard to markets and products; from mass-production to customised production.

This phenomenon impacts on the market, in that the small entrepreneur can now enter the market, with customised products made to individual tastes. There is indeed a huge revival of street markets, where artists and craftsman sell their goods to customers who value customised production.

These changes have a reciprocal effect on each other. As markets, labour and the economy change, so does organisational structure, and vice versa.

3.2.5.3   **Organisation structure**

During the first wave/curve, organised life centred around the family. Hierarchies would therefore exist within the family structure, as organisations only started developing during the second wave/curve.

Organisation structures during the second wave/curve, were characterised by centralised bureaucracies, with top-down management, rigid, vertical communication channels and information flow.

This structure restricted the individual from using initiative, or creating novel solutions to problems in the workplace. Management made decisions and took initiative. It was only required from workers to follow the leaders unquestioningly.

Centralised bureaucracies of the Second Wave are being replaced by decentralised, downsized, flatter organisation systems with the out-sourcing of certain functions becoming increasingly popular. (Carruthers, 1997:45; Harvey, et al. 1997:287; Toffler and Toffler, 1995:42). Sunter (1992:109) refers to this phenomena as the *dual-logic economy*: big businesses with high technology and finance to compete in the global arena, are complemented by specialised franchising businesses, run by entrepreneurs, providing more niche markets and job opportunities. This resulted in the new concept created by Hammer and Stanton (1995), of reengineering the organisation: to fundamentally adapt and change the organisation in order for it to stay competitive in the technology driven, ever changing environment.

Schwan and Spady (1998:6), are of the opinion that smaller organisations encourage "clearer focus, better communication, less bureaucracy, and more rapid decision making and response to changing conditions and opportunities". The top-down decision making in the bureaucratic organisation with the accompanying rigid communication channels is being replaced by bottom-up and team decision making (Toffler and Toffler, 1995:67). The horizontal information flow of the Third Wave organisation demands from workers on all levels to participate in decision making, using individual as well as team competencies and skills to the advantage of the organisation.

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The changes described up to now, on virtually all levels of reality are massive. They are not merely changes. The extent and nature of these changes will therefore be discussed next.

3.3   THE NATURE OF THE CHANGES THAT ARE TAKING PLACE

It becomes quite clear, when one reflects on the dramatic changes which are taking place on virtually all levels of life described in the previous paragraphs, and the impact it has on man, that these are more than your normal, everyday, or superficial changes. The changes described in this report, are not merely alterations, adaptations, reform or reorganisation, building on previous ways of thinking or doing. These changes are fundamental, they are built on new ground, with new foundations, developing from totally different views. For instance, instead of carrying the molecular biology further into minuteness, researchers started to look for the bigger, whole picture, connecting living and even non-living things, describing man's physical emotional and spiritual oneness. Instead of developing the organisational structure into an even bigger, and more rigid structure, totally new concepts were introduced, like out-sourcing, down-sizing and flatter hierarchies. This "seeing with new eyes", is what can be described as fundamental change. It therefore became paramount for the researcher to investigate what the *nature* of these changes are.

Debold (1998:2) refers to "leading influencer" and Land and Jarman (1992:12) refers to "future pull", when the world starts experiencing great changes or as they put it, a new wave/growth curve starts to emerge. Do we experience the emergence of a new wave and which are the leading influencers? This is what the researcher endeavoured to establish. According to Barker (1992:38), new and novel ways of thinking start evolving when there are a few problems that stay unsolved by the prevailing paradigm, urging paradigm pioneers to find new ways of solving these problems.

The *leading influencer*, pulling us into the Third Wave (and even, as it seems, the Forth Wave) may therefore be the fact that many questions/problems stayed unanswered/unsolved during the scientific revolution and the technological revolution, as experienced today.

3.3.1 UNANSWERED QUESTIONS AND ITS CONSEQUENCES

Bateson (1979:11), for example, asked the question "what is the pattern that connects, the pattern of organisation common to all living things?" This question could not be answered by the prevailing reductionalist, mechanistic, fragmented scientific paradigms. Similarly, systems thinking and cybernetics asked questions regarding the way living and non-living systems are organised and connected, instead of studying them in fragmentation. The question of mind versus matter was another problem unsolved by the materialistic, fragmented world view. Bateson (1979:89), looking closely at nature with *new eyes*, came to the conclusion that mind is the process of life and that it is manifested in all living systems; mind also gives rise to matter (Harman, 1988:35). The Santiago theory of Maturana and Valera (Capra, 1996:170), *shifted the rules completely*, in seeing cognition not only as the thinking process, but *including* perception, emotion and action. All of these views therefore constitutes a *fundamental, total change* from the fragmented view of the prevailing scientific paradigms of the reductionalists, mechanists, positivists and behaviourists, offering a holistic, interrelatedness that was never before acknowledged by scientists. The moral/ ethical/ environmental questions of how to conserve our planet, how to solve growing unemployment, how can man live a fulfilling life, all need to be solved, and it requires novel ways of thinking, fundamental changes in the old thinking patterns; because these problems were not solved by the prevailing thought patterns dominant during the Second Wave. These kind of changes are described by Land and Jarman (1992:9), as breakpoint changes, referring to paradigm shifts.

3.3.2 BREAKPOINT CHANGE

In developing a new theory around changes that are taking place in the world, Land and Jarman (1992:9) refers to *breakpoint* change where unconventional change processes have pushed us to the edge (breakpoint)! They postulate that at critical points in the development of anything, the *rules shift* and critical links with the past are broken, causing a *total transformation* where creative new connections produce new and powerful results (Land and Jarman, 1992:5). The mind set that regards the future as merely an extension of the past, must therefore be reset and a complete break with the traditionally accepted thought patterns is required (Turner, 1995:5-7).

According to Land and Jarman (1992:12), the power of the future replaces the anchor of the past and we are being pulled into a new kind of future. This view is also shared by Debold (1998:2) when he states:

> *...one gets a sense that human evolution can be viewed as having a leading influencer from which, and the degree to which, all other human events precipitated with-- not from.*

At this stage we need to define a paradigm shift, in order to establish whether this is indeed happening in our world today.

3.3.3   PARADIGM SHIFT

Willis Harman (1988:10), refers to a paradigm as "the basic ways of perceiving, thinking, valuing and doing, associated with a particular view of reality". Thomas Kuhn, a scientific historian describes a scientific paradigm as follows (Kuhn, 1973:10):

> *(It is)   accepted examples of actual scientific practice, examples which include law, theory, application, and instrumentation together - (that) provide models from which spring particular coherent traditions of scientific research. Men whose research is based on shared paradigms are committed to the same rules and standards for scientific practice.*

Colin Turner (1995:5) uses the phrase paradigm shift to describe situations "where previous ways of seeing, thinking and behaving are no longer deemed appropriate".

Joel Barker (1992:32) explains through his definition that:

> *A paradigm is a set of rules and regulations (written or unwritten) that does two things: (1) it establishes or defines boundaries; and (2) it tells you how to behave inside the boundaries in order to be successful.*

Hammer and Stanton (1995:25), refers to a paradigm shift as a *reengineering* process, which "requires radical, breakthrough ideas..(and).. fundamental rethinking. Radical change, refers to going to the root of things; to reinvent and to start with a clean slate (Hammer ans Stanton, 1995:10).

A paradigm shift therefore implicates a "new game" with a "new set of rules" (Barker, 1992:38). It also implicates a shift in the viewing of reality (Harman 1988:10) because the previous way of perceiving reality is deemed inappropriate (Turner, 1995:5), and a fundamental change in the accepted examples of conducting scientific research (Kuhn, 1973:10). A new paradigm will therefore be *driven* by unsolved problems of the prevailing paradigm, which requires new ways of thinking. Modification of thinking will not be sufficient. Problems need to be tackled from a different angle.

The dramatic changes in thought patterns which was brought about by recent research, as described in this chapter, have a tremendous impact on how man perceives the universe. The interrelatedness between all living and non-living parts; the interconnectedness between nature and man; and the pattern of organisation inherent in all living systems; resulting in a new awareness of cognition as encompassing the whole living system and not only the human brain, are nothing less than a fundamental transformation, a total change in word-view! We have reached a breakpoint change, where the rules are shifting and "modification of our thinking patterns will not work. This new era requires a radical rethinking of the most basic and foundational ways we view the world" (Land and Jarman, 1992:11). Hammer and Stanton (1995:106-107), says in this regard:

> *In nearly all cases, the old design was based on some assumption about the way in which the world works...but like everything else in creation, assumptions are rooted in time and can become as dated as last week's newspaper. - Some assumptions become outmoded over time; others are false from the outset.*

It therefore becomes clear, without any doubt, that what the world is experiencing today, is nothing less than a total paradigm shift! What is needed, therefore, is people who can take the plunge, who can act as pioneers, steering the way into the future.

3.3.4 PARADIGM PIONEERS

In order for paradigms to shift, there need to be paradigm pioneers who trust their intuition, who are willing to make the leap of faith to the new paradigm and who trust their non-rational judgement in order to take the plunge! (Barker, 1992:83). These concepts of intuitive belief and trust in the new paradigm and making use of non-rational judgement are totally strange to the firmly held beliefs of scientists of the positivistic, objectivistic, materialistic and reductionalistic paradigms where all phenomena must be defined and proven to be real before rules can be laid down. The old saying of *seeing is believing* has now changed to *believe what you see* or as Barker (1992:153) states:" I'll see it when I believe/understand it". It is therefore possible and necessary to *see with new eyes* and to trust your own intuition when plunging into a new paradigm.

3.3.5 A REENGINEERING PROCESS

According to Hammer and Stanton (1995:10) a paradigm shift constitutes a reengineering process which requires a "fundamental rethinking and radical redesign of business processes to bring about dramatic improvements in performance". It does, however, not only apply to the business world, but to all spheres of life. We need to go back to the roots, to re-invent, to start with a clean slate, or as Slabbert (1998:52) puts it:

> *... in adopting a new paradigm, change implies a special kind of learning which is expressed most appropriately by a Zen proposition. This proposition requires first a deconstruction and then a reconstruction...The proposition goes as follows: Unless the cup ..is first empty, it can receive nothing. You cannot add anything to fullness. If you want to drink fresh and hot tea, then you had best start with an empty cup.....But having emptied the cup is not enough. In fact even the process of emptying the cup will be futile*

if the cup is not able to contain the new content....It is therefore obvious that the change

required in a paradigm shift, implies a reconceptualisation of both content and structure.

In conclusion, table 3.3 is a summary of the changes that has been taking place through the ages, as described in this chapter.

TABLE 3.3   Civilization's Journey

(Adapted from Land and Jarman, 1992, Toffler and Toffler, 1995 and Slabbert, 1998:9)

Categories	Before 16 th Century	16 - early 20 th Century	20 th Century & emerging
Market economy	Agriculture. Fight for land owners	Industrial: Mass prodnction, consumer society, markets: homogene	Technology: de-massification, customised, heterogene markets
Work	Ability dictates. Roles in community	Manufacturing, low-skilled labour, mindless work or highly specialised.	Entrepreneurs. Service orientated. Symbolic, mindwork, flexible
Organisational structure	Birth regulates structure	Bureaucracy: top-down	Decentralised, flat, bottom-up, virtual organisation, teams
Family/social	Communal	Nu-clear family	Broken up families, single parents
Assets/resources	Natural, land	Tangible: property, money, labour, raw materials, stocks & inventory	Intangible: Knowledge, symbolic, mind-work

Politics	Autocracy	Democracy	Configurative society: Minorities based on democracy
Communication networks	Local	Regional	Global
Relationship with nature	Harmony/ integrated	Conquers nature, exploiting natural resources	Deep ecology: integrated with nature, connectedness, conservation
Science dominance	Mythic onthologic	Functionalistic, Positivistic, Reductionalist, Mechanistic, Determanistic, Naturalistic	Humanistic, noetic sciences
Metaphysical perspective	Multiple spiritualism	Materialistic monism, dualism	Transcendental monism
World view	Goecentrism spirit guided	Fragmented, logic, cause and effect	Creative, interconnected, wholeness, global and ecological
Belief system	Psychic phenomena	Empirical, science dictates consciousness	Inner consciousness is causal reality

Spirituality	Multiple spiritualism, spiritual and natural life intertwined	Dnalism, Science as opposed to spiritualism, worship material goods	Relationships, wholeness, unity, spiritual revival
Values	Community dictates	Materialism, selfish individualism	Caring, nurturing, quality, principle-centred
Orientation	Dependent	Objective experience, independent	Subjective experience, interdependent

As these radical shifts are real and are taking place all over the world, in all aspects of life, we need to look at the implications which they will have for man.

3.4 THE IMPLICATIONS OF CHANGING PARADIGMS FOR MAN

Since the changes which were described in this chapter constitutes a paradigm shift, it seems logic that it will have a profound influence on man. Change is eminent, no one will escape it and man has to find means to adapt to this fundamental transformation.

Change is not acquired over a short period of time. Man usually resists change because of the unknown . He doesn't know whether he would be able to cope with change. It usually causes major upheaval and uneasiness, people are required to move out of their comfort zones, as change requires major challenges and, in some cases, sacrifices. Man therefore has to be convinced that it will be to his benefit, or, in this case, for his survival on this planet!

According to the foundational demands of the future as cited by the various researchers and described so far in this chapter (Capra, 1996; Bateson, 1979; Harman, 1988; Land and Jarman, 1992), and the nature of these demands, it is inevitable and of urgency that man has to undergo a total paradigm shift. The unanswered questions (paragraph 3.3.1) urges man to find answers.

The way in which this can be accomplished, is by radical change in thinking patterns, implicating a change in world view. To change one's world view is fundamental and it should start from *within*, for as Maturana and Valera (Capra, 1996:167) says: *living systems are self-regulating, self-organising and self-making*. Man should therefore rediscover his inner wisdom and strength. The fact that mind gives rise to matter (Harman, 1988:34) and that an inner consciousness causes things to happen, according to the research of Roger Sperry (Harman, 1988:11) implicates a dramatic shift from objectivity to subjective experience. Scientific study should include subjective experience. Emotions, intuition and spirituality should become part and parcel of practising science, for they are all interrelated and interconnected: mind is the process of life (Bateson, 1979:89). *Wisdom* from within is therefore regarded as most valuable, in opposition to the view that information which is observed, is the only source of truth. *Self-awareness and self-knowledge* as mental activity is becoming as important as knowledge of the environment around us, and have to be consciously developed. It can therefore be regarded as changes of magnitude, of gigantic nature! The challenges with which man are confronted for the next century, are indeed a quantum leap, all of which man is capable of conquering.

The turn towards an inner strength and wisdom can be seen today, in what Harman (1988:78) refers to, as the awakening of a new spirituality.

3.4.1 AWAKENING OF A NEW SPIRITUALITY

The problem of prevailing paradigms is that life is centred within the individual/cell/atom, rather than in the relationships between all living things. This phenomenon results in an alienation of man from his environment. Through his selfish lust for financial gain and profits, man is exploiting natural resources, instead of conserving them. Bowers (1993:216) says in this regard:

> *(We need to) redirect our current form of spirituality....in order to live in a sustainable balance within the larger web of life....It does not take a genius to recognise that the current images of individualism, success, competition, and progress are part of the anthropocentric world view that is deepening the ecological crisis.*

Man urgently needs to get answers to the ever increasing ecological crisis, with all the negative factors connected therewith (green house effect, dwindling water resources, gap in the ozone layer). It seems as if a redirection of man's spirituality might be the answer, therefore starting from within.

3.4.1.1   Redirection of spirituality

Bateson (1979), Capra (1996) and Bowers (1993) refer to a deep ecological world view, or spiritual awareness that is emerging from the paradigm shift as described in 3.3. Capra (1996:6-7) describes the deep ecological view as follows:

> *(It is) seeing the world as an integrated whole rather than a dissociated collection of parts....a deep ecological awareness that recognises the fundamental interdependence of all phenomena and the fact that as individuals and societies we are all embedded in (and ultimately dependent on) the cyclical process of nature.....***Ultimately deep ecological awareness is spiritual or religious awareness***. When the concept of human spirit is understood as the mode of consciousness in which the individual feels a sense of belonging, of connection, to the cosmos as a whole, it becomes clear that ecological awareness is spiritual in its deepest sense...The essence of deep ecology is to ask deeper questions. This is also the essence of a paradigm shift.*

Bowers (1993:191) refers to the present ecological crisis as being the direction which "our spiritual development has taken over the course of the last four to five hundred years". There has been a gradual shift from worshipping God, which manifested during the first wave and before, and which involved "an attitude of reverence, devotion, admiration, and intense love" (Bowers, 1993:191) to worshipping the possession of material goods, during the second wave, that brought social status and continual excitement. Consumer items were (and are still) seen as "the ultimate source of meaning and authority" (Bowers, 1993:192). The credit card, words like freedom, progress, science and technology, have become substitutes for the resulting spiritual

vacuum of the last few decades. This constitutes an *outside-in paradigm* "where man relies on the outside (possessions, resources, facilities, knowledge, circumstances) to obtain his inner salvation" (Slabbert,1998:59). The Amplified Bible (1987) says, to the contrary:

> *How much better it is to get skilful and godly Wisdom than gold! And to get understanding is to be chosen rather than silver. (Proverbs 16:16.)*

Reaction against this outside-in paradigm is, however, becoming more prominent today, underlining the idea of Bowers (1993) that man is starting to redirect his spirituality. To site some reaction from Christian religions, Martin Marty, director of the Public Religion project in the USA, says that "moral decay, financial disasters and the emptiness of materialistic cultures are causing people to turn to religion for answers" (Lowvelder, 1998:20). He further states that the number of evangelical Christians has grown by 126% since 1970, while the world's population has increased 60% since then. Furthermore, Pentecostal churches are said to be growing by 20 million a year, particularly in Africa, Asia and Latin America (Lowvelder, 1998:20).

3.4.1.2 A respiritualization

The new paradigm described by Harman (1988:34), reconciles science and religion, and acknowledges subjective experience and the strength of our conscious and unconscious beliefs (Harman, 1988:78). It demands the awakening of a new spirituality which encompasses man and the whole cosmos. Universally, there is a connectedness amongst the religions, or a common consciousness which is represented by the Dalai Lama of Tibet, namely to change from within, through prayerful meditation, to have compassion for others and serve them in the selfless aim of making this world a better place. Man needs to become aware of his innermost feelings and how he/she relates to reality. According to Debold (1998:1):

> *....we are talking about a respiritualization. This refers to the idea that people will see the need to get in touch with their inner selves.*

Various contemporary writers such as Maynard and Mehrtens, Peter Drucker, Jeremy Rifkin and Robert Heilbronner (Debold, 1998:1) refer to terms such as the *fourth wave* , *new world order, post-market era* or *post-capitalist society*. They all refer to the same concepts that are emerging in this new era:

> *...a respiritualization of society,.... self-forgetful service (*serving society without being renumerated*), will become not only a theological watchword, but an emerging paradigm for the common man.....Religions will "catch up" with science.*

This means that science and scientific views which were held during the scientific revolution, and which dominated people's thought pattens, will no longer be dominant. A religious, spiritual, inner strength and consciousness is demanded, in order to align with the fact that there is a new concept of mind, and that inner conscious awareness causes reality (not vice versa!). This phenomenon also spills over into the work place.

3.4.1.3   A new spirit in the work place

Mgibi (1997:50), states that religion is central to life to the African people, and it needs to be brought into the work place as well. He is concerned that the prevailing paradigm negates this fact when he says (Mgibi, 1997:51):

> *Our organisations have a **spiritual and soul** vacuum which greatly undermines creativity, innovation, excitement and morale.*

Mgibi refers to the fact that the work place does not allow for interpersonal relationships to develop, and that this results in a climate of mistrust, hostility and conflict. He advocates a climate of trust, mutual respect, unconditional acceptance and affirmation, which will only be achieved once management and organisational practices acknowledge the fact that these practices should include the totality of human experiences and life in general. Spiritual dimensions like love and caring should be brought into the work place, resulting in a morale booster.

This view coincides with that of Barker (1992:138) when he perceives that one of the changes being brought about by the new paradigms is the return of *spirit* to the workplace. People care again what they do because they are allowed to be innovative and improve themselves. He concludes that the quest for excellence is a way of bringing the Spirit of God into the workplace. For being filled with enthusiasm also means to be filled with the Spirit of God. "To not quest for excellence might be considered sacrilege" (Barker, 1992:138). This is therefore a serious appeal to man, to fulfil his potential, to quest for excellence.

3.4.1.4 The importance of the new spirituality

The awakening of a new spiritual awareness can be seen as the most important aspect emerging from the new paradigms. Turner (1995:X), says that the essence is to realise that the security and strength we seek *outside* of us is available *internally*.

Covey (1992:292), refers to the renewing of the spiritual dimension as:

> *...your core, your centre, your commitment to your value system.... It draws upon the sources that inspire and uplift you and tie you to the timeless truths of all humanity.*

Leonard and Murphy (1995:XI - XIV) sees man's growth, transformation, well-being, love, and development as *linked to the earth itself*. The universe evolves to reveal God more and more. It is an ongoing process of the "unfolding of hidden divinity" (Leonard and Murphy, 1995:X11). It is thus a far cry from the old paradigm that sees man as apart from the universe, studying it objectively and having a fragmented view of the universe (Capra, 1998:6). Therefore, man's destiny is "to learn and keep on learning for as long as we live"(Leonard and Murphy, 1995:XV), for we all have a vast untapped potential to learn, create and love and we should explore our inner wisdom in order to fulfil our destiny.

"The world is hungry for God" is the outcry of religious magazines of today (Lowvelder, 1998:20). Bill Bright, founder of Campus Crusade for Christ says that "the greatest spiritual awakening of all times is taking place today (Lowvelder, 1998:20). There is therefore a clear shift

from the denying of the spiritual awareness as part of life as the source from which man's potential can be realised, to a new spiritual awakening!

In the South African context well respected academics like Drs. Willem de Klerk, Piet Mulder, Lovemore Mgibi and Hennie de Villiers all have respective views on the "new spirituality". According to Van der Merwe (1998a), Dr. de Klerk refers to "intuition" and "feelings" as ways to search for God, in his recently released book ("Die vreemde God en sy mense", 1998) as opposed to the traditional, unemotional, more cognitive approach that has for decades dominated the churches of the Reformation. Dr. de Villiers (a theologian like Dr. de Klerk) in his most recent publication ("Hoekom is ek hier?, 1998) refers to the discovery of man's own spiritual strength. His view is that this new search for meaning, stems from modern man's discontent and disenchantment with the present situation on earth: ecological crisis, toxic waste, incurable diseases like aids and cancer, and the increasing technological demands in the workplace. It causes man to reflect on what is eventually meaningful (Van der Merwe, 1992a). Dr. P Mulder, a creativity expert amongst others, refers to "subjective thoughts" driving your "inner vision" (Van der Merwe, L. 1998b), which may refer to the introspective dwelling in the unconscious in order to release the untapped potential from within. Mgibi (1997:51) emphasises that African learning methods are social, intellectual and spiritual (Mgibi, 1997:65), and that these elements should be incorporated in contemporary training programmes. He therefore also advocates a respiritualization like Barker (1992:38), and Debold (1998:1).

In this regard, the Amplified Bible(1987) says:

> *Strip yourself of your former nature [put off and discard your old unrenewed self] which characterized your previous manner of life ....and be constantly renewed in the spirit of your mind [having a fresh mental and spiritual attitude].. (Ephesians 4:22-23).*

Ultimately, the awakening of a new spirituality and becoming connected, are two sides of the same coin. Man's growing awareness of his innermost feelings and spiritual consciousness, influence the way he subsequently relates to fellow human beings and the universe, seeing the harmony, relationships and interdependence, feeling that he belongs. Man is no longer alienated

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from other living systems, observing and studying it objectively, and acting only on what is visible to the eye. He/she is *free to act through wisdom from within*, relying on intuition and mutual understanding that naturally flow from the relationships between humans and all other living systems.

The challenge is, for man to redirect his spirituality, in order to appreciate and see the world as an integrated whole of which he/she forms part, and not as separate entities from which resources could be tapped to serve man. This is the answer to the problem of the destruction of the earth's natural resources. Man will stop seeing our planet as a "gigantic toolshed" (Mehrtens,1999:27), consuming all to his benefit. Mother Earth is part and parcel of man's existence; it needs to be sustained. The Fourth Wave demands self-sacrificing service! A spiritual turn-about, where man serves man as well as the universe!

The awakening of a new spirituality not only refers to a turning back to religion, but it challenges man to become aware of his inner wisdom and potential, and to access his *inner feelings, imagination, creativity and intuition*. Only a small part of our total mental activity is conscious whereas the vast portion lies in the unconscious mind (Harman, 1988:85). Man therefore has to access the unconscious mind through various meditative practises, or as Covey says (1992:292): *prayerful meditation*, and by paying attention to feelings, emotions and inner imagery in order to release the potential from within. This is the inner change that Man is challenged with, this is the quest to pursue for the future! This view is most eloquently described in the words of Teilhard de Chardin, (Covey, 1992:319):

> *We are not human beings having a spiritual experience. We are spiritual beings having a human experience.*

The new awareness of mind and the awakening of a new spirituality can thus be seen as the thrust of the new paradigm, the core (Covey, 1992:292), the future pull (Land and Jarman, 1993:), the leading influencer, (Debold, 1998:2), the quest to pursue in order to fulfill our potential (Slabbert, 1998:59).

The awareness of a new spirituality leads to a new awareness of principles and value systems which steer our lives.

3.4.2 SHIFT TO A PRINCIPLE-CENTRED PARADIGM

The problem facing us today, is that we are constantly attracted to "quick fix" approaches that promises immediate results. To expand on this statement, Turner (1995:17) says, that whereas "the law of nature operates on a system based on principles, the law of society is a system based on values which are often *not aligned* to principles". Principles, in this regard, refer to the universal principles of life, fundamental truths and natural laws, that have stood the test of time. When society therefore build on values not aligned with the said universal principles, it might be false from the outset, we might be building on sand! In this regard, Covey (1992:19) refers to the personality ethic which dominated the twentieth century.

3.4.2.1   Personality ethic

The personality ethic is being described as follows (Covey, 1992:19):

> *Success became more a function of personality, of public image, of attitudes and behaviours, skills and techniques that lubricate the processes of human interaction......the personality approach were clearly manipulative, even deceptive, encouraging people to use techniques to get other people to like them, or to fake interest in the hobbies of others to get out of them what they wanted, or to use the 'power look', or to intimidate their way through life....the basic thrust was quick-fix influence techniques, power strategies, communication skills and positive attitudes.*

According to the personality ethic, the perception is that being good at human relations, being manipulative and having a positive attitude will "quickly fix" all our problems. Books about "how to make friends and influence people" are typical of this "outside-in" paradigm where people are being taught artificially to manipulate relationships. The personality ethic appeared to lead people to success, but in fact, it left the "underlying chronic problems untouched to fester and resurface

time and again" (Covey, 1992:18). The personality ethic *conditioned* people to *react* in certain ways, in order to get what they want. Therefore a typical second wave, behaviouristic attitude. The Third Wave, however, indicates a total change from these views and attitudes.

Covey (1992:70) underpins, however, the importance of being *proactive*. He denounces behaviouristic viewpoints of humans being reactive to stimuli and accentuates the fact that man is driven by inner values, has an internal locus of control (inner motivation) independent will, vivid imagination, freedom of choice and above all has conscience. Man's "basic nature is to act, and not to be acted upon ..... this empowers us to create circumstances" (Covey, 1992:75). Again, the scientific revolution is proven to be totally out of pace with this fact of human nature, and man is therefore urged to challenge these views which have been dominating our thought patterns and behaviour for the last century. A new character-ethic is proposed by Covey (1992), as opposed to the personality ethic.

3.4.2.2 The character ethic - principle-centredness

Presently, there appears to be a gradual shift towards a principle-centred, "inside-out" paradigm where a "character ethic" like integrity, justice, courage, patience and being humble, are virtues. (Covey, 1992:18). Whereas the personality ethic can be seen as secondary traits for personal growth, the character ethic is *primary*. It refers to the foundation, the "lighthouse" principles like respect and love, the natural laws that govern human growth and happiness (Covey, 1992:33 and Turner, 1995:20).

Our lives should thus be centred on primary principles, for principles, according to Covey (1992:122), are:

> *..deep, fundamental truths, classic truths, generic common denominators. They are tightly interwoven threads running with exactness, consistency, beauty, and strength through the fabric of life.....we can be secure in the knowledge that principles are bigger than people or circumstances; and that thousands of years of history have seen them triumph, time and time again.*

For man to live a principle-centred life, means therefore to be rooted in universal, timeless, unchanging principles, from which our values will flow and which directs our behaviour.

This change which is presently evolving, indicates a radical shift away from the dominating *personality ethic* of the twentieth century, to the *character ethic* of today. The future therefore challenges man to be principle-centred and develop a character ethic, of which the characteristics were described by Covey (1992) and Turner (1995).

Both Covey (1992:122-123) and Turner (1995:23) believe that character building can only be done successfully when rooted in universal principles. They describe people who are principle-centred, as being responsible, competent and trustworthy, as being proactive and internally driven by a strong sense of vision for the future, values and missions. They are not controlled by external influences and enjoy an "abundance mentality" which springs from an "internal security" and not from possessions or opinions (Turner, 1995:23). This internal security is described by Covey (1992:122), as coming from knowing that true principles do not change, they are immovable. Accompanying principle-centeredness, are wisdom and guidance. Correct principles guide our lives because we have the "correct maps", and give us the wisdom to make the correct decisions. Principle-centred living also results in personal power of self-awareness, being knowledgeable and proactive (Covey, 1992:123).

The challenge for man is spelled out by Leonard and Murphy's (1995:6) findings, as well as that of Covey (1992:75) when they state that to be able to change, we need to make it a "habit", therefore you have to know what you want to change - you have to know how to change (constant practice) and you have to have the desire to change (inner motivation and compelling vision). The whole person has to be involved in the process, constantly. This constitutes an "inside-out" paradigm, where man acts, guided by principles from within. The focus is on basic principles in life guiding the value system, eventually resulting in behavioural thinking patterns of man. It attacks the moral/ethical dilemma of today and proposes an alternative, namely to live one's life guided from within, by universal principles or natural laws which "operate regardless of our awareness of them or obedience to them" (Turner, 1995:25). This also refers to character building.

The same principles which apply to developing and building character, also applies to developing professional competence and leadership (Turner, 1995:20). Leadership should especially be centred around principles, for only then will leaders set standards for a core value system to be implemented and followed in their organisations. The moral and ethical pillars of organisations are formed by the personal values of an authentic leader (Schwan and Spady, 1998:30). When the principle-centred leader has to make decisions, he/she tries to stand apart from the emotion of the situation and looks at the balanced whole picture. In this way ensuring the most *effective* decision "because it is based on principles with predictable long- term results" Covey, 1992:127).

Being effective, and having a compelling vision, amongst others, is also what principle-centredness advocates. It is regarded as focussing on what is *important* in life, as opposed to being efficient, which implies attending to what is urgent (Turner, 1998:19). In order to be effective, man should have a clear "vision or destination and a compass (a set of principles or directions)" (Covey, 1992:101) this will result in knowing what is important and to seeing clearly where you are going. In this regard someone once said (Covey, 1992:316): "There are only two lasting bequests we can give our children - one is roots (principles) and the other wings" (a vision).

The character ethic does not, however, result in man being obsessed with his own development at the expense of his fellow human beings/environment. The interrelatedness and relationships between people and their environment are of special importance as universal laws/principles. This has been proven as urgent, new demands with which man is faced (3.2.2.2).
According to Covey (1992:275), "one of the very practical results of being principle-centred, is that it makes us whole - truly integrated". Reference is made here to whole-brain thinking, where a person accesses both the intuitive, creative, and visual right brain and the logical, analytical, verbal, linear thinking of the left brain. It is also clearly stated as a prerequisite for the Third and Forth Waves, namely to utilise whole brain thinking (Mehrtens, 1999:27). Wholeness refers to cognitive, emotional, spiritual and physical integration. It is therefore the *synergistic* element that is of importance. We have already referred to views describing the interconnectedness of nature and the wholeness of the cosmos (Gaia theory and Bateson, 1992)), the living world as a network of relationships (Capra, 1996:39), referring to the *synergistic element* throughout the whole

cosmos. This concept culminates in the principle-centred person, who is internally synergised, resulting from living his/her life "as one whole interrelated compartment... which provides increased energy and well-being" (Turner, 1995:21)

3.4.2.3   The natural law of interdependency

The current social paradigm accentuates independence, living our lives apart from others, as a virtue, for "most of the self-improvement material puts independence on a pedestal" (Covey, 1992:50). It might be a reaction against being controlled or used by others, being dependent on others, which featured strongly during the Second Wave. The other side of the coin is that independence, when driven too far, can become selfishness or self-centeredness. There should therefore be a balance between being independent (being able to choose, be responsible and self-reliant), and interdependence (cooperation, combined efforts, creating something better, together) - (Covey, 1992:49). The shift then implies being *both independent and interdependent*, to grow from dependency to independency to interdependency, aligning with the natural laws of growth.

These new movements and theories therefore have vast implications for man for the future. According to Debold (1998:3), the Forth Wave will be characterised by Gaia-like features, for instance, people will begin to see the interconnectedness of everything, they will see themselves as part of the pattern of life and the whole universe. Therefore, destroying the world, through consumption, exploitation and waste, means destroying oneself. It will have a tremendous influence on the way in which man relates to his environment and fellow human beings. People will start serving the planet (Mehrtens, 1999:27), displaying a serious social responsibility and will be service-orientated, instead of serving the goal to maximise profits and exploit the natural resources. Maximising creativity and becoming fully integrated, are required from people for the twenty first century (Mehrtens, 1999:27).

Conclusively, Land and Jarman (1992) believes that there are a few principles to which man should adhere in order to "connect" (Land and Jarman, 1992:191-205):

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* *See the potentials and possibilities in everyone.*

* *Offer mutual support.*

* *Extend equality to everyone.*

* *Bring about the circumstances in which everyone can win.*

* *Recognise that whatever you focus on, expands.*

* *Eliminate judgements.*

* *Trust and love one another.*

Land and Jarman (1992:189) conclude their view regarding the interdependence of the cosmos in saying:

> *Growth, change, and ultimately evolution occur as individuals, organisations and society increase the depth of their relationships by continually broadening and strengthening their interdependent connections......The vital skill to master, is the ability to connect - with everything, resources, information, ideas, ..pay attention to what you feel, hear, see, think, or perceive.*

The consequence is therefore that *connection* "represents one's deep and genuine relationship with and appreciation of the value, intellectual , and feeling dimensions in oneself and others. Connection is about your 'EQ', the emotional equivalent of your IQ" (Schwan and Spady, 1998:41). Man's worth does *not* refer to his cognitive, rational abilities only, but also and more profoundly so, to the fact of his *wholeness,* of intellectual, emotional, physical and spiritual connection, and the *interrelatedness* to the whole cosmos. This new realisation of how man relates to the universe and to himself, as well as the fact that it is a common phenomenon in all living systems, opens up new horizons, and indicates a deeper dimension of the changes that can be seen today. Man needs to develop this kind of awareness, it is demanded from him, in order to survive in the next century!

In   conclusion one can therefore say that the old paradigm negates the natural law of interdependency of the cosmos, and constitutes a fragmented view of reality, an outside-in, behaviouristic way in which man *reacts* to environmental stimuli. The new paradigm, on the other

hand suggests a juxtaposition, a fundamental change: Man is operating from universal, deeply rooted principles, which guide his *total* way of perceiving, doing and believing. Man now *perceives what he believes*, from an inside-out paradigm, he is *proactive and effective*. The shift is from worshipping material goods, to having an inner core of spiritual awareness, an *inner wisdom* that enables him/her to fulfil the potential with which God created us all. Having a deep sense of spiritual awareness and being interconnected with each other and the cosmos, being principle-centred, independent as well as interdependent, are inseparable aspects of how man is perceived by the new paradigm. Man therefore enjoys a wonderful freedom, in that he is acting with *self confidence* and *responsibility*, using *own initiative*, *common sense* and *inner motivation* to tackle problems with vigour and *effort*, to *persevere* until the sweet fruits of success are tasted. Man also enjoys the positive interdependence of *sharing* within a group situation. Sharing feelings, understanding, respect and forgiveness within a cooperative working relationship, where communication is open and honest, are most fulfilling to man, because he is created as a unique person, but also as social being, needing to share *love* in order to be happy and enjoy *peacefulness*. These are Mega life-skills (Slabbert, 1998:224-227), the inevitable consequence of living a principle-centred life, and which culminates in the cooperative life-skills, living an interrelated life! To this quest, we are all called. This is the change which is demanded from man in order to live a fulfilled life in the future he creates.

A very important question arises, namely, how do these changes impact on the world of work? This phenomenon needs further and urgent investigation, as it is in this sphere that man spends most of his life on earth. It is important for man in general, and AD practitioners specifically, to plan and be prepared for the enormous impact which the described paradigm shift will have on future employees.

3.5 THE IMPLICATIONS FOR THE WORLD OF WORK

The changes which have already been indicated and discussed, earlier in this chapter, revealed that there seems to be a redefinition of work since the last decade of this century. The wave theory of Toffler and Toffler (1995), indicates vast changes from one wave to another in for instance, the world of work, organisation structure, markets, economy and the role of the employee. The Third

Wave, which Maynard and Mehrtens (1995) say has been cresting already, is gradually making way for the Fourth Wave at the change of the millennium, indicating a new social awareness, where social responsibilities and environmental conservation are important issues. Contemporary scientific research which proposes an interdependent, interrelated world view as opposed to the traditional fragmented view, makes one realise that it becomes important to study the impact which these changes might have, specifically on the world of work, for these changes are new, they are fundamental, they are paradigmatic and challenge man to conquer new horizons.

According to quite a number of authors, (Herbst, 1998; Harvey, Geal and Moon , 1997; Harman, 1988; Carruthers, 1997; Eager, 1996a&b ; Boshoff, 1997; Hammer and Stanton, 1995; Senge, Roberts, Ross, Smith and Kleiner, 1994; Somerville and Mroz, 1997; Sunter,1992 & 1996; Verville, 1995) the present world of work (and that of the new millennium), is demanding radical changes, aligned with the changed paradigms. The following paragraphs are dedicated to highlighting the implications for the world of work, using categories which emanated from the *changes* which were discussed earlier in this chapter. The researcher will discuss their impact on the world of work and the challenges they demand from man.

3.5.1 ORGANISATIONAL STRUCTURE

A gradual change can be seen since the 1970's, as far as the structure of organisations is concerned. This can be attributed to a few phenomena, which are directly linked to the changes/paradigm shifts which have been described previously in this chapter.

3.5.1.1 Globalisation

Companies/organisations are becoming *global* in their operations, they have to compete on the global markets (Herbst, 1998:33). This is totally different from the home-based First Wave family business or the nationally driven economies of the Second Wave. The advancement of technology makes it possible for global communication networks to link companies/organisations and individuals all over the globe. The implication is that as information becomes accessible to all, markets are becoming more competitive, companies no longer compete in near isolation in their

own countries, but have to keep up with world class companies/organisations. According to Kanter (Sunter, 1996:105), *world-class* companies have to be more entrepreneurial, learning-orientated and collaborative.

The work force must therefore also be skilled in entrepreneurial thinking and team-work. They should have an attitude of life-long learning, in order to fit into these world-class companies.

3.5.1.2   Decentralisation

The centralised, hierarchical organisational structure which was prevalent during the twentieth century, up to the 1970's, is now becoming decentralised and more flexible (Harman, 1988:131), with open horizontal lines of management, and shared decision-making on all levels. A total different structure from the Second Wave companies, therefore.

The demand is, for alignment of all members at all levels, sharing a sense of ownership and involving commitment to a shared vision (Harman, 1988:131).

3.5.1.3   Downsizing

"Downsizing" is one of the significant changes that has been taking place over the last decade, resulting in "delayering" and "out sourcing" (Harvey et al, 1997:287). This means that organisations are becoming "leaner" and "fitter", delayering unnecessary hierarchies of management and distributing decision-making throughout the company; a far cry from the huge, businesses of the Second Wave, monopolising their sector of the economy.

Responsibility and accountability is therefore being handed over to employees as well, who need to become mentally "fit" and knowledgeable to perform these functions. Again, the advancements in technology have a major role to play in this phenomenon. Fewer people are needed to do the job, and speedy decision making coupled with expert competency in executing the job, is needed because of increased global competition. Some functions of the company/organisation, are

therefore being out sourced or franchised to smaller companies or consultants. The human resources division of a big company might for instance be out sourced to a group of consultants, rendering a more efficient service. Similarly, the marketing of a product when leaving the factory, can be left to the expertise of a marketing company, instead of the producer having to finance a marketing division as well. This phenomenon opens up many opportunities for the professional to become an entrepreneur, starting his/her own consultancy firm. It also has vast implications for education in general and AD practices in particular, in that an entrepreneurial mind set needs to be developed and nurtured.

3.5.1.4   Virtual organisation

In sharp contrast with the "visible, tangible" organisation of the present, a new kind of organisation is starting to develop, thanks to the quantum leaps in the technology of today. Technology has a major influence on the organisational level, where the "virtual organisation" will replace or develop alongside present organisations. Carruthers (1997:45) describes the "virtual organisation as an enterprise in which:

*   *corporate structure and trappings are kept to a minimum,*

*   *communications are done via electronic mail,*

*   *employees and associates operate from different locations - i.e. from different buildings, from their homes and even from other countries - in order to optimise resources,*

*   *additional skills and resources are obtained on need-to basis through out-sourcing and the use of contractors."*

The entrepreneur therefore only needs his/her "information super highway" (Boshoff, 1997:11) in the form of computer and communications technology, to run a competitive business. This is indeed a change of gigantic nature, one which nobody would have dreamt of, ten or twenty years ago! It implies a total reconception of the world of work, or as Hammer and Stanton(1995) puts it, a reengineering of the organisation!

3.5.1.5 Reengineering

Reengineering of the organisation implicates the "redesign of work (and processes) so that it can be performed in a far superior way" (Hammer and Stanton, 1995:274). It is not merely changing and adapting the old systems, but a "fundamental rethinking and radical redesign of business processes...(it is) starting with a clean slate" (Hammer and Stanton, 1995:10), and questioning outdated assumptions, discarding them when found to be not effective anymore (Hammer and Stanton, 1995:107).

Boldness, in order to discard what is no longer needed, and creativity in the work place are therefore of the utmost importance! To be able to anticipate what is needed for future success and to solve unique, new problems which might appear on the horizon, before they can have a devastating effect, is what this future world of work demands! Knowledge, coupled with intuition and vision, is what is needed most.

3.5.2 KNOWLEDGE - A NEW ECONOMIC VALUE ORIENTATION

The economic value orientation of organisations are totally shifting from hard assets like buildings, machines and stocks, to the acquiring, generating, distributing and applying of knowledge (Toffler and Toffler, 1995:42-43). The focus is therefore on intangible, inexhaustible assets like *knowledge* and *competence*. Sunter (1996:105), refers to these intangible assets as the ability to operate effectively when measured in world standards. Leading organisations of today, are actively engaged in knowledge management, which is made possible by advancements in technology (Somerville and Mroz, 1997:73). Knowledge that is being developed by the organisation's research projects, operations, marketing, logistics and even through experience and wisdom, is being disseminated to be accessible world wide. This sharing of knowledge through technological networking is regarded as critical for the success of almost all organisations (Somerville and Mroz, 1997:74) and has the implication that employees need to be able to access and assess knowledge suitable to their environment. The assets of organisations of today, are therefore located in their human resources.

3.5.3 TEAM WORK

For organisations to gain the competitive edge (Senge et al, 1994:11), collaborative team-work and group problem-solving skills are critical, "as is the ability to exploit the power of technology and information" (Verville, 1995:46). Whereas teams of people working in the same section/career would normally work together, the demands are now totally different . Collaboration should be cross-functional, i.e. engineers, lawyers, accountants and sales people in the same team; and diverse, multi-cultural teams from all age groups and gender. This multidisciplinary composition of teams is important, in order to bring about creative breakthroughs in solving the complex problems of today. Somerville and Mroz (1997:70) are of the opinion that "the power (of multidisciplinary teaming) lies in the extraordinary breadth of perspective they bring".

For successful team working employees should, however, undergo extensive training in communication directed at interdependent skills and supportive behaviour. This refers directly to what Mgibi (1997:51) advocates, namely to bring a new spirit into the workplace (3.4.1.3). Values of respect, being appreciative, open to cross-cultural views, and demonstrating mutual trust are important factors that should be addressed in team-building exercises. This refers to emotional intelligence, which is becoming a competency of vital importance for the world of work, whether one deals with colleagues or clients.

3.5.4 CLIENT-ORIENTATION

The *interdependency* of customer and company is becoming of vital importance in today's organisations and replaces the previous "one-sided" company decision-making with regard to products and the markets. Companies thought they could describe what the client needs, and never even thought of consulting clients as to what their needs are.

Becoming client centred is regarded as of the utmost importance in the leading organisations of today. "Clients are becoming full members of project teams and are consulted ..... to ensure that their needs are understood" (Verville, 1995:47). The reengineering of processes are directed at

the outcomes or end product; it is therefore important for organisations to be client-oriented (Hammer and Stanton, 1995:106). The values held by companies are therefore demanding to really care about customer's needs and satisfaction (Senge et al., 1994:10). According to Hammer and Stanton (1995:106), reengineering is also about "having the customer's needs upfront (and) to rebuild on customers' behalf".

Clients are now consulted and are stakeholders in the whole process, implicating that employees must develop interpersonal skills.

3.5.5 MARKETS

Mass-production of the first half of this century, is making way for smaller, customised markets, to the extent that "Today they no longer focus on 'segments' but on 'particles' - family units and even individuals" (Toffler and Toffler, 1995:43). In this regard, technology enables companies to produce for the individual market; it only requires some changes to the programming of the computer, and the individualised product will be produced, ensuring a satisfied customer (Sunter, 1992:59). Creativity and novel ideas are therefore required and should be seriously pursued.

The Fourth Wave, according to Mehrtens (1999:27) will impact on the markets and production in the following way: The performance/production of a worker will be measured, not according to financial gain, but according to its social value and the contribution made towards the preservation of resources. Markets will be global, not merely international. The challenge is, for employees to develop an attitude of service, to work in unity with all, in a communal atmosphere becoming fully integrated with his/her environment. This is a strong indication of the synergistic element that characterises the new wave.

The segmentation of markets and customisation of production, the foreseen volunteer and service organisation, logically leads to smaller organisations, influencing the organisation structures. This is reflected in the down sizing and out sourcing concepts.

Hand in hand with smaller organisations, goes an increasing demand for productivity and effectiveness.

3.5.6 PRODUCTIVITY AND EFFECTIVENESS

Budgets are being slashed, resulting in fewer people having to do more work effectively, productively and with the assistance of technology. This is a shocking change to most employees, but a very real one. As technology advances, the unskilled or unproductive worker finds himself unemployed.

Because of flatter, delayered organisations, progression is "far less well-defined than in traditional hierarchical organizations. There will thus be an unclear promotion ladder (Harvey et al, 1997:288), which results in:

*   A performance culture for promotion; employees will have to undergo a kind of performance appraisal to advance in their careers.

*   Building and applying *competencies which* are necessary in fast paced ever-changing business-environments (Verville, 1995:47). Employees need to be multi-skilled and be committed to life-long learning, for "as the rate of change in the workplace accelerates, yesterday's competence does not guarantee today's job and today's job may become tomorrow's history" (Liang and Schwen, 1997:19).

*   Flexibility in job roles which are becoming more important (Harvey, 1997:287). No specific, rigid job specifications are applicable, employees should be flexible and adaptable, being able to transfer their unique skills to varied tasks. (The manager can fulfil his own secretarial functions through technological skills.) Or to use the words of Liang and Schwen (1997:19):

> *Instead of selecting a "qualified person to fit a job, the recruitment policy of companies may now favour hiring a "high-potential" person , one who is able to learn quickly. Life-long learning has become one of the dominant themes in the corporate world.*

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What organisations need, therefore, is competence and quality, the implication for employees are, that they should become multi-skilled and flexible in order to be employable. Quality service, quality organisations and quality employees are therefore needed.

3.5.7   QUALITY MANAGEMENT

Whereas the focus of organisations and businesses previously may have been on sales, and production, (quantity), the shift to quality is on the forefront in the last decade. Quality doesn't refer to products only, but it "inherently focusses on people in the whole system, ... on collective learning and action and on their own desires for improving (Senge et al, 1994:453). The total organisation functions as a system, "elements that hang together" (Senge et al, 1994:90), and processes that influence each other. Quality should be embedded in the whole system: processes, employees, products, customer-service, management, etc.

In the organisations of the future, "quality will be regarded as a basic skill" (Carruthers, 1997:44). According to Barker, (1992:133) the total quality concept can also be seen as "continuous improvement", or the belief that everyone can be inventive and innovative. Man is therefore urged to give his all, to use his/her potential to the full.

3.5.8   INCREASED SOCIAL AND ENVIRONMENTAL RESPONSIBILITIES

According to Carruthers, (1997:45), "organisations of the future will have a ..greater social awareness of the well-being of their employees, their families and the organisation's stakeholders...(for) There is a growing body of evidence that shows that satisfied employees and stakeholders have a direct influence on the organisation's performance and productivity". This is a radical shift from the old paradigm, where organisations were only interested in profits and re-investing their money in the organisation for more profits (Toffler and Toffler, 1995:43). Many organisations are getting involved in community upliftment programmes, specific needs like transport, medication and leisure activities, as well as financial assistance for learners and the like.

Companies are becoming sensitive to environmental issues like pollution, exploitation of natural resources, toxic waste and the like. The challenge is for companies to make funds available for research in dealing with environmental issues, to put into operation, practices which will be environmental friendly like recycling, strict control measures regarding pollution and waste, and sponsoring clean-up operations of our beaches, rivers, and other natural resources. As this trend is global, organisations world-wide, are cooperating in dealing with global environmental issues like caring for our oceans and the atmosphere, sharing of resources, reducing deforestation, global warming and the resulting greenhouse effect (Harman, 1988:125-126).

When one studies the concepts accompanying the emerging Fourth Wave (Maynard and Mehrtens 1993) there is a strong indication that "the fourth wave will be taking hold on the social fabric", in contrast with the extreme mechanization and knowledge/information revolution of the Second and Third Waves (Debold, 1998:3). The present unemployment problem, coupled with the fact that the employed will have more free time due to the virtual organisation phenomena (technology empowering people to work from any location, globally, not tied down by specific organisational commitments), will result in the evolving of the "third sector"in the economy. Debold (1998:3) describes this third sector as a *social economy*, which is measured in outputs, not salaries or revenue, when he states as follows:

> ...*(it) includes community activities, non-profit organisations, voluntarism or advocacy organisations.*

These predicted changes are even more dramatic than those of the third wave. Work will for instance not be done solely for materialistic means, volunteer work will become more important. A good example of this kind of work, has already started in America, where pensioners are assigned tasks at schools, for instance to be caretakers of school grounds or to take care of children after school hours, in exchange for cheaper or subsidised housing. This implies a shift to a more caring, loving attitude, where generosity and selfless sharing are valued. The demands will be for everybody to become responsible for the conservation of the universe, to serve the planet and leave a valuable legacy of natural resources, and to serve each other, implicating a more cooperative, holistic view of life. Whereas intellectual capital are seen as assets during the

Third Wave, the assets of the Fourth Wave will be the ability to generate ideas, information, creativity and having future vision (Mehrtens, 1999:27).

For many a person, this view will probably be regarded as total and utter nonsense, for how can one work without being remunerated in money? How can one be content just by being a caring person? Thirty years ago, however, Toffler (1999:1) already predicted the arrival of cable television, VCR's, satellites, the cloning of mammals and humans, the break-up of the nuclear family, all of which sounded like science fiction at the time, and all of which became a reality now.

The predictions for the fourth wave will therefore , as with the previous waves, have profound implications for the world of work, the economy and the social organisation, which in turn also impacts on the personal level. Debold (1998:1) says that there seems to be a "respiritualization of society" characterising the Fourth Wave, a change to an attitude of caring and conservation, and a "oneness with nature" (Mehrtens, 1999:27).

This trend highlights the prediction of Mehrtens (1999:27), that the Fourth Wave will challenge man to care for, and serve the planet, in order to leave a valuable legacy to the human race of the future. This has implications for man's ethical behaviour.

3.5.9   WORK ETHIC AND PURPOSEFULNESS

Work ethic is becoming increasingly important especially if companies want to gain and keep the "competitive edge" (Van Rensburg, 1997:5). Work ethic, not only relates to work pride, punctuality, honesty and dedication, but also ethical obligations towards clients, employers and the profession you serve. It demands therefore, an all inclusive ethical approach to work.

According to Harman (1988:131), organisations will be characterised by a "strong deep sense of purposefulness and vision for the future" and a "shared sense of ownership and personal responsibility for performance". They will create an "environment that emphasises growth and

empowerment of the individual". The organisation of the future needs to be committed to a "higher purpose" (Somerville and Mroz, 1997:67), which does not merely have a mission statement of empty words as was (and still is, in some cases) evident in the past.

The challenge is therefore, for workers to be *involved* and *engaged* in such a way, that *"they will choose to link their personal sense of purpose to the corporate purpose"*. (Somerville and Mroz, 1992:69). It implies, an interconnectedness and seamless boundaries between personal life and work life, as predicted by Debold (1998:1) for the new century.

3.5.10 CONCLUSIVE REMARKS

When reflecting on the changes that have been described, one cannot go untouched by the enormity of it all! It seems as if the basic ways in which man described, perceived and acted upon his working surroundings, have been turned upside down. Nothing has gone untouched by these phenomena!

The demands for organisations to change and reengineer, are enormous. It is however, the challenge which they have to face, to be able to survive in the next millennium. An even bigger challenge is, however, for employees to align with these new demands. For instance, employees must take responsibility for reaching their own set targets. This will result in a total redefinition of work, i.e. flexible hours, effectiveness as opposed to efficiency, autonomy, self-reliance and self-fulfilment, in the knowledge that the work is done satisfactorily and one is being trusted and empowered to take the responsibility of executing the job. The reengineering of the organisation obviously demands changes in employee attributes, which is the topic of the next discussion.

3.6 CHANGING DEMANDS ON EMPLOYEE ATTRIBUTES

If we analyse the changing face of the world of work, it follows logically that, in order to live up to these challenges, the work force should seriously consider the new demands being required from them by their working environment and be willing to take up these challenges.

Contemporary literature from academe describes a vast range of competencies which are demanded from workers for the next millennium (Slabbert, 1992, 1998; Harvey et al, 1997; Carruthers, 1997; Eager, 1996b ; Monteith, 1994; Senge et al, 1994; Land and Jarman, 1992; Hammer and Stanton, 1995 and Boshoff, 1998). The researcher therefore needs to have a closer look at some attributes that will be crucial for employees if they want to lead fulfilling and effective lives in their various fields of work.

According to the *Workplace basics* report, a study undertaken in 1990 by the American Department of Labour and the American Society of Training and Development, employers indicated that "above and beyond the mandatory need for reading, writing and computational skills, there existed another order of skills that more significantly contributed to the productivity and competitive edge evident in some employees" (Liddel and Baumgarten, 1995:32). These skills include learning to learn, listening and oral communication, self-esteem, motivation, creative thinking and problem solving, goal-setting and career-development, organisational effectiveness and leadership.

These attributes are dictated by the changing face of the world of work, emanating from the changing demands of the future, as discussed under 3.2 and 3.5. and are applicable on the personal and interpersonal level. These are discussed under the next headings. The researcher again used the structure of "what was expected in the past", followed by the present changes, and eventually what the future demands from employees.

3.6.1 INTRAPERSONAL ATTRIBUTES

The personal attributes which employees need to develop and which can be logically deduced from the effects of the changing world of work, are discussed in the following headings.

3.6.1.1   Knowledge and intellect - mind workers

The changing needs of the future implies that employees not only need basic theoretical subject-specific knowledge to be able to do a specific job as was the case during the old paradigm, it also

includes the "capacity to transfer knowledge learned in one setting and apply(ing) it to another setting" (Liddel and Baumgarten, 1995:35). The employee therefore has to demonstrate his/her intellectual ability using higher order cognitive skills like analysing, synthesising, creating, generating, transferring to other settings (Liddel and Baumgarten, 1995:35). Totally unlike the Second Wave trend, where mindless, reproductive work was required! Employees can no longer focus on one field of speciality, they have to be able to use their knowledge in numerous fields and situations, *understanding* these situations! A fundamental change in perceptions of what knowledge is, should take place. Knowledge is *not* a list of information accumulated over a period of time, stored in the brain until it can be reproduced when needed. (The prevailing view.) Knowledge is "an interpretive process aimed at the understanding of reality" (Kember and Gow, 1989:269).

Employees should therefore realise that the demands for them to become *mind-workers* (Toffler and Toffler, 1995:54), applying their competencies to various fields of specialities, as opposed to simply following established routes of doing the job, is becoming of the utmost importance. Employees should be able to *access* relevant knowledge through technological expertise, and they should be in a position to *evaluate new* knowledge. Technology brings with it, an overload of information, which should be interpreted and valued for applicability. This places high intellectual and motivational demands on the employee, in that it is a *total paradigm shift,* from accumulating information to reproducing it when needed, and, which was prevalent in the previous paradigm, to *acquiring* knowledge. This is indeed a dramatic change, a quantum leap, in that *work as well as the work force are being redefined.* The challenges which workers are now faced with, are nothing less than dramatic! It is no longer the quantity of the work force, doing manual labour, that is of importance, but the quality of the workers, *having* to use their *minds.* Whereas workers of the first and second wave neither had the *autonomy* nor took the *responsibility* of using their *own ideas* and *insights* that could impact on their work, the third wave mind workers are challenged and encouraged to do so.

This has vast implications for man, who has to change his views of the work place and the role he/she is fulfilling, and has to adapt according to completely new rules and roles that apply in the work place. New rules in a changing work environment suggest that workers wanting to survive

in the work place cannot rely on tenure anymore, it does not provide security to have worked for the same firm for the last twenty years. Workers need to continuously brush up their knowledge and skills, and show initiative and competence, in order to be an asset to their employers/firms. They need to become autonomous, responsible, creative, individualistic risk-takers, embarking on continuous learning.

This has an enormous implication for learners who prepare themselves for the future world of work. They need to develop the attitude of a researcher, always wanting to know more, needing to verify and assess new information, staying abreast of new developments in their field of expertise, which is totally different from the attitude of "the lecturer will tell me what to do and what I need to know ". In other words, they need to develop a self-initiated lifelong learning attitude, *sharing* and disseminating knowledge all over the globe. Learners therefore need to start thinking in various ways: problem-solving, creative thinking, lateral thinking, critical thinking, analysing and synthesising, should all be enhanced. It is clear that workers need to think for themselves and the mind-set of waiting for instructions should therefore be altered to that of being proactive, thinking and solving problems in creative and novel ways.

3.6.1.2   Motivation, eagerness to learn - life long learning

In organisational settings, motivation of staff is usually seen to be external, related to salary increases, perks like housing subsidy, company car, private office with own secretary, and being able to climb the hierarchical ladder to top management. When the changing needs of the world of work are scrutinized, a different pattern emerges. Motivational incentives in the workplace of the future demand that there should rather be focus on the personal qualities of employees and their willingness to be part of the change process.

The nature of the world of work demands from employees to be self-starters, wanting to learn (Harvey et al, 1997:289) be self disciplined, (Carruthers, 1997:43) and their learning should be self-directed (Eager, 1996a:19). The employee who enthusiastically embarks on the acquiring of

new skills and life long learning, taking the initiative and responsibility without the "push" from management, will be rewarded for being self-directed and motivated, while the mediocre will eventually lose his/her job.

According to the Chinese meaning of the word, learning, it includes two concepts namely, study and practice (Senge et al., 1994:60). To study, means to accumulate knowledge that will open doors for you. Through constant practice, you will obtain mastery. Therefore, learning is an ongoing process.

Technology has also influenced the importance of time as it accelerates the pace of operations, deliveries, information and transactions. In this regard Toffler and Toffler (1995:47) say:

> *Economies of speed replace economies of scale. Competition is so intense and the speed required so high that the old "time is money" rule is increasingly updated to "every interval of time is worth more than the one before it."....Slow, sequential, step-by-step engineering is replaced by "simultaneous engineering". .... DuWayne Peterson ...says, "Money moves at the speed of light. Information has to move faster"*

The implication is therefore that man has to keep up with the speed at which technology advances, in order to make any sense out of it and to stay on the cutting edge in the world of work. Technological advances have resulted in ubiquitous communication and information (Debold 1998:2). Embarking on a journey of lifelong learning, therefore, seems to be the option to take for workers of the Third Wave and emerging Fourth Wave! A concept that is quite novel, because during the second wave, people were trained or educated for a specific skill or career, which he/she pursued for life. Technology and all the driving forces of the Third Wave have changed all that.

The technological advancements leave workers no option, but to become life long learners, in order to deal with increasingly high-tech equipment (Jones, 1996:33). They therefore have to become *self-motivated* and take *responsibility* for their own learning and development. This means, having control over the total process, i.e. planning their career paths and what they want

to learn, monitoring the process, and evaluating the outcomes (Slabbert, 1992:162). This action can be seen as a feedback loop, where monitoring and evaluating will give feedback for re-planning and adjustments for the process to become meaningful. This self-regularity way of learning demands self-directiveness and internal motivation from an employee, he needs to have an "internal locus of control" (Monteith, 1994) for him/her to be able to "regulate" his/her self-sufficiency. Senge et al. (1994:18-21), refer to a deep learning cycle where people develop new skills and capabilities, new awareness and sensibilities and new attitudes and beliefs. This requires them to experience the world differently, undergoing a total mind shift, to becoming involved in lifelong programmes of study practice. A pre-requisite of this mind shift will be "a deep sense of individual accountability and responsibility" (Sunter, 1992:185).

Harvey et al. (1997:290) summarizes the demands placed on employees to be motivated and life-long learners, as follows: They "need to develop a range of self-skills including self-regulatory skills (such as self-discipline, time-keeping, ability to deal with stress, prioritization, planning and ability to juggle several things at once), self motivation (ranging from being a self-starter to seeing things through to a conclusion, including such characteristics as resilience, tenacity and determination), and self-assurance (including self-confidence, self awareness, self-belief, self-sufficiency, self-direction and self-promotion)." Gone are the days of being pushed up the ladder of the company hierarchies purely by doing one's job. The paradigm shift here, is that employees need to develop these self- skills, which are Mega skills (Slabbert, 1998:224-227) and *can be acquired* through long term practice, in order to meet the demands of the future world of work and stay employed!

3.6.1.3 Flexibility and adaptability - employability

In the rapid changing climate, employees can no longer expect a job or even career for life (Harvey et al, 1997:287). The average American has seven job changes in a lifetime and three separate careers (Sunter, 1996:104 *and* Liddel and Baumgarten, 1995:32). This is a total mind-shift from the previous "model" worker, who kept his/her job for a life-time, and was awarded for it! The view of the professional, doing the job he/she was trained for, and nothing else, is also being overthrown. The keyword now, is "employability", rather than merely being employed

(Sunter, 1996:104). Man can pursue as many careers as he can handle comfortably in a life time, thereby enriching the mind. The need is for employees to become flexible and eager to learn new technologies, to be proactive in dealing with ever increasing changes and possibilities. This implies a new-mind set, a new way of looking at how to be prepared for work in the future.

The implications for employees are that they will be challenged to become more flexible and employable, having a multitude of competencies; to develop excellent communication skills; to work productively in a team and have the self-confidence to be assertive; to make decisions and have the perseverance to follow through. The future needs people who are self-starters, not waiting for top-down instructions, not needing to be pushed, but taking own initiative and responsibility for decisions and actions.

Employees should be able to differentiate themselves from their "ordinary" colleagues by becoming multi-skilled, taking on various tasks, thus making themselves employable in more fields. "Employability" should become their mission (Herbst, 1998:33). According to Jones (1996:34), there is a great need for transferable skills and interactive skills, for example to be able to use acquired skills in different situations. Being multi-skilled also impacts on the way workers think: They need to be able to solve a multitude of problems using critical and creative thinking (Jones, 1996:34).

The reengineering of organisations places vast demands on workers to be adaptable, and flexible. When processes change, workers also need to change, with enthusiasm. Their attitudes, style, thinking, behaviour, and assumptions about the working environment must change, for the requirements of the jobs and skills will be challenging. Workers will eventually find that they are "new people" (Hammer and Stanton, 1995:117), taking on new challenges, which will eventually lead to what Land and Jarman (1992:21), refers to as the last phase of change, namely the fulfilling phase. For "to continue growing, the original pattern must be broken, rearranged and restructured" (reengineered). New, and different combinations should be structured, the process is therefore "disordering, reordering and innovation", in order for employees to fulfill their potential (Land and Jarman, 1992:21). This is a far cry from the days that employees needed only to diligently do their work everyday, receiving instructions and being good at their specific jobs.

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Much more is demanded from the new working situation, a total reordering of thinking and doing. Everybody therefore needs to change dramatically, in order for them to meet these challenging new demands.

3.6.1.4   Creativity

Change needs new ways of thinking, planning and behaving. For too long man has been accustomed to his/her comfort zone, where nothing changed, and nothing much was demanded from him. Man's creativity was therefore not cultivated.

Being innovative and creative, however, is one of the key demands for workers in order to be effective in the future world of work. It is only the creative mind that will be able to keep abreast of, and hold the competitive edge in the fast changing environment. (During a telephonic interview with Prof. Henti Boshoff, director of the Unit for Future Studies at the Potchefstroom University), he referred to a "future memory" - the ability to perceive changes before they actually take place and to deal with futuristic scenarios in a creative manner. Man therefore needs to trust his intuition and wisdom, in order to *create new solutions*. Man needs to find novel ways of solving problems, and according to Prof. Frank Barron (Land and Jarman, 1992:151), a "willingness to break with custom, a spirit of play as well as of dedication to work, and purpose on a grand scale." Land and Jarman (1992:68), are of the opinion that:

> *we are entering a period that demands that we operate in such a way as to empower the incalculable assets of human intelligence and creativity. The major distinction, for example, between old and new methods lies not in the methods themselves, but in the ability to integrate human beings to function as essential information and idea resources, creating solutions we have never seen before. In this kind of situation, human labour is no longer a disposable commodity, but a unique creative resource, in which an individual's development is as valuable as the organisation's growth.*

A last word comes from Einstein (Covey, 1992:42): "The world will not evolve round its current state of crises by using the same thinking that created the situation", we need novel, creative, innovative thinking! We therefore need entrepreneurs! We need to tap the potential!

3.6.1.5   Entrepreneurial skills

When studying present and future scenarios in the economies of the world, according to Sunter (1992:104), we should follow a "dual logic economy" where big business with high technology and financial assets, being able to compete internationally, should be complemented by the small, informal entrepreneurial sector (3.2.2.3). This was not the case during the highly industrialised Second Wave.

A good example and many success-stories of this phenomenon,   can be found in the multi-million franchising-business. The trend for big organisations to out-source services (see 3.3.4), also creates opportunities for entrepreneurs. This fact opens up a wide range of careers to pursue for the entrepreneur with an attitude of willingness, optimism, initiative and creative thinking.

The described changing environment demands from workers to develop an entrepreneurial mind set, coupled with innovation. To survive in the fast changing environment, workers need initiative, creative inventiveness, perseverance, having the confidence to take the risks of starting their own businesses, and to be focussed on the future in anticipating and solving new problems, before they lead to disaster for their new business enterprises. These competencies are prime requisites for individuals for the next century, which could ensure a successful entrepreneurial economy, creating more job opportunities and fulfilling man's need for autonomy and self-sufficiency.

The virtual organisation allows for entrepreneurs to work from home, having very little overhead costs (renting of rooms, employing secretarial and administrative support). It demands, however, quite a different mind set. In order to be able to work from home or to learn at home, people need to be self-starters and be self-disciplined, able to plan and set goals, execute the planned tasks, and monitor whether their planning is functional. A drastic change in attitudes towards work (and

studies) is needed, where workers no longer need to be dependent upon companies or institutions for work, and learners/scholars are not solely dependent on schools or other educational institutions for schooling..

The previously discussed attributes lead logically to the fact that employees should develop entrepreneurial skills, to create jobs and sustain them. This is essentially *a fundamental change* from seeking for employment, relying on others to give you a job (external locus of control), to *self-directedness*, relying on your self to create your own employment (internal locus of control). All the attributes mentioned under *motivation and willingness to learn, life long learning, and creativity* are essential for an entrepreneur. "Quick decisions, bold initiatives and resourceful ways of solving problems" (Land and Jarman, 1992:42) are what is needed to become a successful entrepreneur.

This attitude includes a very essential aspect that needs to be highlighted, namely credibility and having sound values. The entrepreneur who wants to survive in this competitive world, needs to earn the respect of clients and customers.

3.6.1.6   A sound value-system and moral base, adding quality

Because of the non-directive and often "chaotic" nature of the future environment, the conditions imposed will "require a particular breed of individual who displays both a strong moral ethic ..... is guided by a moral centre, a legitimate, visible and credible code of ethics and a deeply held set of values" (Herbst, 1998:33). Basic business relationships should be built on principles like trust and respect, honesty, humility, humaneness and a "healthy work ethic in which all honest work is regarded as something noble" (Carruthers, 1997:43). This view coincides with that of Covey (1992) who advocates a "principle-centred" paradigm where the core, fundamental and universal principles should guide man's life, as opposed to the "personality-centred" way of life. This "living from the centre" concept leads to self-acceptance, because of true belief in one's principles, and a loving attitude that will eventually lead to an open, honest way of communicating with co-workers, resulting in cooperative, sharing, win-win relationships in the workplace (Land and Jarman, 1992:133).

The change, therefore, which is demanded by the future is that increasingly, it seems, people will be seeking for meaning instead of material wealth (Boshoff, 1997:12), for meaningful relationships and meaningful work, instead of repetition and monotony. In this regard, Turner says:

People want meaning in their lives. It is the essential ingredient in organisational success.

Shared values regarding the mission and vision of a company, are very important for success, as they build on an organisational culture (Land and Jarman, 1992:188), where employees can feel secure and united in knowing exactly which principles are driving their values. Employees therefore need to share their principles and values and should be seen to live up to these principles. It is a fundamental requirement if they want to be happily employed in the future world of work.

3.6.1.7 Changing attitudes

To adopt a new, creative world-view, requires a conscious decision to change, also as far as attitudes are concerned. These changes in attitudes are directly linked to the changing demands of the new and evolving waves. It points out the total, fundamental change from living one's life without future vision, in a competitive, narrow, reactive, individualistic way, in total discordance with the universe; to an interdependent life, in harmony with the universe, anticipating the future with enthusiasm. Workers should, however, first be convinced that change is paramount for their future survival. They need to be fully informed about all the changes that are taking place and which are having an impact on their world in totality. Therefore, attitudes, amongst others, should also change. (Land and Jarman, 1992:132) list these attitudinal changes as follows:

From	To
Certain	*Curious*
Judging	*Choices based on vision*
Responding/reacting	*Initiating/anticipating*
Comparing with the past	*Experiencing the present*
Monotonous	*Wonder/awe/enthusiasm*
Egoist	*Healthy ego*
Competitive	*Cooperative*
Co-dependent	*Interdependent*
Discordant	*Harmonious*
Cynical	*Optimistic*

Sunter (1992:87), refers to trends and attitudes of the future, which will include a slowing desire to consume (deconsumption, in other words, a society that wastes less), a move towards sharing, connections, emotions and vitality , and a creative drive. Covey (1992:74-75) suggests that the highest value in life is attitudinal, because, "what matters most is how we *respond* to what we experience in life". Harman (1988:118-122) says that a "reperception" of values and attitudes is spreading over the world. It is, a search for wholeness, community and relationship, identity, meaning and a sense of empowerment. These views all coincide with the description of the values that characterise the Third Wave (Toffler and Toffler, 1995) as well as that of the emerging Fourth Wave (Mehrtens, 1999). For the Fourth Wave, Debold (1998:1) predicts seamless boundaries between corporate and personal life. Attributes that are seen as important in one's personal life, like caring and nurturing, will surface in the work place as "self-forgetful service", an emerging paradigm, according to Debold (1998:1). The worker's role is therefore completely redefined! People need to start caring about each other and their environment, they need to do volunteer service, in advocacy or non-profit organisations Debold, 1998:3).

In summarising the personal demands placed on employees for the future world of work, we can say that man has to reconsider his view of reality and the world of work. Fundamental change is needed to respond to the demands of the future. Man has the responsibility to fulfil his potential, for what is needed, is people with "high potential" (Liang and Shwen, 1997:19). The

world of work therefore needs high potential *leaders* who are *able and willing* to lead from a principle-centered, goal-directed, inner motivated core, they need to continuously develop and acquire new knowledge, be creative in reengineering the total organisation and empower employees to be self-starters. Furthermore, a *balanced* approach is needed, between economic development (being empowered to deal with the demands of the world of work), environmental health, and quality of life (Sunter, 1992:83). He says:

> *People need spiritual fulfilment and a sense of idealism (as opposed to ideology). They want autonomy and independence, family and friends, health and vitality and the satisfaction of a job well done.......Voltaire warned a long time ago: "In one half of our life we sacrifice our health in order to earn money, in the other we sacrifice money to regain our health. And while we are doing so, health and life pass us by.*

In addition to the personal attributes, the most important change of the new paradigm shift, is for man to live an interdependent life. Employees, therefore, need to be able to work in interactive teams. The personal attributes which have been described as of paramount importance for the employee to survive in the new world of work, lay the foundation for the next crucial set of attributes, namely the interpersonal skills. Man first has to become independent, in order to fulfil the higher call of becoming interdependent, and connected to his total environment.

3.6.2   INTERPERSONAL ATTRIBUTES

The interpersonal attributes which employees need to develop, which can be deduced from the changing demands of the world of work, are discussed in the following headings.

3.6.2.1   Interdependence

When studying guiding paradigms advocating fundamental change, the thrust pulling this change can be seen in the shift from dependency to independency to interdependency, (Covey, 1992:53) from objectivity or "standing apart", to becoming subjectively involved, from fragmentation to

integration and "becoming connected" (Bateson, 1979). The *social and emotional* nature of man should thus be taken into account.

Therefore, the future employee should be able to work in collaborative groups, (Boshoff, 1997:12), in "cross-functional teams of engineers, marketers, lawyers", etc. (Verville, 1995:47), and they will need complementary skills enabling them to work effectively in teams. These skills will include multicultural knowledge and human relation skills (Slabbert, 1992:157) dealing with diverse tasks, being able to communicate, "formally and informally with a wide range of people" (Harvey et al, 1997:290). Team working involves mutual trust and cooperation, trust being one of the core attributes needed for teams to perform up to their capabilities (Land and Jarman, 1992:205). It involves "systems thinking" (Senge et al, 1994) to get all perspectives and discuss problems from all angles and how everything affects everything else.

This shift is according to Raine Eister (Harman, 1988:123) from the "dominator" model to the "partnership model" of society. Managers and leaders, therefore, need to change their management style accordingly. Employees need to be part and parcel of decision making processes, and it will be the responsibility of managers to acquire the required interactive skills for interdependence to be realised in the work place.

This model also fits the "virtual organisation" where individuals from different locations can form partnerships and work effectively in teams. The importance of team working can also be seen in terms of problem-solving, as it draws on the strengths of a range of individuals (Harvey et al, 1997:291) in decision-making skills as well as in discussion and communication skills (Jones, 1996:36). The important concept that summarises teamwork, is therefore *interdependency*, or the orientation that you are part of a whole (Senge et al. 1994:197). This is again a far cry from the competitive, reactive, individualistic approach of the paradigms of the second wave, where each person was fighting his/her way up the ladder for promotions, only interested in his/her own field of expertise, and working alone. It therefore requires a special kind of skill, namely interpersonal skills.

3.6.2.2   Interpersonal skills / emotional intelligence

These skills have been identified in a study undertaken by Harvey et al (1992:291) as "vital in *relating* and *interacting* with clients and customers, ... it is high on the agenda of many organizations". An aspect which was not really cultivated in the past, because it was not necessary for workers to relate to others in team work or to deal directly with customers.

Interpersonal skills cover a wide range of attributes, i.e. sincerity, warm personality, empathy, caring, approachable, being trustworthy and understanding. Although these qualities are essential for all workers, it should first and foremost be reflected by leaders of organisations and institutions, for the influence of strong, but caring leaders will eventually contribute to a culture of interdependence in the work place.   These skills are less tangible than other skills like communication, and more difficult to develop.

The abovementioned qualities are also referred to as "emotional intelligence" (Cooper and Sawaf, 1997), using information to guide one's thinking and actions, being empathetic and having social deftness. The emphasis on client-centredness, which was highlighted as one if the crucial changes occurring in the "new" organisations (see 3.5.4), as well as cooperative team work in the new world of work, make it imperative for workers to develop emotional intelligence and excellent communication skills.

3.6.2.3   Communication skills

As far as communication skills are concerned, the ability to read, write and be conversant in a required language, was seen as being sufficient for a worker to be employed. The situation has changed drastically in the Third Wave world of work.

According to Harvey et al, (1997:290) communication skills emerge "in study after study ..... as one of the most important if not the most important quality that employers acquire of graduates..... (for) Communication skills confer an enormous range of attributes, both written and oral".

Employers need to be able to make their point, clearly understandable, unambiguous and *to the point*. Written communication skills like report writing, producing press-releases and memoranda are of vital importance for all employees, as secretarial and administrative support are increasingly being scaled down as result of advanced technology (each employee has his/her own PC) and the downsizing and out- sourcing phenomena in organisations of the nineteen nineties. Communicating via information technology is fast becoming a fundamental requirement for all managers and employees, being able to utilize word-processing, data-processing, e-mail and facilitating networking (Harvey et al, 1997:290).

The ability of managers and employees to communicate effectively with clients and customers, participate with team-members and undertake formal presentations is equally important (internal and external communication).

Communication acts as the *link that connects*. Good interpersonal skills will be lost without good communication skills, team working will collapse in the face of lack of communication skills. Marketing your creative idea, *leading* an organisation to the competitive edge, dealing successfully with conflict, being sensitive to diverse groups of employees, all depend on excellent communication skills, which *can* be acquired. Covey (1992:237) summarises the importance of communication when he says:

> *Seek first to understand then to be understood. This principle is the key to effective interpersonal communication.*

When studying all the personal and interpersonal attributes needed to be successful in the new world of work, and the changing attitudes which will be demanded, it becomes clear that the role of leaders becomes vital. Leaders are the influencing factor, which can change attitudes, ideas and thinking, through leading by example, by being consistent when applying principles and by giving unconditional support. According to the new paradigm, however, everybody should develop leadership qualities! This important shift is next discussed, as interpersonal attribute.

3.6.2.4 Leadership attributes

The major challenge facing man, is that *everybody* needs to cultivate leadership attributes, because when one looks at the predictions for the future (Mehrtens, 1999:270 and Debold (1998:2) , the role of the manager will change from decision-maker, to coach, to *none!* The discussion which follows is therefore directed at the human race, for everybody needs to adopt leadership attributes, as every person will eventually be responsible for his/her own direction in life.

Leaders need to develop the independent and interdependent attributes first, in order to set the example, *coach* and convince employees of its value for effectiveness in the new world of work. Covey (1992:101), distinguishes between leaders and managers as having top line or bottom line foci. Managers will for instance say: "How can I best accomplish certain things?", whereas leaders would say: "What are the things I want to accomplish?" Covey (1992:101) further states that:

> *..the rapidly changing environment in which we live, makes effective leadership more critical than it has ever been. - in every aspect of independent and interdependent life.*

According to research done by Zaleznik (Georgiades and Macdonell 1998:97), he also spells out a distinct difference between managers and leaders. He describes leaders as "loners, risk takers and visionaries", as having personal attitudes towards their goals which seems to be "embedded in themselves" and who relate to individuals "in an intuitive and empathic way", rather than being task orientated. This description can directly be linked to that of the "paradigm pioneer" who follows his/her intuition and judgement (Barker 1992:83). Zaleznik (Georgiades and Macdonell, 1998:97) found that managers, on the other hand, "regard goals as entirely impersonal and reactive". They believe that their role is to see to it that people achieve the set goals, to the benefit of the organisation. This is a typical, Second Wave attitude!

According to Rudnitski, (1996:80) conceptions of leadership are changing as a result of the Global Village concept, for "Leaders are receiving prominence in knowledge fields that are vital to the survival of the planet and the maintenance of high quality of life for humanity" (Rudnitski, 1996:80). This view regarding *leaders*, is underpinned by contemporary theories about leadership

(see Principle-centred leadership theory: Table 3.4). Leadership theories have developed quite dramatically during the last few decades, as will be indicated by the different theories cited.

The shift implicated here, as a result of the new demands of the future, is *from managing, to leading*. Contemporary leadership theories indicate this shift clearly.

Leadership theories have developed from the "nature paradigms" associated with hierarchical power structure and competition, to "nurture paradigms" which are associated with participation and "distribution of power across all levels" (Rudnitski, 1996:81). The attributes which leaders need to have, become clear when taking into account several leadership theories of the day, for instance the situational leadership theory (table 3.4) which focusses on psychosocial ability and the contingencies of a given situation, in other words the leader's emotional intelligence is at stake. He/she should be able to relate to different personalities, in different situations, in an effective way (Georgiades and Macdonell, 1998:88). The cognitive resources leadership theory (table 3.4) which focusses on above qualities *as well as* cognitive ability and expertise, emphasises the need for leaders to be knowledgeable. The communitarian leadership theory, advocated by Zergiovanni and Etzion (Rudnitski, 1996:83), focusses on *moral or ethical* conduct, particularly also on new concepts of "professionalism and competence"; professionalism being defined in this case, as competence or expertise *plus virtue*. These are indeed very important attributes already acknowledged as being vital for today and the next century, being personal attributes to be developed. Feminist theories, according to Noddings (Rudnitski, 1996:83), provide a "balance to the power and hierarchical relationships that dominate traditional leadership theories", in that they focus on *caring and nurturing relationships*. This correlates with the service culture of the workplace which Sunter (1992:85) refers to and which are brought about by more women entering the world of work (see 3.2.3.1): a strong indication that the Fourth Wave is already emerging! The principle-centred leadership theory as proposed by Covey (1992), reflects aspects of both feminist and communitarian theories (table 3.5). It can be seen as combining all attributes that is regarded as vital for the future world of work.

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TABLE 3.4   Leadership theories

SITUATIONAL LEADERSHIP THEORY	COGNITIVE RESOURCES LEADERSHIP THEORY
Leaders are chosen by the group for their ability to help the group meet its goals. A leader may be either task oriented or people oriented depending on his/her nature or the nature of the situation (contingencies). Leadership ability is based on psychosocial ability and the contingencies of a given situation.	Leaders may be chosen by the group, or appointed based on their high level of expertise, which is partially dependent upon innate ability or talent. Leadership ability is based on cognitive ability and expertise in a given domain, psychosocial ability and contingencies of situations.
Sisk & Shallcross, 1986	Sisk & Shallcross, 1986

(Rudnitski, 1996:82)

TABLE 3.5   Global, principle-centred leadership theory

GLOBAL, PRINCIPLE-CENTRED LEADERSHIP THEORY
There is less emphasis on competition, and individual achievement, and more on caring, nurturing relationships. Leaders are individuals who can help establish a true community in which many play what were traditionally leadership roles in the quest for the attainment of common group goals. Each leader works with a sense of moral obligation. Rather than task or people orientation, possible guiding principles might be: ➤ Caring, nurturing relationships   ➤ Commitment to the community, family, domain or field   ➤ Respect for elders or experts, and for diverse points of view   ➤ Teaching and nurturing members of the cognitive, learning or other community   ➤ Professionalism   ➤ Shared leadership

Feldhusen 1994

(Rudnitski, 1996:85)

Dr Tessie Herbst, project manager, R & Development - Business Unit, Transnet, is of the opinion that certain competencies and a "set of values/beliefs should be developed in order to comply with future leadership and management requirements" (Herbst, 1998:33). These competencies and values relate directly to the *redefined context of the environment*, "characterized by change, diversity, ambiguity complexity, interdependency and seamlessness", and can be described along the following lines.

a)   Leading from within

Leading from an inner strength is, according to Walsh (1997:296), the duty and responsibility of leaders. They need to attend to their inner selves and to seek self-knowledge. To lead from within, means listening to an inner voice, being connected with an inner truth and wisdom. The Amplified Bible (1987, Proverbs 4:7), describes this wisdom as "understanding (discernment, comprehension, and interpretation)." To lead from within also refers to the character-ethic of Covey's (1992:30) "inside-out" paradigm, being principle-centred and value driven. This is exactly what the researcher described as a vital change, that has to happen in the lives of all people, namely the awakening of a new spirituality, starting from within! (paragraph 3.4.1), and the shift to a principle-centred paradigm (paragraph 3.4.2). To be principle-centred, leaders need purpose and vision in their lives.

b)   Purpose and Vision

Creating a compelling purpose and vision, is regarded by Schwan and Spady (1998:44) as the top priority of all performance roles of a true leader. Their analysis of "Total leaders" indicate the following (Schwan and Spady, 1998:44):

> *Total leaders lead effective, dynamic, and enduring organisations that:*
> ** Have a clear and compelling purpose, which they involve all stakeholders in creating and   maintaining;*
> ** Embody the values of the staff in that purpose; and*
> ** Align all the organisation's functions and decisions with the purpose.*

Along with the purpose comes the creation of a vision, which is of utmost importance for leaders of the twenty first century. Leaders need to create (*with* their employees) a compelling vision and mission statement, which "aligns with the purpose" (Harman, 1988:165 and Land and Jarman, 1992:179). A shared vision will lead to voluntary followership and an inner motivation (Senge et al, 1994:15), because employees will take ownership of the vision. Schwan and Spady (1998:50), believes that "vision and leadership are synonymous. If you are not a visionary, at best you are

a manager." Visionary leaders are focussed on the future and therefore the demand for being creative, imaginative and innovative is of the utmost importance. To be able to translate the vision into concrete action and define processes and strategies towards this purpose, are as important as creating the vision (Schwan and Spady, 1998:13). Senge et al.(1994:196), believe that there is a creative tension between man's current reality and his vision, which will pull us forward with energy and enthusiasm. The purpose, core values and vision eventually become the "key motivators of highly competent empowered employees" (Swan and Spady, 1998:12), and it is therefore vital for leaders to lead through example.

c)   Values and principles

Leaders need a deeply rooted, strong set of personal principles that will align to their value systems (Turner, 1995:17), and guide their Code of Ethics. Principles have universal applications, and when focussing on principles, leaders and employees alike, will be able to apply them to a variety of circumstances (Turner, 1995:26,43). Covey (1992:101), in describing these principles, uses the metaphor of an inner compass, giving us direction.

Figure 3.5 is a summary of principle-centred leadership, as viewed by Covey (1992), Land and Jarman (1992) and Turner (1995).

d)   Earning trust and respect

Trust in self and others, as well as respect for self and others, will be core attributes for leaders if they want to be followed. Fear, according to Wilson (Harman, 1988:164), is the most limiting factor that keeps us from actualizing our potential, because it acts as an inhibiting factor. Trust and mutual support/cooperation on the other hand, can build organisations (and people) to fulfil their potentials. Trustworthiness instills respect, and it is earned when leaders align their personal principles and values to that of the organisation (Turner, 1995:45). The management style of leaders should also align with these principles.

A new management style of empowering people, trusting and enabling them to work creatively and develop towards self-actualization is a powerful statement made by Harman (1988:132) which could result in quality organizations retaining excellent employees. Sunter (1992:183) says that "modern leadership is about supporting people, bringing out the best in them, liberating their spirit and making them leaders themselves". The source of this "support" is empowerment of individuals, for as Herbst (1998:34) indicates, leaders must become facilitators instead of managers. There needs to be a shift from managing to facilitating. They need to be flexible, adaptable and not rigid in their management style. (The same is required from all employees, cf. paragraph 3.6.1.3) Barker (1992Debold:168), elaborates on this idea, by saying that managers must "facilitate cross-talk" and "demonstrate pliancy.

To earn trust and respect, leaders need to "coach" and "take risks", make quick decisions and fully understand the role of Information Technology in their organisations Herbst, 1998:34). The ability to value new knowledge for relevancy and applicability, to conserve such knowledge, price it and measure the returns, are equally important. Leaders therefore need to be knowledgeable, keep abreast of technology and be an expert in own right to be able to make informed decisions.

e)   Participative management

Managers need to focus on interdependency, on the needs of customers and clients (Carruthers, 1997:44), as well as engaging all employees in all processes. This is a result of flatter organisations, (paragraph 3.5.1.2). When mutual trust exists between leaders and employees, a spirit of interdependency will develop (Covey, 1992:188) eventually leading to *synergy* in the workplace. This in turn will lead to empowered employees, self-directed in their quest for excellence and becoming self-fulfilled human beings.

To be able to recognise the needs of clients and employees, leaders need to develop "emotional intelligence" (Cooper and Sawaf, 1997), which includes qualities such as self-awareness, impulse control, persistence, self-motivation, empathy and social deftness (Herbst, 1998:34). Leaders also need to develop cultural awareness to actively engage all employees (Schwan and Spady, 1998:26), and because of the global context in which they operate.

f)   Quality management

The global context immediately refers to a new concept of quality. The total quality movement underpins internationally acclaimed quality standards for products and employees alike. In this regard, Carruthers (1997:44) says:

> *Quality will be regarded as a basic skill (and) these people (managers and leaders) will be responsible for their own quality, the emphasis has already shifted from quality management, to ..... leading for quality.*

Leaders should therefore create a "feedback loop" (Schwan and Spady, 1998:100) between processes, leaders, and employees, as it creates valuable information where quality is determined, for instance, how well a new plan of action is working, if and how it should be changed to increase the quality, and to evaluate the effectiveness of all role players in the implementation of the new plan. Feedback can therefore set performance as well as product standards. Success or failure acts as feedback and as a learning curve for leaders and employees, to help them develop new strategies. It is important to "act" on feedback. When leaders have all the qualities explained above, the communication skills, interpersonal skills, knowledge and planning abilities, it will lead us nowhere, if action is not taken and decisions made, ensuring excellent, over-all quality. Leaders should not only "talk the talk" they should also "walk the walk". This does not imply that leaders should be reactive to feedback, though. Pro-activity is at the core of effective leadership (Covey, 1992:71), for proactive leaders have the freedom, conscience and independent will to choose how they want to act on feedback.

In conclusion, one can refer to the concept of "unifying principles"Turner (1995:45). When focussed on the mission, (which is driven by principles, values and a clear vision), the unifying principles are: personal trustworthiness, interpersonal trust, empowerment and organisational alignment. Leadership development can thus be seen as of the utmost importance for the paradigm shift to take place in the lives of ordinary workers. For it is the leaders who will be able to

facilitate this paradigm shift through own development and change, through leading by example, through empowering the employees with the relevant knowledge and inner motivation, to be willing to accept the challenges of the new world of work.

3.7 CONCLUSION

Change is part and parcel of the universe, of which man fulfils a central part. He is an independent, autonomous entity, able to *control* and *organise* his own thoughts, emotions, attitudes and actions. He is also part of his immediate environment and the universe, and is therefore compelled to be in an interdependent relationship with his environment, to interact and respond to it. The challenge to man is to continually assess his position in this world, through the process of autopoieses and interaction with his environment, which in turn would enable him to *co-create* his world. Man is urged to *develop continuously*, taking on the challenges of change and finding new solutions to novel problems. Man has to undergo these changes in thought patterns, attitudes and behaviour. It should be facilitated in every educational programme, for it is demanded from us, to be able to create our own future in the fast changing environment.

The exponential changes that the world is facing today, result in challenges, unprecedented by humankind of all times. It therefore needs courage, commitment, and trust, to undergo a total paradigm shift from the prevailing world view, to a new, creative world view. The challenge facing man today, is to *challenge* the legitimacy of the present era we are living in; for instance the consumption economy, environmental destruction and the alienation of humans from their life-goals (Harman, 1988:152). Social forces are pulling us into "a fundamental system change, where life is meaningful and everybody has a fair chance to create a decent life for self and family" (Harman, 1988:151). He (Harman1988:157) concludes that:

> *people all over the world continuously reaffirm their "angst" of unemployment, war, ...inequity, instead of affirming new belief systems of self-development, piece and cooperation,.... self-fulfilment...By deliberately changing the internal image of reality, people can change the world.*

The world demands a totally new human being, for the totally new world he/she is living in! A total reperception of self and the universe is needed. Man is able to undergo this paradigm shift, for man is created with an enormous potential, which, up to now has not nearly been tapped to the full. Man needs to take on the challenge and deny all boundaries implied by the old paradigms.

The new worker of the new millennium must:

* cultivate his/her unconscious mind in order to realise his/her potential;

* be an independent thinker (not mass-thinking);

* become a mind-worker;

* be creative, using intuition, be bold and create new solutions;

* be a self-starter, motivated from within;

* assume responsibility for own lifelong development;

* be flexible and employable;

* develop an entrepreneurial mind set;

* have sound values supporting a sound work ethic;

* be cooperative and supportive, able to work in diverse teams;

* develop emotional intelligence; and above all

* change their attitudes from "the world owes me" to " how can I serve"!

In order for man to be able to live a meaningful life amidst all these challenges and changes, he/she has to adopt a fundamentally new world view, starting from the "inside", developing and strengthening his/her inner-self, seeing with new eyes, taking responsibility for own development, in order to reach out in a meaningful way, to his/her environment. This environment being people, the work situation, nature and the whole universe. It implicates a development from independency, to an interdependent connection (Covey, 1992 and Bateson, 1979). The self-entered, self-loving attitude should now be replaced by a nurturing, sharing attitude, where love abounds and relationships are the cornerstones of humanity and the universe.

With this philosophy in mind, AD development practitioners should become paradigm pioneers, seriously reflecting on their current programmes. It is, after all, the pioneers who lead others into a new territories, who are responsible for growth, development and enrichment. Instead of

analysing and fragmenting problem areas where learners lack academic skills, the point of departure should be to reflect on why learners are not competent and prepared for the demands of tertiary education. Learners should not be treated as objects with specific, isolated problems that need correction, but as whole human beings, in constant relationship towards nature and other people. Addressing this lack of seeing oneself as part of a whole system of living things, as well as being aware of the unifying system within oneself, (emotions influences endocrine system, which influences actions, etc.), should be the task of AD practitioners.

Man (including learners) is continually involved in communication, either with himself (thinking), with fellow humans or with the environment (acting and reacting on feedback). Man should therefore be able to control his thoughts as well as the influence of the environment. Although he is in constant relationship with his fellow human beings, man should retain autonomy in decision making and thoughts (self-regulation and self-organisation). Learners also need to develop the responsibility to continually adapt, change, and create, for this is the challenge for all living systems. Nothing in the Universe is static, the future challenges demand proactive planning, action, control, evaluation of progress and re-planning.

Learners should be treated as independent human beings who can take control over their lives, who can think autonomously and act by reflecting on and evaluating own emotions and behaviour. They should also develop a sense of interdependency, of acknowledging the fact that everything in the universe is interdependent and is bound in interconnecting relationships. From the research findings of this report, it does not seem as if AD practices are doing this at all.

The development of learners to be able to cope with the changing demands of the world of work, is a challenge to be taken up by educators and academic development practitioners alike. For to become independent, responsible, self-reliant young adults with an attitude of lifelong learning, to be able to work in interdependent teams and to be driven by internal, universal principles and values, is a mammoth, but worthwhile task. Only then can we say, man's potential is being realised, man lives his life as it was originally meant to be!

CHAPTER 4

A proposed model for academic development of learners

4.1   INTRODUCTION

In this chapter, the research remains essentially qualitative in nature. This chapter is a resultant action research phase, where the findings in chapters two and three culminate in the construction of a grounded theory for AD in the form of a theoretical model which will guide AD practice to facilitate lifelong learning in order for learners to maximise their potential, as this is the best way to answer to the challenges of the 21st century.

Chapter two of this research, revealed the current state of AD practices at universities and technikons in South Africa. Chapter three explicated the demands of the future especially in terms of man's essence in life namely work, and the demands it places on employees having to develop new attributes. Higher education institutions should be preparing learners for these challenging demands of the future and from the findings of these two chapters it is obvious that they don't. They should focus on the demands of the future in order to prepare learners for a changing and challenging future world of work and lifetime employability as was indicated by chapter three.

In this chapter, the researcher will reflect on the challenges revealed in the previous chapter in order to construct a model according to which learners should be prepared for the demands of the future.

4.2   THE CHALLENGE OF THE DEMANDS OF THE FUTURE

When looking at the demands of the future world of work, made on the employees, it is clear that a total paradigm shift is needed. The redefinition of work implies that the mindset of employees must undergo drastic changes. It demands a change from being mindless, reactive workers, dependent on others for instructions, to becoming independent, autonomous, creative mind

workers, being able to initiate, plan and execute own work in the real world. It also implicates rigid hierarchies with top-down management to be substituted by matrix management resulting in team-work on all levels, in cross-functional teams where interdependent cooperation and flexibility are regarded as vital for decision-making and problem-solving. All employees are required to part-take in the running of "their" companies, to take on co-responsibility for the well-being of the company and to develop trusting and respectful relationships with their fellow workers. It is therefore a total change, from being detached, only doing one's job, to making one's job a meaningful part of one's life in total, experiencing it from a subjective, holistic perspective as part of an holistic fulfilment of one's life.

Ultimately, Welmans (1997:12) summarises the challenge as follows:

> *The challenge... is to find the courage to develop new and innovative ways to nurture and develop human potential. This is especially relevant in this transitional period when the future must be **discovered** and not based on past paradigms.*

We are on the crest of a new wave sweeping through the world, regardlessly carrying everything in its wake, and those who cannot "surf", will either be crushed, or will have to learn to surf, very soon! The demands of the future ultimately challenge man to exceed himself in every possible way. It demands of man to rise above mediocrity, it is a quest for excellence, it demands of man to *maximise his potential*. This *can* be achieved, through facilitating lifelong learning, as will become clear in the paragraphs to follow.

4.3   THE PROPOSED ACADEMIC DEVELOPMENT MODEL

The aim of this chapter is to propose a model whereby learners will be prepared for the challenges of the future. *These challenges, as they have appeared in the previous chapter require nothing less than the fulfilment of man's potential.* This model therefore identified and focusses on maximising human potential which can be realised through facilitating lifelong learning. Such a model implicates fundamental changes from previous "AD programmes", and since the changes required are paradigmatic in nature a new paradigm is required to guide the construction of the model.

4.3.1 THE PURPOSE OF THE PROPOSED AD-MODEL

The purpose of academic development of learners, as it transpired from this study, is to maximise human potential. Man is born with his potential, and the purpose is to develop it fully. Sadly, however, the prevailing outside-in paradigm denies this fundamental fact. Since man's potential constitutes what is inside man, the fulfilment of purpose should also start from the power of the inner potential, the inner drive that pulls man to his purpose, namely the fulfilment of potential. This is a life-long process, which can only be achieved, by facilitating life-long learning; a deliberate, conscious intervention, guided by a clear purpose.

To maximise human potential is foundational. It is a deep, total and fundamental deconstruction of the how, what and why of current AD-practices. It is a challenge of gigantic nature, the consequence of which can be nothing less than a total paradigm shift!

4.3.2 A GUIDING PARADIGM FOR THE AD-MODEL

A new paradigm in education has been proposed by Slabbert (1998) which he formulated as maximising human potential through facilitating lifelong learning as the essence. The proposed AD-model is guided by this paradigm, of which the key concepts will be explained next.

Maximising human potential is defined by Slabbert (1998:60):

> *Maximising human potential is the process whereby the human being continually exceeds him/herself in every possible way: expanding the senses, cultivating the mind, developing the body, exploring consciousness, deepening relationships, and serving others, through which the divine spirit is manifested.*

Lifelong learning is defined by Slabbert (1998:64) :

> *Lifelong learning is the effortful process of continually discovering our potential and fulfilling our purpose in life as long as we live.*

Facilitating learning is defined by Slabbert (1998:65):

Facilitating learning is a deliberate, conscious intervention in the life of a human being caused by activating learning through challenging obstacles which necessitates exploration into the unknown, and by ensuring the continuation of that learning which results in the maximising of the potential of the human being through conquering these obstacles.

These key concepts will guide the proposed AD-model in its aim, the way it is constructed, and facilitated.

In developing the AD-model, however, one needs to find the criteria it has to adhere to.

4.3.3 CRITERIA FOR THE PROPOSED AD-MODEL

The previous chapter has exposed the demands of the future which also revealed the criteria for the proposed AD-model that will be explicated in the following paragraphs.

4.3.3.1 A paradigm shift

When scrutinising the demands of the future, as depicted in chapter three (3.3 and 3.4.2), it is clear that what the world is experiencing today in all spheres of reality, is a fundamentally new view of reality which can be identified as a paradigm shift. The AD model should therefore constitute a paradigm shift. It should not merely attempt to adapt/change/rewrite the programmes, but should constitute a radical redesign, a fundamentally new model based on creative new connections, breakthrough ideas and new inventions which constitutes a completely new way of thinking about AD. It is therefore clear that the first ans foremost criterion for the proposed AD-model is that the model must represent a clear paradigm shift.

4.3.3.2   Meeting the demands of the future

It is quite logical, that the model should be guided by and focussing on the pressing and challenging new demands of the future. These demands have clearly been identified in chapter three of this study and impacts on the individual as well as the social level of human relations, culminating in the world of work, as the sphere where man realises his potential and fulfils his reason for being in this world.

In meeting the demands of the future, all the attributes which are necessary for man of the 21st century need to be developed (see 3.6). These attributes therefore have to act as criteria when designing the model. Although therefore very obvious, the second criterion has to be acknowledged, also in terms of the purpose of the model in that it has to meet the demands of the future.

4.3.3.3   Maximising human potential through facilitating lifelong learning

When the definitions of these concepts are studied, they relate directly to what the future demands from man. Lifelong learning is explicitly mentioned as a major demand, because of the changing nature of the world of work (3.6.1.2). Similarly, it has been clearly stated, that what the world of work needs now, are people with potential (3.5.6), people who pro-actively and with vision, create their own world, derived from an inner wisdom (3.2.1.4), people who continually exceed themselves in pursuing creativity (3.6.1.4) and realise the importance of being connected and whole (3.2.2.2). A major demand from the fourth wave, and a major shift from the prevailing paradigm relating to work, is for man to serve others and the universe (3.2.1.1).

Learners will not necessarily fulfil their potential by merely being confronted with the demands of the future. A deliberate, conscious effort should be made, to challenge learners with the essence of these demands. They should be confronted with challenging problems in real-life context which they should solve by themselves. These problems should compel them to stretch themselves beyond their capabilities, motivate and urging them to take responsibility for own learning,

maintaining learning in order to meet and conquer these obstacles/problems. Therefore, lifelong learning should be facilitated.

This, however, cannot be a one-off exercise; it needs lifelong dedication. Changing attitudes, beliefs and behaviours doesn't happen overnight, it needs a lifetime of constant practise, or as Leonard and Murphy (1995:8) put it:

> *Any significant long-term change requires long-term practice, whether that change has to do with learning to play the violin or learning to be a more open, loving person......those who ended up permanently changed, had spent considerable time preparing for their life-changing experience or had continued diligently practising the new behaviour afterward.*

The third criterion therefore required that the proposed AD-model has to ensure that a new paradigm in education, namely maximising human potential through facilitating lifelong learning, will be manifested. This endeavour should also not be exclusive to only a few it must include everybody.

4.3.3.4   Including all learners

It is clear, from the research findings in chapter two, that only "at risk" learners are included in the AD programmes which are currently presented at HEI's in South Africa. This is also true of institutions world wide, as AD is "parallelled by equally significant and long-established initiatives and programmes of broadly similar kinds in many other countries of the world" (SAAAD, 1997:13). If only these marginalised learners are included in the new proposed model for AD, how will we explain the exclusion of all the other learners from maximising their potential? It is evident that all learners need this intervention in their lives. *Every student* should have the opportunity of realising their potential. This in itself is a major paradigm shift in AD practice.

The fourth criterion therefore indicates that all learners need to be included in the new proposed AD-model.

4.3.3.5 Universal applicability

The demands of the future are not applicable in the South African context only. The literature research (chapter three) shows clearly that these phenomena are presenting themselves world wide and are therefore universal. The proposed model should therefore be universally applicable as far as it possibly can. The proposed AD-model should therefore be recognised as being universally applicable to comply with the fifth criterion.

The question to be answered is what the model should consist of to comply with the criteria.

4.3.4 COMPONENTS OF THE PROPOSED AD-MODEL

When reflecting on the demands of the future, three major categories were revealed and these could act as the major categories of the components of which such a model needs to consist.

4.3.4.1 Developing intrapersonal relationships

Since potential is an internal attribute and learning is essentially an internal process, it follows that having sound, productive intrapersonal relationships is of fundamental importance.

It recognises the uniqueness of each individual with its endowed potential to fulfill a particular purpose in life. This requires self-knowledge and being able to become more and more of what they are supposed to be, all the time.

In the subsequent discussion of each component for developing intrapersonal relationships, the component as it relates to the proposed model will be described, then the implications for facilitating it will be indicated, and lastly a reflection will reveal whether the particular component will comply with meeting the criteria for the proposed AD-model.

A   Control over consciousness

To enable learners to develop effective intrapersonal relationships they must become conscious of who they are and what attributes they possess. They need to be able to improve and enhance these attributes through being in control of them, thereby maximising their potential.

The demand is therefore, to exert control over consciousness. This should be facilitated, as it was explicitly stated in chapter three (3.2.5.2) that this is of the utmost importance for potential to be realised. The process of becoming aware of our conscious and unconscious thoughts, of listening with our whole being, of utilising our natural ability to create, visualise and to fully absorb new ideas, will be investigated in more depth.

i)   Consciousness, as component of the AD model, described

The meaning of consciousness is to have one's mental, affective, and psychomotor faculties in an active and waking state (Slabbert, 1998:135). This again highlights the necessity of wholeness, of mental, physical and emotional interrelatedness (chapter three). Consciousness also refers to the process, the "how" of thinking and being aware. It does not merely refer to what can be known by objectively observing reality through the physical senses alone. The observer is subjectively involved in the observation of reality, he/she is not detached from what is being observed, but reality also becomes known through an "inner exploration" or "inner imagery" (Harman, 1988:85). Therefore the concept of self and its consciousness comes into play. This is according to the new concept of mind, described under 3.2.5.2. and a challenge which people should pursue. Educational practices in the Western world have grossly neglected consciousness, while following the reductionalist, positivist, mechanistic schools of thought. According to Slabbert (1998:134), consciousness and the control over it enable the learner to attain the highest level of development as a human being, therefore, realising his/her potential.

Consciousness also refers to the ability to perceive and interact with the environment, to be mentally aware of what is perceived, to reflect upon information, in a mental, emotional and physical way, and to evaluate this information in order to decide upon action. It is also to the

ability to invent new information, in other words to be creative and innovative. In this sense, consciousness functions as a "clearinghouse for sensations, perceptions, feelings and ideas, establishing priorities among all the diverse information" (Csikszentmihalayi, 1991:24). A person can therefore control consciousness, deliberately weighing what the senses tell him/her and respond accordingly. This holistic function of consciousness can therefore determine the way in which our lives develop, especially the quality of our lives. The control over consciousness is therefore the answer to achieving and maximising one's potential (Slabbert, 1998:136), and the aim of conscious reflection is to penetrate the unconscious mentation. We are therefore the creators of our own destiny and it is important for AD practitioners to facilitate this kind of mastery within the lives of learners. Several authors have indicated how inner exploration or the unconscious could be accessed.

ii)   Implications for facilitating control over consciousness

Harman (1988:85) describes the difference between consciousness and unconscious knowing, referring to research findings in this regard:

> *Of all the findings of modern psychology, one of the most firmly established, and the one with the most pervasive implications, is that only a small part of our total mental activity is conscious. The more vast portion is out of conscious awareness - in the unconscious. Ordinary conscious awareness may be thought of as a narrow "visible spectrum" between the subconscious (for example, instinctual drives, repressed memories, automatic functioning) and the supra conscious (for example, creative imagination, intuitive judgement, aesthetic sense, spiritual sensibility).*

The learner who wants his/her potential to be maximised, is therefore obliged to penetrate the supra-conscious, where 90 percent of our potential lies, in order to release the vast, untapped wisdom, lying dormant, waiting to be released. Access to the unconscious is obtained through consciously paying *attention* to our thinking processes. Not only what we are thinking, but also

reflecting on how we are thinking, therefore our feelings, emotions and inner imagery (Harman, 1988:85). Thus control over consciousness is accomplished through reflection, the highest level of consciousness.

Slabbert, (1998:137-139) explains the process of controlling consciousness, and how it can be facilitated. This process happens when the learner is confronted with an overload of information, when he/she struggles with the process of constructing meaning from an exceptionally challenging task. Learners often get despondent, because it seems as if the answers seem to elude them and the harder they try, the more difficult it seems. The left brain is in a state of panic because of overload and it is then that the learner must consciously control the process, by allowing the right brain to take over. This happens when the learner consciously goes into the incubation process by thinking about other things like paying attention to emotions, imagery, sitting waiting for the solution to happen. This process takes place on the supra-conscious level. When the moment of insight, the product of such supra-conscious processes, reaches consciousness, the learner has to seize this insight and after reflection (the deepest level at which the learner is able, to construct meaning) be able to fully explain it.

Hunt (1992), who underwrites this view, explains through various concepts, how access to the unconscious can be obtained. She (Hunt, 1992:191) refers to "centering" as:

> *The conscious inducement of deep relaxation that leads to mental stillness. It is a requisite for higher-order thinking for it enhances our ability to receive, retrieve, and integrate what we've learned. Centering, focusing, and meditation techniques will become central themes in future strategies for developing solutions to the challenges we are facing at every level in society. When we still the mind through daily centering, we begin to receive flashes of inspiration and insight from the great universal storehouse of wisdom.*

It is in this "storehouse of wisdom", the supra conscious, where we connect with our wave of possibilities (Land & Jarman, 1992:156). Hunt (1992), has developed a model for maximising the performance potential of man, which she calls "Learning to Learn", and from which various

concepts can be utilised, to enhance AD-models with this aim in mind. She refers to "whole body listening" (Hunt, 1992:199), which expands perception and allows intuitive whisperings and sensations to be experienced. This method of listening turns hearing into a whole body experience and heightens both receptivity and mental acuity, resulting in deep awareness and understanding. A precondition for centering and whole body listening, however, is total relaxation of the body and mind. Stress has been found to be detrimental to higher order thinking, and research has systematically and conclusively shown that the relaxation response relieves stress and anxiety (Hunt, 1992:73). During relaxation practices, the brain goes into an Alpha or Theta state of relaxation and it is in this state that most AHA-experiences take place. For example, just before falling to sleep, one sometimes experiences the simplest solutions to problems encountered during the day. This also happens just after awakening from a refreshing sleep. During the Theta range of activity of the brain, the two hemispheres synchronise, as information is exchanged between the two hemispheres rapidly. They harmonise, with astounding learning, and vivid memory results (Hunt, 1992:79).

iii)   Meeting the criteria

The facilitation of accessing the supra conscious is therefore the first and foremost step in meeting the criteria as discussed under 4.3.3. It meets the demands of the future, because through this endeavour, learners get in touch with their innermost feelings and understand how they relate to reality (demanded under 3.4.1.2). It is a paradigm shift in that learners become aware of their inner strength, spirituality and creative nature, realising the extent of their own potential, being able to realise it (demanded under 3.2.2.5). They develop insight, inspiration and universal wisdom. But the best part is, that *all* learners realise that they can control their consciousness! (Mind over matter, 3.2.2.5). Learners should be given this thought of Csikszentmihalyi (1991:28) to ponder on:

Each of us has the freedom to control our subjective reality.

For this is what the future demands from everybody, to exert mind over matter, to experience reality as it arises from mind (Roger Sperry - 3.2.2.5).

From mastering this practice, arises self- knowledge (experiencing one's own potential), self-esteem and an inner motivation to learn. For when one discovers this vast potential to grasp and understand new information, to remember and retrieve information quickly, it inevitably motivates learning. This is then the second demand, to develop and maintain intrinsic motivation.

The need to meet the challenges of the new millennium, to excel, learn and improve, originates from the inside-out paradigm. The person who wants to realise own potential obviously operates from an inner drive, an internal locus of control, that does not rely on outside influences for action or reaction, but accepts responsibility for own life, development, learning and improvement. He/she seeks fulfilment from within, by accepting and seeking for new challenges, in an ongoing competition with himself to keep on finding innovative ways of solving unique problems. AD models seriously need to facilitate an internal locus of control orientation amongst all learners and this was therefore included in the proposed model.

B   Intrinsic motivation

When developing intrapersonal relationships it does not refer to the student being independent from his/her environment, functioning on an island, but it refers to being an *independent thinker*, to have control over conscious and unconscious thoughts. It also implies intrinsic motivation, not to rely on external rewards, but to be in control of what he/she wants in life and to be determined to get it! Closely linked with this is the concept of resilience, as described by Claxton (1999:16). He says that emotion is integral to learning and that learning involves "exhilarating spurts, frustrating plateaus and upsetting regressions. That is why resilience is so important." A person who is driven by intrinsic motivation will be resilient, able to overcome frustration and upsets, wanting to exert effort in order to achieve their goals. To be self-starters, resilient, pro-active and to use initiative, as is demanded from employees, they need to be intrinsically motivated.

i)   Intrinsic motivation, as component of the AD model, described

Man is born with intrinsic motivation, for as Deci and Ryan (1992:9) maintain:

Children are by nature active, and through their natural activity they learn. By spontaneously exercising their capacities, children expand and refine those capacities and acquire new knowledge. This learning proceeds at its own pace and, as Montessori (1965:164) stated it, " in accordance with the tendency of nature."

In motivational terms, we say that this learning is intrinsically motivated. The innate psychological needs to be competent and self-determining are manifested as curiosity and interest, and they lead children to explore and manipulate. Through continually taking on new challenges and working to master them, children not only experience spontaneous, intrinsic satisfaction, they also develop skills that allow them to function more effectively and autonomously.

The assumption is therefore made, that humans are active and strive to be effective and autonomous. The external environment is, however, not always supportive of self-initiated activity and autonomy; children's behaviour is mostly controlled in the school environment, and it is here that the paradigm shift should take place, in order to enhance man's natural intrinsic motivation. When learners enter the tertiary environment, there is little left of the initial spontaneity, curiosity and interest to explore new territories. This phenomenon is the result of a multitude of inter-active factors like directive, product-orientated teaching practices, parents' influences on the learning environment, pressure to perform, the learner's own perception of self-worth as a learner, the content to be learned, peer pressures and so on. *The challenge is therefore, to re-kindle the spirit of intrinsic motivation.*

ii)   Implications for facilitating intrinsic motivation

As de Charms (1984:276) rightfully remarks, we can train habits and teach knowledge, but motivation cannot be taught or trained. It can only be enhanced or facilitated. It is therefore not an easy task for AD practitioners to enhance intrinsic motivation. It is, however, a vital component of any model that aims to facilitate lifelong learning. Because motivation can be defined as the degree to which learners are willing to commit effort to achieve goals they perceive as meaningful and worthwhile, their active participation in goal setting and choice thereof, are important (Scott, 1991:28). Several factors can influence motivation to perform a task. The

choice of the task (is it interesting, worthwhile and challenging), level of persevering, and the will to excel, are all influenced by the student's expectations of how successful he/she will be in performing the task. This implicates that the student needs to acquire self-knowledge through self-evaluation.

* Self-evaluation

The above statement implicates that self-evaluation plays a vital role in motivation, and therefore it is important to include self-evaluation practices in the AD-model. Learners need to appraise own feelings, thoughts, and actions from past experience, social interactions and environmental influences. A student who believes that he is not good at Maths, but realises that he needs it for further studies, will have low expectancy of being successful in Maths, yet, his will to pass in order for the eventual, worthwhile goal to be realised, namely to study at university, may motivate him to work harder.

Through self-evaluation, the student gains insight, which occurs though the cognitive capabilities of symbolizing, forethought, vicarious deduction, self-regulation and self-reflectivity (Bandura, 1986:18-19).

~ *Symbolizing* refers to the internalising of personal experiences and environmental influences, which serve as guides to behaviour, perceptions of self-efficacy, and give structure and meaning to self-evaluation. The student therefore thinks about personal experiences and learn from them.

~ *Forethought* is the cognitive representation of the future in the present derived from enactive, symbolic and vicarious sources (Bandura, 1986:19). It enables the formulation of learning goals, the structuring of an action plan to achieve the goals and to forecast expectations of success or failure. Forecasts are based upon self-efficacy perception. Therefore if the student has a high self-efficacy, his forethought would be to expect success, which will heighten motivation levels, and effort exerted.

~ The *vicarious capability* refers to the capacity of a student to gain self-knowledge by observing the behaviour and behavioural results of similar others, on condition that the modelled behaviour is important to him/her (Scott, 1991:31). Modelled behaviour is not

imitated automatically, however, it is evaluated on its outcomes, social reactions and rewards. Here-in lies the motivational factor, the student will regulate which behaviours to imitate, according to their importance to him/her.

~ *Self-regulation* refers to the comparison of performances to internal standards of excellence. The student therefore compares his/her ability to goals which he/she wants to pursue. Self-regulation ensues from self-observation, self-judgement and self-reaction.(Bandura, 1986:336). The student who gains self-knowledge, will therefore be able to regulate his/her learning activities. He/she will be able to set realistic, attainable goals, which thus acts as the standard against which performance can be measured. Self-regulation therefore motivates the student to achieve and set realistic goals, for he/she experiences control over own behaviour.

~ *Self-reflectivity* implies that the same person who thinks, feels and acts, can later think about his thoughts and feelings and evaluate his learning experiences (Bandura, 1986:21). Thoughts about self are structured through symbolising and forethought, which aid the formation of goals and expectancies. Successes are being observed and evaluated through self-refutation, from which evolves self-reaction and control. Learners therefore verify and monitor their thoughts, react upon them, and make forecasts with regard to performance as well as evaluations with regard to ability. Self-evaluation should be an ongoing process of continuous re-evaluation, in order to gain realistic self-knowledge and perceptions of self-efficacy. This can be facilitated when maintaining learning.

Closely related to self-evaluation, is the concept of self-efficacy (Bandura, 1986:391).

* **Self-efficacy**

Bandura (1986:391) defines self-efficacy as personal judgements of one's capability to organise, implement and execute actions necessary to attain designated performances. Self-efficacy is not based on knowing what to do, but rather on one's belief that you are capable to perform specific actions that will lead to positive results. Perceptions of self-efficacy will therefore have an influence on level of motivation (Scott, 1991:30). There is a strong relation between the self-efficacy perception and taking action (deciding to perform a task). Self-efficacy perceptions will

therefore influence the choice of tasks to be performed (easy or difficult), and the level of trust in one's own competencies to master different tasks. Learners will therefore not be motivated to take on tasks for which they feel they are not competent (low self-efficacy), because personal performances are viewed as the most influential, to determine the level of self-efficacy (Bandura, 1977:191). Repeated failures therefore, will lower self-efficacy while repeated successes will raise the level of self-efficacy. In this regard Claxton (1999: 17) says:

> *Being a good learner and developing your learning power, are more to do with how you think about your own mind and how you feel about yourself,* (self-evaluation and self-efficacy) *than with the size of the mental motherboard they gave you at birth.*

AD practices should be directed at enhancing the cognitive capabilities necessary for self-evaluation. Symbolised thought, attributions (to what does the student attribute failure or success), expectancies of performance and control of learning can be identified by questioning learners directly. Self-efficacy can thus be determined and the AD practitioner is enabled to identify faulty self-conceptions and maladaptive motivational patterns (Scott, 1991:42). Setting specific challenging learning goals focussed on specific outcomes can attribute to change these faulty conceptions and maladaptive motivational patterns.

It is important to note that there is a clear an definite relationship between control over consciousness, self-evaluation, and perceptions of self-efficacy as described. Facilitating control over consciousness, therefore, also implicates self-awareness and self-efficacy perceptions.

* **Goal-orientation**

Goal-orientation refers to the tendency to pursue certain goals, which again influences motivation. Two categories of goals or objectives are identified (Dweck, 1989:95), namely learning goals and performance goals. When a student pursues a learning goal, he/she aims at increasing his/her competence, at understanding and mastering something new. These learners are intrinsically motivated to learn for the sake of knowledge and have own internal standards for performance, based on their perception of self-efficacy (Dweck, 1989:97). They usually choose

challenging tasks that stimulate the intellect and thinking abilities, with high expectancy of being successful and therefore shows more perseverance. Tasks should be meaningful and worthwhile and give opportunity to develop new skills and tenacity. These goals are therefore seen as individual, non-competitive, and leads to the student feeling that he/she is in control. It therefore enhances self-discipline, self-efficacy and self-regulation of effort, in order to master the task. Performance goals on the other hand, enhance extrinsic motivation, because it is based on normative standards of success. The student will learn for various reasons, like to please others, to compete with peers, or to avoid negative judgement (Scott, 1991:36). Expectations of being successful are based upon personal beliefs of own ability, as compared with others. These learners usually choose easy to moderately difficult tasks in order to perform better and be evaluated as good learners. The expectations of success are therefore attributed to ability, environmental factors and normative standards. The student therefore has little control over his performance, which leads to feelings of being controlled by outside factors, eventually resulting in diminished motivation. Learners who pursue learning goals, learn to become smarter, whereas learners pursuing performance goals, learn to look smarter (Dweck, 1989:102-103).

AD practices should realise the importance of facilitating learning goal orientations coupled with real life tasks which is in itself, meaningful. Dweck (1989:96-97) suggests that:

> *performance goals lead to expectancies that are more vulnerable or brittle and that two of the major maladaptive expectancy patterns - evaluation anxiety and learned helplessness - occur within the performance-goal framework. Although much well-meant educational practice retains the performance-goal framework and attempts to create confidence with respect to performance goals by providing success, research evidence suggests that a more fruitful alternative is to (a) aim interventions directly at the specific mediators involved in the maladaptive pattern, rather than hoping that children will draw the intended inference from success experiences; and (b) create an emphasis on learning goals and personal challenging tasks..... (because) what is desirable in a mature motivational system is the ability to generate personally long-term goals, and to act in ways that maximize the probability of attaining them.*

In addition to setting certain goals, learners tend to attribute their success or failures to certain factors. The causal attribution theory, as developed by Weiner (1986), explains this phenomenon

*   **Attribution**

According to Lens (1994:3940), learners are always looking for reasons why they fail or succeed. They need to explain their performance and attribute it to certain factors influencing their motivation. Lens (1994:3940) identifies three causal dimensions.

~   *Locus of causality,* which can be internal or external. The perceived cause can be situated within the individual, who will attribute success or failure to abilities or effort, while in the case of external locus of causality, success or failure will be attributed to luck, task difficulty or help from others.

~   *Temporal stability,* referring to stable or unstable causes. Unstable causes may be present at a certain time, affecting the outcome, or absent during another time, i.e. luck or effort. Stable causes are being perceived as stable over time, i.e. ability and task difficulty. The third dimension distinguishes between *controllable versus uncontrollable* causes. These causes should be controllable by the student himself, like own emotions or effort, to be motivational. When a student feels that he/she has no control over the cause of his/her performance, i.e. when he/she thinks that a lecturer's mood has a subjective influence on his/her mark, then it becomes de-motivational.

In conclusion to the attribution theory, Lens (1994:3941) states:

> *For the cognitive, emotional, and motivational consequences of causal attribution of successes and failures, it is not important to know if the perceived causes are objectively internal or external, stable or unstable, controllable or uncontrollable. What matters is how the individual perceives this........From a motivational point of view it is more optimal to attribute successes to internal, stable causes, and failures to external unstable causes. It is always more motivating for a person if he or she can attribute outcome (success or failure) to causes under his or her control.*

It is therefore important for learners to experience success and failure via the cognitive processes, i.e. to attribute success to controllable, internal, stable causes such as wanting to do it, effort exerted, ability to do it, rather than to external, unstable, uncontrollable causes such as luck. In so doing, they will become responsible for their own actions and, therefore, for their own learning.

*   Motivation as interactive process

Deci and Ryan (1992:10-11) as well as Scott (1991:29-30), describe motivation as a psychological process where there is interaction between individual and environmental characteristics. Individual characteristics like ability, competencies and knowledge, temperament, self-evaluation, goal-orientation and to what factors the individual attributes his/her success or failure, interact with aspects of the environment. These aspects can be the social climate, design of learning opportunities, role models, stressors like time limits and control, and peer influence. There needs to be a fine balance between internal and external influences in order to be motivated, and stay motivated.

According to de Charms (1984:276), man creates and constructs his own motivation, which he calls *personal causation*. He refers to the perceived locus of causality for behaviour as being either internal or external. The positive experience of internal locus of causality for behaviour, was dubbed the *origin* experience because of the strong sense of originating one's own behaviour, while the negative experience of external locus of causality for behaviour was dubbed the *pawn* experience, because of the feeling of being pushed around by external forces. The origin concept includes choice, which is experienced as freedom, but also imposes responsibility for choices made and enhances ownership of behaviour. Pawn behaviours originate from perceptions of having actions imposed from without, which abrogate choice. Lack of choice is experienced as bondage; it releases one of responsibility and encourages the feeling that "I am not in control" (de Charms, 1984:278-279). The implications are, therefore, that the individual's orientation and the climate in class rooms should be conducive to *origin* experiences, in order to facilitate internal locus of control behaviour.

In conclusion it is important to note that personal aspects like cognition, affect (feelings) and conative aspects (the will to achieve), all have an influence on motivation, and that they are in close interaction with environmental factors. It is therefore possible to intervene with regard to motivational patterns by acknowledging individual differences, by enhancing self-knowledge through self-evaluation, from which self-efficacy perceptions develop and which eventually leads to the origin behaviour of being intrinsically motivated, because performance is linked to internally controllable and stable factors, which are acknowledged by the individual.

iii)   Meeting the criteria

Through the facilitation of an intrinsic motivational orientation, including all the aspects which have been described, learners will develop feelings of self-worth, of being able to work independently, of becoming self-directed, self-starters, willing and eager to pursue their goals. It will also enhance feelings of being in control and therefore not needing to rely on directive supervision. Having an internal locus of control, employees will take responsibility for their own actions, planning and behaviour, they will therefore be in a position to work autonomously in a virtual organisation. Internally motivated people are also inclined to keep on improving themselves. They will therefore embark on life long learning, because they are motivated to excel. These attributes are also of essence for the entrepreneur, an orientation which is increasingly being demanded from man, having to create his own work in future. All of these attributes were explicitly stated in chapter three, as being vital for the future. They are paradigmatic, universal and aimed at maximising potential.

A third demand, which also relates to being in control, this time of one's emotions , and which is vital for the individual to develop if he/she wants to be employable, is the concept developed by Goleman (1995) namely, emotional intelligence. It is, therefore, worthwhile exploring for inclusion in the proposed AD-model.

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C   Emotional intelligence

Dealing effectively with own emotions in the work place in order to handle interpersonal relations effectively, is one of the most important demands placed on employees for the future. Through knowing one's own emotions and thinking about one's own feelings, a person can learn how to be empathetic and deal with others' emotions and feelings. This will also have a positive impact on the handling of conflict in the work place.

i)   Emotional intelligence, as component of the model, described

Ryback (1998:2) reports that emotional intelligence was already described in 1935 by E. L. Thorndike, the renowned psychologist, as the capacity to "act wisely in human relations". It was only much later, in 1990 though, that the first paper was published on the topic, by Peter Salovey and John D. Mayer. Goleman (1996:34, 43), describes emotional intelligence as the ability to monitor *your own emotions*, to discriminate between them, regulate them, and to be able to use this information to guide your thinking and actions. According to Goleman (1996:36), success in life is not due to your IQ, it is rather a result of how well you manage yourself. It is therefore a "meta-ability" (Goleman, 1996:36), the mastery of being in control of yourself, your emotions and your interactions.

If learners manage to gain self-knowledge through control over consciousness, through exploring the sub-conscious and supra conscious mind, recognising and identifying various emotions and feelings; realising what is behind those feelings, they will be able to learn to control their emotions.

According to Goleman (1996:43), emotional intelligence includes five domains namely, self-awareness, managing emotions, motivating yourself, empathy and handling relationships, of which the first three will be discussed for purposes of intrapersonal development.

*   *Self-awareness*, or the ability to observe, identify and recognise own emotions, and to realise that there is usually more behind those feelings or emotions, i.e. low self-esteem, jealousy or unfulfilled needs.

Self-awareness seems to be one of the most important aspects to include in AD-models, because it is an important aspect of all the areas of development which has up to now been dealt with. It is a prerequisite for internal motivation. It is a by-product of being able to penetrate the subconscious, and a prerequisite to develop emotional intelligence.

* *Managing emotions*, is the second domain of EI, which implicates being in control of emotions in order to handle them in an appropriate way. It means, finding ways to deal with emotions like anger and frustration, anxiety and stress, and to exert emotional self-control. This ability can only be developed once a student has self-awareness.

Through self-knowledge, learners will realise which emotions are detrimental to realising their goals, and they need to learn how to control these emotions by recognising them as they occur, actively controlling them by, for instance, "self-talk"; a method for delaying impulses to act on emotions.

* *Motivating yourself*, has been dealt with in the previous section on motivation, yet it is a very important aspect of emotional intelligence, because it involves channelling your emotions towards achieving goals. It is, therefore not only a cognitive act, but also deals with the affective (feelings or emotions) and conative (will), therefore the whole person being in control.

ii) Implications for facilitating emotional intelligence

Goleman (1996:34) says that emotional competencies can be learned and improved upon. He suggests some key issues which could be included in a curriculum for this purpose (Goleman, 1996:301). They are:

* *Emotional skills* like identifying and labelling feelings, expressing, assessing, and managing feelings, delaying gratification, controlling impulses and reducing stress.

* *Cognitive skills* like self-talk or conducting an inner dialogue as a way to cope with one's own behaviour, reading and interpreting social cues that influence behaviour, and using steps for problem-solving and decision-making, thereby controlling the process instead of acting on emotional impulse, understanding other people's viewpoints, behavioural norms, having a positive attitude, and self-awareness.

* *Behavioural skills*, like non-verbal communication through facial expression, gestures, eye contact, and so on, and verbal communication through mastering the skills of listening attentively, making clear statements and requests, responding effectively and dealing with conflict in a positive way.

Katz (1998:50) reports that although there is no single, well-validated paper and pencil test for EI, because many aspects are intangibles which cannot be measured, there are, however, situations in which EI response is quantifiable. Katz (1998:50) refers to optimism, for example, as an effective measure for a person's self-worth, which again, is a fairly accurate indicator of how well people succeed in life, be it personally or socially. Hein (1999:5) says that negative feelings are the cause of many problems in the work place, like turnover, absenteeism, inefficient communication, decrease in creativity, fear of risk-taking and inefficient problem solving. People who foster negative feelings are critical, defensive, closed-minded, impatient and inflexible. All these characteristics are detrimental to being personally and interpersonally effective. It is therefore important to create a climate conducive to more desirable feelings like being respected, acknowledged, supported, trusted, appreciated, valued and needed. Hein (1999:6) suggests that to manage own feelings, one needs to identify primary feelings, as well as the cause of these feelings, and to generate and choose various options of what would make one feel better. Communicating negative feelings can also assist in clarifying the causes thereof and in adopting a more positive attitude. Ryback (1998:34) says that:

...the self-awareness that comes with emotional intelligence allows you to manage negative emotions more effectively and bounce back to your successful, confident self more quickly.

Ryback (1998:33-35) also points out that emotional intelligence provides for individuals to succeed, independent of their rational intelligence! It allows for sharpening the instincts, controlling negative feelings and discovering your talents and making them work for you.

By deliberately initiating learning through challenging learning tasks which learners must tackle on their own, urging them to use emotional skills like identifying and labelling their emotions (feelings of panic, unworthiness, helplessness), controlling these in order to conquer the learning tasks, learners become emotionally intelligent. The controlling of emotions that could be negative towards conquering the learning task, should be done through cognitive skills like self-talk, step by step problem solving (tackling the task at hand) and a conscious decision to succeed (motivating oneself). An atmosphere conducive to maintaining the learning process is facilitated through emotional support and encouragement within feedback sessions. Behavioural skills like positive non-verbal feedback, verbal communication of constructed meaning which was done by the student himself/herself, and shared communication like listening attentively to what others have to say with regard to the solving of the learning task, enhance emotional intelligence. When learners feel worthy of having effectively dealt with the learning task, not only on the cognitive level but, much more so, emotionally, then their self-worth feelings improve leading to a positive outlook, opening the mind and eventually creating a work place where people can be freed from negativism.

iii)   Meeting the criteria

Emotional intelligence is directly named as of vital importance for employees to fit into the new world of work, where the focus will be on social deftness, knowing how to deal with own emotions as well as those of others (3.6.2.2). It is interesting and very important, to note that *similar* aspects of development that need to be focussed on, have been dealt with when discussing control over consciousness and intrinsic motivation. These aspects are self-awareness, self-directiveness, managing and taking control of own thoughts, actions and feelings, and resulting

perceptions of self-efficacy. They all point to living from within, from an inner strength and wisdom, a radical change from the dominating passive attitude of learners, waiting to be told what to do instead of wanting to control their own learning and eventually their own lives. These are paradigmatic changes, which compel man to realise his potential; changes which are demanded by the world of work and include all learners/ employees all over the world.

Emotional intelligence is closely related to Howard Gardner's (1993) theory of multiple intelligences and refers more specifically to Gardner's (1993:8) "interpersonal" and "intrapersonal intelligence". It is of paramount importance to include the multiple intelligences theory of Gardner in an AD-model in order to adhere to one of the criteria as set out at the beginning of this chapter, namely to recognise individual differences, as well as to adhere to the challenge of becoming whole persons, instead of focussing on fragmented mind, body, and soul experiences.

D   Multiple intelligences

The demand on man for the future is to become connected, to become whole, to use whole brain thinking and to utilise his full potential! Up to now, man has mostly only utilised part of his potential, because of the unilateral belief in IQ as an only indication of man's potential.

i)   Multiple intelligences, as component of the model, described

Walters and Gardner (1986:165) are dissatisfied with the traditionally, unitary concept of intelligence as merely an IQ figure, based on verbal or non-verbal *quantifiable* abilities. Gardner initially identified seven intelligences (1993), and added another two during 1997 (De Kock, 1997:85). His definition of intelligence is simply "the ability to solve problems or to fashion products that are valued in one or more cultural or community settings" (Gardner, 1993:7). Individual differences occur obviously in terms of the degrees of skills and the nature of their combination. Gardner (1993:12) therefore believes in an individualistic approach in education, because as he says:

We are all so different largely because we all have different combinations of

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intelligences. If we can mobilise the spectrum of human abilities, not only will people feel better about themselves and more competent; it is even possible that they will also feel more engaged and better able to join the rest of the world community in working for the broader good.

All of these intelligences which are identified by Gardner (1986, 1993, 1997) will be briefly described next.

The first two intelligences (logical-mathematical and linguistic) are associated with the logical-analytical left hemisphere of the brain and were traditionally recognised to describe one's intelligence, measured as IQ (Slabbert, 1998:162). The rest of the intelligences are associated with the creative-emotional right hemisphere of the brain, which was traditionally mostly ignored. *The challenge is therefore to develop whole brain functioning!*

* **Logical-mathematical intelligence**

The logical-mathematical intelligence is associated with problem solving. It is the ability to make causal conclusions (logical, deductive and inductive reasoning), which may or may not include numerical patterns. It is non-verbal in nature, as it is possible to construct a solution to a problem before it is articulated. This kind of intelligence is also measured as IQ.

* **Linguistic intelligence**

Another intelligence which is measured as IQ, is the linguistic ability of a person. It constitutes the ability to perceive, interpret and produce language, and a sensitivity to sounds, rhythms and meanings of words. It is therefore essentially verbal in nature. It is specifically in this area of competence, that most AD practitioners find learners to be lacking the essential skills.

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*   Musical intelligence

Musical intelligence is characterised by the core components of abilities to produce and appreciate rhythm, pitch and timbre, and appreciation of the forms of musical expressiveness. Certain parts of the brain play important roles in this ability, and although these areas are characteristically located in the right hemisphere, musical ability is not clearly localized in a specifiable area. It is a known fact that baroque music, specifically, plays an important role in stimulating alpha waves of the brain, in order for it to be at its most receptive. It also calms the emotions and releases anxiety, assisting with memory retrieval.

*   Bodily-kinesthetic intelligence

Bodily-kinesthetic intelligence is the ability of control bodily movement to solve problems or to fashion products, using the whole body or parts of it. Bodily movement is localised in the motor cortex of the brain with each hemisphere controlling bodily movement on the contra-lateral side. This intelligence may play a significant role in bridging the two hemispheres, facilitating integration of all intelligences in various combinations, thereby maximising their effect.

*   Spatial intelligence

A function of the right hemisphere, spatial intelligence is the ability to perceive and construct a mental model of a spatial world and to manoeuvre and operate using that model or produce a spatial reality from a mental model. Spatial problem solving is for instance required for navigation, the visual arts, visualising objects seen from a different angle or to notice fine details (Gardner, 1993:22).

*   Interpersonal intelligence

Interpersonal intelligence is the ability to relate with others and cooperate in social interaction.

Aspects of interpersonal intelligence like noticeable contrasts in moods, temperaments and intentions, or in advanced forms to read the intentions and desires of others, are closely associated with the left hemisphere's control of emotions.

*   Intrapersonal intelligence

Intrapersonal intelligence refers to the ability to accurately know yourself, access your own feelings and to operate effectively. This is the most significant of all the intelligences because "it embodies the interaction of intelligences" (Gardner, 1993:25), therefore constitutes the interrelatedness of these intelligences which is manifested in the wholeness of the learner (Slabbert, 1998:164). Again, the focus is on self-knowledge and self-control (to operate effectively).

*   Naturalistic intelligence

According to Rogers (1999:1) Naturalistic intelligence is:

> *the ability to understand, relate to, categorize, classify, comprehend, and explain the things encountered in the world of nature.*

This refers to a natural ability to recognise and classify patterns.

Yet another intelligence, discussed by Sternberg and Wagner (1986), Goodnow (1986), and Ford (1986), refers to practical intelligence, which is discussed briefly under the next heading.

*   Practical intelligence

Goodnow (1986:143) interprets practical intelligence as:

> *Everyday intelligence; that is.. situations where people can use, and have some interest in using their past knowledge to solve a real-life problem.*

Practical intelligence is also practical know-how, or tacit knowledge (Wagner and Sternberg, 1986:51). Tacit knowledge refers to the ability to manage oneself, one's tasks and others. Practical intelligence can therefore be synonymous with social competence, practical problem solving ability and practical adaptive behaviour (Wagner, 1986:365). According to Ford (1986:198), mastery and management are core criteria for defining and evaluating practical intelligence, with the focus on skills and their outcomes, i.e. goal setting, decision making, planning and problem solving.

ii)   Implications for facilitating multiple intelligences

Gardner (1993:27) emphasises the interrelatedness of the intelligences and that they should be assessed as a combination of skills which can eventually indicate the student's vocational niche. When facilitating the various intelligences, it should be dealt with in a holistic, integrated manner. Learners should be confronted with challenging learning tasks which urge them to utilise both hemispheres of the brain. When confronted with learning tasks that are beyond their capabilities, the utilisation of both hemispheres of the brain is in any case facilitated (control over consciousness and activating the supra-consciousness). This is an excellent opportunity to discuss the concept of interconnectedness of everything in the universe. It could be introduced as a problem which will challenge learners to think about connections in their every day life-experiences eventually leading to the AHA-experience that everything is connected, also the mind, body, emotions and spirit. With this as foundation, the various intelligences could be facilitated by designing challenging problems which are directly linked to each specific intelligence, and which will urge learners to want to conquer these challenges. Problems can be designed in such a way, that various intelligences should be combined in order to solve these problems.

*   Logical-mathematical intelligence

Deliberate effort should be exerted in confronting learners with real life problems which should be solved, using cognitive reasoning strategies like logic, inductive and deductive reasoning, analysing and synthesising, and transferring knowledge to be applicable to real life settings.

Claxton (1999:32) refers to a report of the American Psychological Association in which they point out that when learners are confronted with practical problems (real life problems), it can give a more accurate indication of their "intelligence" or ability to have a quality life. The report says:

Analytical problems, of the type suitable for test construction, tend to (a) have been formulated by other people, (b) be clearly defined, (c) come with all the information needed to solve them, (d) have only a single right answer which can be reached by only a single method, (e) be disembedded from ordinary experience, and (f) have little or no interest. Practical problems, in contrast, tend to (a) require problem recognition and formulation, (b) be poorly defined, (c) require information seeking, (d) have various acceptable solutions, (e) be embedded in and require prior everyday experience, and (f) require motivation and personal involvement.

It is obvious, that practical problems will eventually maximise human potential because they urge the learner to construct own meaning through problem seeking and problem solving activities which are self-initiated and evaluated.

*   Linguistic intelligence

Learners show difficulty in communicating on a level required for tertiary studies. Much work needs to be done with regard to linguistic intelligence in general and communication skills specifically. Learners need to become sensitive to language in all its nuances: to read between the lines, to interpret different meanings and express themselves clearly, using language as the ultimate communication source, also when expressing feelings. Being confronted with challenging learning tasks where the emphasis is on the said abilities to handle language skilfully, this intelligence will be maximised. Having regular feedback sessions regarding the learning tasks where learners need to express themselves, defending their viewpoints, clarifying issues, should be facilitated continuously for maintenance of learning.

*   **Musical intelligence**

The activity of listening to, appreciating and producing music can be introduced in the AD-model. Although musical intelligence refers to the production of music, not all people feel that they can successfully "produce" music. Every person can, however, be actively involved in producing rhythmic sounds, like tapping to a rhythm, creating own rhythm through tapping and dancing or simply moving to rhythm. When designing learning tasks for facilitating musical intelligence, these should therefore actively enhance appreciation for, and a sensitivity towards music, as well as to recognise the importance of music (baroque) when studying and penetrating the unconscious mind, as it enhances concentration and relaxation. Music can even be introduced as an integral part of everyday class activities, presented as problems to solve, for instance identifying the rhythm and changing it to become more soothing, have more beat, or creating a waltz from a march tempo! All learners should be compelled to do this exercise on their own, discovering that they can do it, that everything is possible and that it is even enjoyable.

*   **Bodily-kinesthetic intelligence**

Hunt (1992), as well as Leonard and Murphy (1995), refers to whole body learning where body, mind and soul are closely linked in the total learning process. AD practitioners should therefore consider very seriously, the inclusion of bodily-kinesthetic activities in the AD-model, such as exercises, performing arts, fashioning products and handling objects skilfully. The learning task should be designed so as to include practical problems from real-life situations which should be solved, using bodily-kinesthetic activities. It should be very challenging yet meaningful, to compel the learner to keep on trying until they can perform the task effectively and skilfully. Motivation should be maintained through continuous feedback from and interaction with the facilitator, who should recognise and support every positive step towards conquering the required skill. The importance of gaining practical experience in the work situation, where learners are placed in real work settings for specific periods of time, and the career is linked to bodily-kinesthetic activities, are vital and should be incorporated in the AD activities.

Research findings have indicated that reading ability is directly linked to bodily kinesthetic development of the young child (Johnswood, 1988). According to these findings, the movements that an infant makes, clear and develop the pathways of the mind and increase communication ability. If certain movements are missed during the first year of life, this study assumes that the development of reading and other learning skills will be negatively affected. It underlines the importance of whole body functioning: mind, spirit, emotions and physique.

* **Spatial intelligence**

Various visual tests and instruments are widely accessible and can be utilised to develop learners' spatial perception. These can be: identifying two similar pictures amongst a number of pictures which seems the same; manoeuvring parts of a picture to form a whole; visualising more than one figure/shape within one picture, etc. The importance is, however, that learners should put visualised models to practice. They need to be confronted with real life problems which should be solved through visualisation and consequential mind-maps of mental constructions, attending to detail, ensuring a fit in real life context.

* **Interpersonal intelligence**

Man is not an island and needs to relate effectively to others, therefore needs to develop a vast range of interpersonal skills. The facilitation of emotional intelligence, as described under D, will also underpin the development of interpersonal intelligence. (The facilitation of this intelligence will be dealt with, in more detail, during the second phase of the proposed AD-model.)

* **Intrapersonal intelligence**

In this process the AD practitioner should be a facilitating agent through various means, like observing, testing, directly asking learners about their perceptions of self, enhancing self-knowledge and acting upon it by deliberately confronting learners with the different kinds of intelligences. Again the facilitation of emotional intelligence, control over consciousness and internal motivation will enhance intrapersonal intelligence.

*   Naturalistic intelligence

Learners should be encouraged to seek patterns in the world around them, thereby finding order instead of chaos, building confidence in their understanding of how the world works, which will give them more control over it (Barkman, 1999:1). Facilitating the awareness of the interrelation of everything in the universe (3.2.4.2 and 3.2.4.3) should be the focus; and therefore problems should be constructed in such a way that learners discover the patterns and relationships, whether the field/subject is nature, business and industry or in the human being.

*   Practical intelligence

Learners need to master the competencies which were identified by Ford (1986:198) to be vital, namely goal-setting, decision-making, planning and problem-solving. They need to apply and act out their knowledge, be it study strategies, self-management or social deftness. The acknowledgement of practical intelligence is probably one of the most important factors in achieving the goal of developing learners for the demands of the new millennium. What is needed, is people who can manage themselves, people with know-how, who can anticipate and solve problems in practical, real life, intellectual and emotional terms. The facilitation of lifelong learning as described earlier in this chapter will fulfil this aim.

If stated like this, it seems as if practical intelligence can be seen as the culmination of all the intelligences, in that it gives one the tools with which to realise all the intelligences, namely integrated self-management and real life problem solving.

In conclusion, Walters and Gardner (1986:167) use an excellent analogy to describe the perfect harmony between the intelligences when they say: "they work in concert", comparing it to the concert pianist, who makes use of her musical, bodily kinesthetic, intrapersonal motivation and interpersonal skills with the audience, to perform optimally. AD practitioners should facilitate these intelligences, focussing on the holistic aspect and not fragmenting them. Learners should realise that they all have, to a certain degree, elements of all these intelligences and that these should be developed in order to realise their potential to the full.

iii)   Meeting the criteria

In maximising these different intelligences, the need as identified in the previous chapter, that employees should be multi-skilled in order to be employable, will be met. Adhering to the Metaphysic-theory, (3.2.2.5) the student develops as an integrated whole, experiencing the totality of human experience, being able to identify and explore his/her full spectrum of intelligences, with the aim of developing them optimally. It represents, therefore, a paradigm shift from the prevailing IQ-dilemma, aiming at maximising potential of all learners, and meeting the demands of the universal future.

When looking closely at Gardner's definition of intelligence, two major aspects are salient, according to Slabbert (1998:161), namely **thinking** and **creativity**: "Intelligence is the ability to solve problems (thinking) or to fashion products that are valued (creativity)..." (Gardner, 1993:7). Dewey (Lipman, 1988:4) already foresaw that education had to be redefined as the fostering of thinking rather than the transmitting of knowledge. Attention should therefore be given to the development of thinking, which according to Slabbert (1998:165) is especially aimed at controlling the understanding of reality, and of creativity, which is aimed at controlling the transcending of reality, or creating the future. Higher order thinking processes are clearly highlighted as of vital importance for the future (3.6.1.1. and 3.6.1.4). It is also clearly stated by Toffler and Toffler (1995:56), that what the Third Wave demands, are mind workers, people who can think and create. The two processes will be the topics of the next two elements, of vital importance to be included in an AD-model.

E   Higher order thinking

When referring to thinking with regard to the enhancement of this ability within an AD-model, reference is made to thinking as a matter of control or reflection, rather than the teaching of thinking skills.

i)   Higher order thinking, as component of the model, described

This kind of thinking is what is needed to meet the demands of the future and become employable citizens. Welmans (1997:12) describes it as first level thinking abilities, which manifest themselves in the unconscious mind. It refers to intuitive, innovative thinking. Slabbert (1998:166) says in this regard:

> *What is meant by thinking in the context of the new paradigm, is the discovery of life through wonderment and amazement as a point of departure. Life is therefore the active power of thinking and thinking is the affirmative power of life.*

It is this thinking which is guided by wisdom (deep thinking, penetrating the supra conscious and subconscious mind), and higher order thinking (analysing, synthesising, reflecting, evaluating, and operationising) that AD-models should facilitate in order to establish relationships between all human experiences, restore wholeness and open up new opportunities for life and living (Slabbert, 1998:166).

Higher order thinking also includes critical thinking. According to Adams and Hamm (1996:37), "Critical thinking is an academic competency as crucial to a child's future as literacy and numeracy."

ii)   Implications for facilitating different modes of higher order thinking

Thinking is never detached from a specific mode of thinking, which is usually determined by the set goal or the outcome needed. Critical thinking is for instance needed when analysing and evaluating something. People might have different styles of thinking , which can include emotions, being objective or being reflective. De Bono (1985) has identified six different styles of thinking with the purpose of unscrambling thinking, so that a thinker is able to use one thinking mode at a time, and to purposefully diverge from his/her normal style of thinking. This process will allow many possible ways of thinking, and its value lies in the integration of them all to eventually arrive

at the most suitable solution to a problem. Learners should therefore apply all these thinking modes when confronted with challenging learning tasks for them to be able to prompt the desired wisdom needed to maximise their potential.

*   The six thinking hats

The description of the six hats is derived from Guastello, Shissler, Driscoll and Hyde (1998:82).

~   **White hat:** This thinking style is centered upon pure facts and information, and stripped of any opinion, commentary or elaboration; it uses the power of objective observation. A student should be able to identify only the facts pertaining a problem with which he/she is confronted, without any emotional, subjective connotations added.

~   **Red hat:** This thinking style is centered upon the emotional content of the idea or message and utilizes intuition as a primary mental capability. When confronted with a problem to solve, learners should be encouraged to use their "sixth sense" or "gut feeling" to solve the problem.

~   **Black hat:** This style represents the critic, the judge concerned with negative assessment; the cautious thinker. When confronted with a problem, learners should be encouraged to assess it critically through looking at the negative issues.

~   **Yellow hat:** This style is characterised by optimism and a positive outlook on what can be done with an idea or project. Yellow hat thinking is constructive and generative. Learners should be encouraged to find solutions to problems by being optimistic, believing in the effectiveness of their solutions, constructing solutions where others might find none.

~   **Green hat:** This thinking style is most heavily loaded with divergent thinking, resource utilization and idea combination activities. It is therefore the creative thinker, the lateral thinker who, according to De Bono (1971:47) is concerned with change, with the escape from old ideas and the generation of new ones. Learners should be confronted with problems that are seemingly impossible to solve. By urging them to use lateral, innovative, creative and even, to their mind, irrelevant thinking these problems can be proved to be solved.

~   **Blue hat:** The blue hat style is characterized by thoughtfulness. The blue hat thinker remains aware of his/her own thought processes and organises or controls them. It therefore enforces the discipline of the type of thinking that needs to take place. The same kind of thinking takes place during the facilitation of control over consciousness and therefore the same facilitation can be used.

The researcher has since 1993 introduced these thinking styles in a programme for learners who were enrolled for a preparation programme (bridging). Controversial topics like the legalisation of abortion, the taxi violence in South Africa and euthanasia were discussed, dividing the class in groups of six, each student required to wear a different hat when discussing the topic, trying to find solutions for the problems surrounding these topics. The results were phenomenal, in that learners were enthusiastically involved in the activity, they discussed all angles of the problems at hand and quite interesting solutions for the taxi violence were put to the table. It was quite clear that learners never thought of thinking in such ways before and that they enjoyed the activity. The researcher also made use of the six thinking hats, while dealing with meeting procedures for communication skills. Discussions and problem solving during meetings can most effectively be done through this method, when members of the meeting wear different hats.

When developing intrapersonal relationships the student can start by looking objectively at him/herself (white hat), gaining self-knowledge of, for instance the way he/she studies. He/she can then identify which study methods he/she intuitively feels are the better ones for him/her (red hat), and be critical (black hat)of some of the weak spots identified during step one, for instance lack of willpower. Yellow hat thinking can enhance positive enthusiasm and motivation through which the student can generate (green hat) and operationalise (yellow hat) known as well as new methods to improve studying. Creativity will greatly be enhanced by deliberately practising lateral or green hat thinking. Ultimately the student can reflect on his/her study patterns, drawing conclusions, controlling and re-planning the process (blue hat thinking).

Other thinking styles which the researcher has used with great success, are being discussed next.

*   **Circle of understanding**

This model of thinking (Perkins, Capdevielle, Chonco, Cilliers, Goodrich, KaSibisi, Tishman, Van Heerden and Viljoen, 1994:133-138) assists the student to analyse a learning task, or any topic of interest to him/her. When confronted with a problem it sets the stage for planning any actions to be taken, because it implicates a set of fundamental questions aiming at understanding the problem/learning task. These questions which the student must ask him/herself when dealing with a problem/learning task, are the following:

~ **What is it?** This question refers to the structure or form, and the relationships between elements of the structure. It is aimed at understanding the fundamentals of the problem/learning task.

~ **How does it work? What is it used for?** This question compels the student to establish the purpose or function of the concept/learning task at hand.

~ **How well does it work?** This question compels the student to determine the quality through evaluating its value.

~ **What else can it be used for?** This question compels the student to think deeper than the obvious. Other functions or uses, apart from the usual, needs to be contemplated, enhancing creative thinking as well.   A related question can also be: With what can you compare it?

~ **What are the causes and consequences?** This question will lead to thinking about the origin of the problem at hand and what the consequences of certain actions will be.

~ **What is uncertain about it?** The student should now proceed to investigate all uncertainties or problems of concern.

~ **Can I construct what is needed?** Through this question, the student is compelled to create a solution to the problem which will lead to the execution of the learning task/solving of the problem.

These questions aim at deeper understanding of a phenomenon and are very valuable when a student needs to fathom new concepts. The researcher uses this method when a problem needs to be identified, defined, described and discussed, critically. Once the student has worked through the problem area, using the circle of understanding, he/she is requested to draw a mind-map of what he/she understands. One student studying electrical engineering reported that using these

two methods, helped him to integrate and visualise the learning task. Analysing and explaining to himself what it is, trying to understand from his own world of experience and comparing it to other similar electrical devices which he already knew, made the learning task exciting and challenging, because he felt that he could master it on his own. It also helped him understand the work much better, because he had to draw a mind map, which requires analysing and synthesising, and has a strong visualising factor, using colours and figures, enhancing memory retrieval. This particular student was requested to conduct a class to his fellow learners on the work that he had previously felt was very difficult to master. In so doing, the researcher urged the student to explain, clarify and justify his own thinking, and to generate own examples, thus engaging in deep understanding of the subject matter. Other positive results were, that his confidence and motivation was greatly enhanced through feelings of self-worth and self-efficacy. Research findings (King 1994:29) have revealed that interaction and learning in peer groups indicate that the learners who learn the most, are those who provide elaborate explanations to the group, engaging in thinking activities that require deep understanding of the concepts.

Closely related to the circle of understanding is CAF, which are discussed under the next heading.

* **CAF: Consider All Factors**

CAF can be described as an exploration of a situation, before deciding on an idea for implementation. It can therefore be used as part of the planning process and is essential, before decisions and actions are taken. This thinking tool is best used within groups, because ALL factors, important and non-important should be considered. After all factors have been considered, the most important ones can be identified. To enhance this method, one can also try to discover what has been omitted, trying another angle for considering ALL factors. Brainstorming is closely related to this activity. When confronted with a problem, learners should be encouraged to partake with enthusiasm and confidence, using creative and bold ideas/factors that should be considered in order to have all options on the table before deciding on an action plan. Another method that would broaden the perceptions thus made, is to include the views of other people or groups as well.

*   **OPV: Other points of view**

It is necessary to consider other points of view which can form part of the solutions to a situation. Another person or group of persons may have different objectives, priorities or beliefs which can enhance solving the problem at hand. It is therefore a deliberate attempt to open the mind to the views of other people, considering their views as valuable, being freed from narrow, selfish ways of thinking. This also maintains learning. Learners can debate a controversial issue whereby different views are raised. The facilitator need to stress the importance of being objective, listening to other views and understanding that there can be different ways of solving problems (empathy and tolerance/flexibility enhanced).

*   **PNI: Positive, Negative, Interesting**

This is a deliberate tool to decide whether an idea is acceptable or not. It could follow the CAF thinking, for when all factors have been considered, one can start evaluating and rating these factors as positive, negative or interesting, in order to decide which will eventually be suitable to meet the set goal. This tool enlarges our perspective of a situation and prevents hasty decision making based on narrow and biased views. All these tools which have been discussed up to now deal with effective problem solving, the most important challenge for learners who need maximise their potential.

The mind map as organising tool for thoughts was mentioned earlier and as it is a logical, practical follow-up to the previous thinking methods, it will be discussed next.

*   **Mind maps**

Mind maps are a tool which can be used very successfully to analyse, summarise, visualise and synthesise a topic or learning task. By mapping out different related aspects of a topic or concept, drawing figures, using colours and key words, the student learn to organise, conceptualise and formulate his/her thoughts, to find relations between aspects and to see the bigger, related picture.

Visualising a concept, enhances understanding, thus making the learning task a worthwhile experience.

By using all the above methods to enhance thinking, the student develops critical, operational and creative thinking abilities, enabling him/her to become an optimal learner.

Figure 4.1   Example of a mind map

*   **Critical thinking**

Developing critical thinking abilities complements the above mentioned thinking development, because according to Paul, Fisher and Nosich, (1993:4):

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Visualising a concept, enhances understanding, thus making the learning task a worthwhile experience.

By using all the above methods to enhance thinking, the student develops critical, operational and creative thinking abilities, enabling him/her to become an optimal learner.

Figure 4.1   Example of a mind map

ABBA
Spice Girls
Boyzone
Back Street Boys

Guitar
Piano
Violin
Saxophone

MUSIC

Pavarottti
Sara Brightman
Mimi Coertze
Andrea Bochelli

Classical
Pop
Rock
Jazz

*   **Critical thinking**

Developing critical thinking abilities complements the above mentioned thinking development, because according to Paul, Fisher and Nosich, (1993:4):

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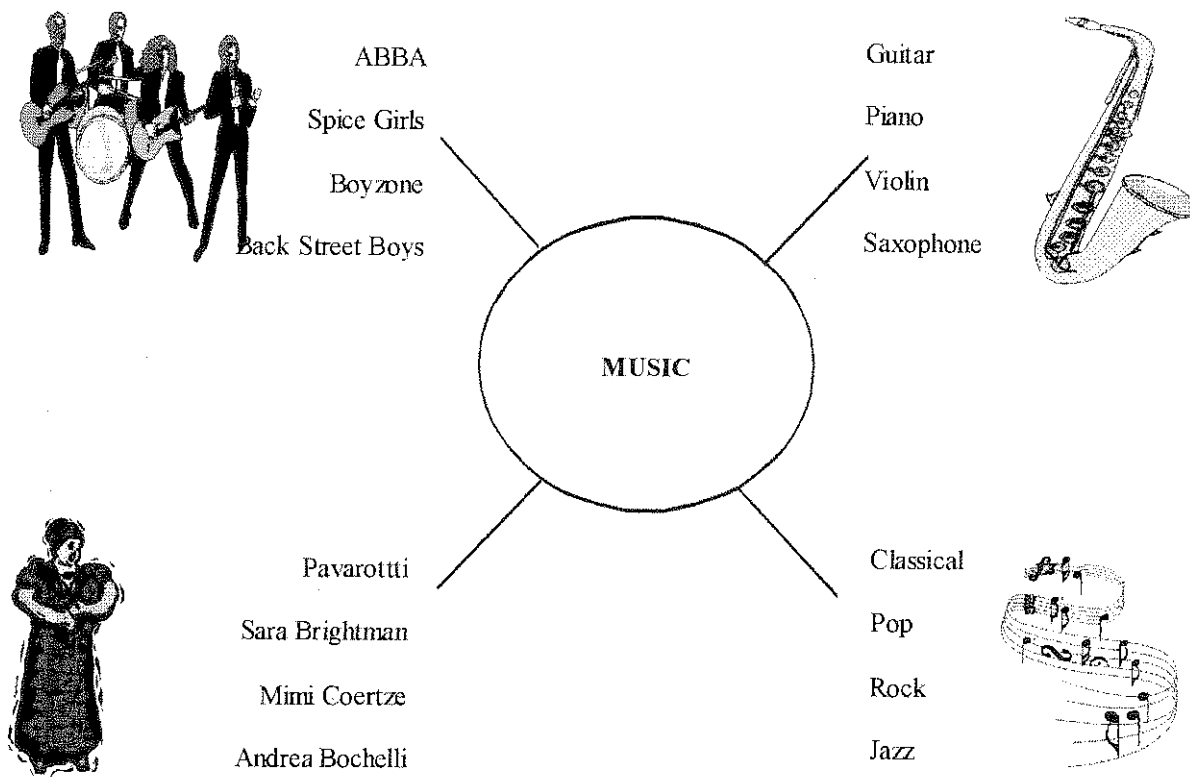
a well-cultivated critical thinker:

~ raises vital questions and problems, formulating them clearly and precisely;

~ gathers and assesses relevant information, using abstractions to interpret it effectively;

~ comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;

~ thinks open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences; and

~ communicates effectively with others in figuring out solutions to complex problems.

Critical thinking is, in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities.

According to Paul and Scriven (Paul et al.,1993:11), critical thinking can be used for various subject matter, issues and purposes, and is incorporated in a family of interwoven modes of thinking, among them: scientific thinking, mathematical thinking, historical thinking, economic thinking, moral thinking and philosophical thinking. Interestingly, Paul and Scriven (Paul et al.,1993:11) says that critical thinking varies according to the motivation underlying it. Selfish motives can manifest themselves in skilful manipulation of ideas to suit one's own interests, but when grounded in fair mindedness and intellectual integrity, it is typically of a higher order thinking ability. However, because of the fact that all persons are being subject to irrational or undisciplined thought sometime or another, critical thinking is never perfected in any individual. For this reason, Paul and Scriven (Paul et al.,1993:11) says that the development of critical thinking skills and dispositions is a life-long endeavour.

Critical thinking should be facilitated in AD-models through giving ample opportunity for reasoning, a fundamental element of critical thinking, being the drawing of conclusions based on good reasons. Class debates are good examples and give opportunities for reasoning abilities to

be practised and developed. Topics should be relevant, challenging and interesting for the learners to be motivated to engage themselves in the activity. The AD-practitioner should facilitate the process in order to see that sound reasoning takes place, in other words set the standards for sound reasoning; that intellectual development takes place through engaging in higher order reasoning abilities like exploring, comparing, analysing, synthesizing, evaluating and applying logic. Learners should always be encouraged to ask how and why questions, for then he/she engages in critical thinking.

iii)   Meeting the criteria

In cultivating higher order thinking, many of the cognitive developmental needs are being addressed: being able to think deeply, gather relevant information, solve problems in a well-reasoned, reflective way, become a critical self-observer, and develop critical communication skills like logic reasoning and be able to speak and write clearly, concisely, accurately and adequately. These abilities are amongst the standards set for competent communication skills which are crucial for the new world of work (Harvey et al., 1997:290).

The international conference on thinking, held in Singapore during 1997, underpins the importance of pursuing various modes of thinking as reported by De Kock (1997:83):

> *The intention of this event was to be a forum dedicated to the pursuit of excellence in critical, creative and operational thinking. It brought together world renowned experts to present and discuss innovating methods to unleash the unparalleled power of the mind.*

The message from the host country, Singapore's president, was that learning and thinking are essential skills if nations want to stay afloat in the competitive world of the future, and that educators will be accountable and responsible for unleashing a learner's potential in order to cope with the new dispensation (De Kock, 1997:84-85). The message is clear, the universal demand for the future, is for all learners to unleash the power of the mind (their potential), by cultivating various modes of thinking.

Facilitating thinking in the proposed AD model will represent the paradigm shift. It is not teaching thinking skills, but confronting learners with challenging learning tasks, necessitating the effortful exploration of ways in which to conquer these tasks, through various ways of thinking.

Most of the thinking described up to now, can be used to control the understanding of reality and to maximise human potential. But, as Slabbert (1998:189) says:

> ..*the control of understanding reality is only a prerequisite for the control of transcending reality... It is only in transcending reality that the unconscious is penetrated to release the wealth of potential locked up in the supra conscious through creativity.*

It is a critical demand for man to develop his creative mind, for it is only the creative spirit which will enable man to stay abreast of the fast changing environment (3.6.1.4).

F   Creativity

Creativity is surely one of the most popular "buzz-word" of the 1990's. It is, however, not a new concept to be studied, researched and pursued. J.P. Guilford, a world famed psychologist, has already during 1950 laid out a scenario that placed creative thinking as the most vital resource available for the time (Feldman, Csikszentmihalyi, and Gardner, 1994:xi). He said:

> *We hear much these days about the remarkable new thinking machines. We are told that these machines can be made to take over much of men's thinking and that the routine thinking of many industries will eventually be done without the employment of human brains. We are told that this will entail an industrial revolution that will place into insignificance the first industrial revolution...Eventually, about the only economic value of brains left would be in the creative thinking of which they are capable.*

This has indeed become true for our time and it refers specifically to the mind-work concept of Toffler and Toffler (described in 3.2.1). Routine work is done by computers, but the real creative work, the thinking about and transforming reality, is done through creative human minds. The

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entrepreneur of the future can only survive in this fast changing environment, by being creative: finding new solutions to old problems, creating new opportunities and new concepts in the market, always staying on the forefront of new innovations.

i)   Creativity, as component of the model, described

Creativity has a wide diversity of meanings all over the world and no single uniform and comprehensive model or definition of creativity is yet established (Slabbert, 1998:191). Different models and studies are therefore being highlighted, in order to establish which construct of creativity will be valuable for the purpose of this study. Generally, creativity is concerned with the generation of ideas, alternatives and possibilities, or products which is perceived to be novel and acknowledged to be useful or valuable in some cultural or social context (Gilhooly, 1996:213).

Creativity can be perceived in different ways; it can mean being artistic, having good, unusual ideas, or being unusually apt at fashioning products. The creativity that is of importance, though, when facilitating the maximising of human potential, is best described by Feldman et al., (1994:1), when they say:

> *The meaning that is of primary interest to us here is creativity as the achievement of something remarkable and new, something which transforms and changes a field of endeavour in a significant way. In other words, we are concerned with the kinds of things that people do that change the world.*

This is indeed a big challenge for AD-practitioners and learners alike. To be capable of such achievements would require lifelong dedication and effort. According to Feldman et al. (1994:3-15), creativity can be enhanced, as it is a process, rather than certain hereditary or personality traits as was previously believed and researched. The world renown psychologist, Carl Rogers (Neethling, 1995:20) supplies us with a guide on how to facilitate creativity when he says:

The facilitation of learning to free curiosity; to permit to go off in new directions; to unleash the sense of inquiry; to open everything to question and exploration; to recognise that everything is in the process of change. Out of such context arise true learners; real learning; creative scientists and scholars and practitioners.

It will therefore be proper to establish how various authors describe the process of creativity and how it could be facilitated.

*   Different views with regard to creativity

Feldman et al. (1994:15-40) propose a framework for the study of creativity, from which facilitators of creativity can work.

~Framework for the study of creativity as a process

The framework presents several sets of processes operating at several levels, with interplay among and between these processes. Three dimensions are identified (Feldman et al., 1994:16), the first being the field, which refers to the social or cultural aspects of a profession, job or craft. The second dimension is the domain which refers to the structure and organisation of a certain distinct body of knowledge, and the third dimension is the individual person with his own distinct characteristics and experiences. The interrelations of the three systems jointly determine the occurrence of a creative idea, object or action. The individual who has distinct knowledge of a certain domain, might be dissatisfied with some aspects of that body of knowledge and would like to change or transform the domain. In so doing, he/she is shifting the boundaries of the domain, sometimes looking for resources in other related domains. When the field (peers, knowledgable people in the same domain) accepts such transformations, set and reset boundaries, the creative process/transformation is taking place. An example of this process is seen in the action taken on the general dissatisfaction with educational practice that fails to maximise human potential and produces employees who are incapable of dealing with the demands of the future world of work.

The new paradigm in education, as proposed by Slabbert (1998) is proof of this action, born out of the creative process. Another example can be cited in the domain of physics (Joubert, 1997), when referring to the work of Einstein.

Einstein, on the individual level, working on his doctorate in the physics domain, discovered the existence of atoms during 1905, and published a paper to prove this breakthrough finding. He thereby shifted the boundaries of the domain , but it was only during 1910 that the existence of atoms were accepted by most physicists (the field), and the boundaries were reset, thus following the creative process as proposed by Feldman et al. (1994). Environmental factors play an important part in this process, like the cultural and social context. For instance to what extent will new products be valued by a certain culture or social system. The model as initially conceptualised by Csikszentmihalyi (Feldman et al., 1994:21) is mapped out in figure 4.2

Analysing processes on the individual level, has been the aim of other researchers in the field of creativity (Gilhooly, 1996:213-244; Feldman et al., 1994:26-27).

*   Processes on the individual level

Focussing on the individual level, Gruber (Feldman et al., 1994:26) studied creative individuals in order to comprehend extreme and unequivocal instances of creative accomplishment. He identified three interrelated systems in the lives of individuals, namely **knowledge, purpose** and **affect.** Each system can be analysed separately, but is also enriched by its relations with the other systems in an individual's overall personality. The creative person therefore needs knowledge of the domain (in accordance with the model of Feldman et al., 1994:20), directed by a clear purpose. During the process, feelings (affect) like frustration when something hampers the progress, or challenges, urging the will to succeed, might influence the process. But when and how does "insight" eventually occur? Gilhooly (1996:217-219) indicates that reports of personal accounts of the creative process (he cited reports from Tchaikovsky, Poincare, a renowned French mathematician and Helmholtz, a nineteenth century scientist) proposed four stages through which the individual progresses for a creative product or act to be realised. These four stages are:

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Figure 4.2   The locus of creativity

Feldman et al., 1994:21
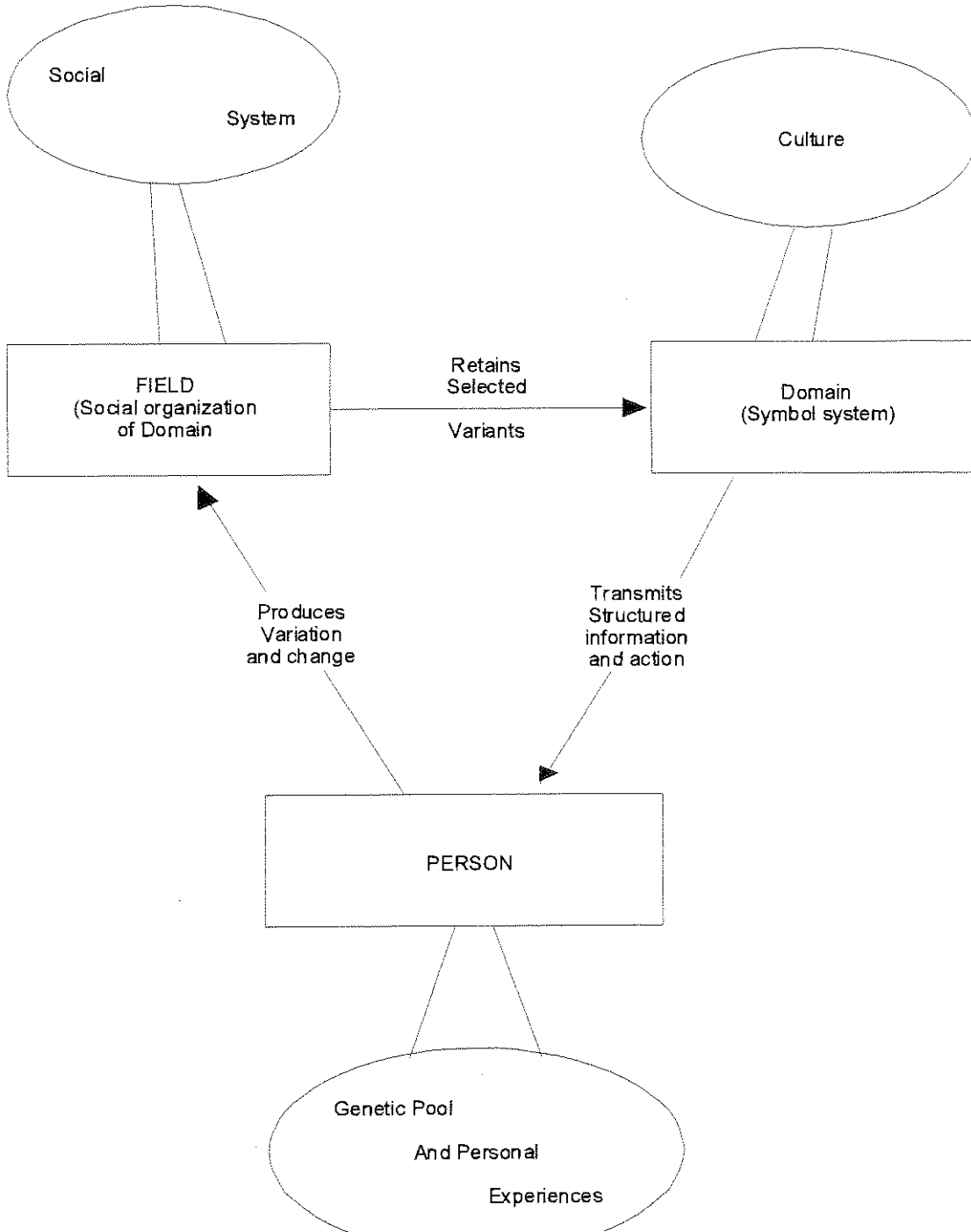
~ **The preparation stage**, during which the individual engages in conscious effort, familiarising him/herself with the field of study (compares with knowledge of the domain), working systematically on the problem (with a purpose and plan),. This stage is therefore the perspiration phase, or to cite Edison (Gilhooly, 1996:219): "no inspiration with out perspiration".

~ **The incubation stage**, where no conscious work is being done. The task is set aside and the individual has a period of mental relaxation and physical well-being. Sometimes the individual might be pursuing another field of study, not consciously concentrating on the task which is temporary set aside, thus relaxing the mind from that particular task. During this stage, the unconscious mind is working on the problem, resulting in the next stage of the process.

~ **Illumination, or the AHA experience** which usually comes unexpectedly, inspiring the solution to the problem, or the fruitful idea that leads to outstanding new products or actions. Preceding this stage, successfully creative individuals have reported (Gilhooly, 1996:218-219) that they had feelings of frustration, of being intimidated by the task, and even depression, because they felt that they will never solve the problem. When becoming aware of these feelings, they purposefully relaxed their minds and bodies, concentrating on feelings of well-being and rest. The solution was thereafter usually forthcoming! This might seem very unscientific, therefore the fourth stage needs to conclude the process.

~ **Verification** of the inspired thoughts should follow next. Conscious work must be done to test and develop the inspired thoughts, because according to the model of Feldman et al., (1994), the creative thoughts or products should be accepted and valued by the field.
Feldman et al., (1994:29-40) went further and developed a three-part model for thought processes associated with creativity.

*   **Thought processes associated with creativity.**

Three key processes have been identified, namely reflectiveness, transformational impulses from the unconscious and changing the world (Feldman et al., 1994:32-34). To account for creative accomplishment, the systems have to be integrated, although they are described as separate

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components.

~ **Process 1: Reflectiveness** is a quality that human beings possess, and is probably the most important quality. It is the ability to gain self-knowledge through awareness of past experiences in unconscious as well as external events, in order to build a unique picture of the self. It also refers to consciousness, which enacts virtually all of the symbolic and abstract activity, which is the hallmark of human thought (Feldman et al., 1994:32). Reflectiveness can therefore be seen as thinking about our thoughts, feelings and actions be they imposed from outside, or brought forth from inside. Based on evidence of previous productive changes and transformations, reflectiveness may thus lead to further attempts to transform the external world (creativeness), enhancing innovation, through images and experiences from within, which leads to the next thought process.

~ **Process 2: Transformational impulses from the unconscious.** There is an "internal traffic" (Feldman et al., 1994:33), back and forth between and among conscious and unconscious functions. The unconscious forms representations based on internal and external experiences, which becomes organised into images, events, objects and processes. One must, therefore include unconscious processes into any study of creativity. Unconscious processes have the distinct features of being fluid, active and generative; they have access to other sources of information like images, perceptions and sense impressions; and they can in part, be harnessed to serve various purposes directed by conscious goals (Feldman et al., 1994:34). Unconscious thought can thus motivate conscious efforts to change and transform, if the individual makes use of these images and impressions through, for instance, reflection or meditation.

~ **Process three: Changing the world.** Human beings know that they have the power to make the world a different place to what it is. Since the inception of the world, humans have produced cultural artifacts and through intentional efforts, changed their world to be more comfortable. It is therefore a basic human trait to be creative and to transform. These changes need not only be focussed on the external environment, it can also manifest inside the mind through a paradigm shift. Both the internal urge to change reality and the external nature of constructed reality need to find their way to consciousness, in order to be thought about and to be represented. There

always need to be an interrelatedness between the internal urge to change reality and the conscious efforts to this effect, for it to be fruitful.

These processes indicate, therefore, that creativity is a basic human capability, and that it can be developed and enhanced. This will be the topic for the next discussion.

ii)   Implications for facilitating creativity

Based on the framework and processes which have been described above, there seems to be different levels that need to be kept in mind. The macro level, including the field, domain and individual; and the personal level, where cognitive and emotional, conscious and unconscious processes take place. These levels are not to be divided or fragmented, they are all interrelated in the process of creativity.

a)   Important aspects when facilitating creativity

Following from the proposed framework and processes, aspects to keep in mind when facilitating creativity, will next be discussed.

*   Creating a conducive environment

The environment plays a major role in inducing creative behaviour (Slabbert, 1998:196; Wilks, 1995:8-28; Freeman and De Beer , 1995:123). Claxton (1999:17) also refers to this when he says that learning can be facilitated through the "creation of a culture" or conducive environment, rather than by designing training programmes. One fundamental criterion for the environment to induce creativity, is for it to be proactive. According to Armstrong (Slabbert, 1998:196), this is evident in the Montessouri and Waldorf schools which are well known for the creativity they produce. It is also confirmed by Feldman et al., (1994:32-35) when they refer to domains and fields influencing conscious efforts (proactiveness) to change the world, as well as by Wilks (1995) who proposes the establishment of a community of inquirers in the classroom, based on active participation. Paradoxically, creativity flourishes best in a climate of independence, as well

as cooperation. In this regard Wilks (1995:3) says:

Teachers should focus on how we can go about improving our learners' skills of thinking and dialogue.

This can be obtained by having frequent problem-solving sessions in class, where the individual student should first have ample time in which to find solutions on his/her own, taking responsibility for own creativity to be developed, followed by group discussions which gives opportunity for free flow of ideas and the encouragement of unconventional thoughts (Freeman, and De Beer, 1995:123). A supportive and nurturing environment should be facilitated, by allowing all learners to participate, free from interference like judging good responses or allowing destructive criticism (Wilks, 1995:11). Even a playful environment can induce creativity, for then learners are allowed to use unconventional modes of thinking, they are freed from the stress of "looking smart" when participating in class and can therefore relax, inducing creative thoughts (Gilhooly, 1996:219).

A student's attitude is, however, of great importance if we need them to participate in an proactive class-environment.

* **Attitude of critique**

In developing creativity, learners need to adopt an attitude of critique, being an "objective analysis or evaluation of something, in order to redesign, remodel and make better" (Paul et al., 1993:66). This attitude can only be fostered if learners acquire grounded knowledge of the domains in which they study, or through self-scrutiny, if they want to change themselves. Learners therefore need to be proactive in finding problems where there are none, in order to create the future. For as Slabbert (1998:209). says:

Finding problems where there are none or suggestions to investigate something with the

aim of improvement or simply to see what will happen or to find something new, should be prompted, encouraged and followed through whenever possible.

The finding of problems where there are none, should be a purposeful endeavour for enhancing creativity.

*   Purposeful endeavour

This refers to the conscious effort (preparation stage) that a person puts into solving a problem, or immersing him/herself in the work. This needs to be a lifelong endeavour; purposefully wanting to know, in order to evaluate whether change is needed, acting on the need by presenting various options for change, deciding on which to implement. Csikszentmihalyi (Feldman et al.,1994:141) says in this regard that "creative achievements depend on single-minded immersion in the domain."

Reports from highly creative individuals have also indicated that constant, purposeful hard work foregoes creative ideas (Gilhooly, 1996:219). A precondition for a person to immerse himself in any domain, is that it should be of personal interest, and that he/she should be motivated to do so.

*   Intrinsic motivation

The attitude of critique and inquiry is fostered by intrinsic motivation, for Csikszentmihalyi, (Feldman et al.,1994:141) says:

> *I have become convinced that an essential ingredient for sustaining creative effort is intrinsic motivation, or the ability to derive rewards from the activity itself rather than from external incentives like power, money or fame.*

Feldhusen (1995:262) agrees with Csikszentmihalyi when he says:

The creative person is undoubtedly motivated from within and is imbued with a sense of power or capacity to create.

Intrinsic motivation is therefore a vital prerequisite for facilitating creativity. This highlights the integration of all the components which are included in the proposed AD-model and that all these components should be dealt with in a holistic manner.

*   Constant practice

By combining the thought processes and actions, of immersing oneself into the task at hand; reflecting upon conscious and unconscious thoughts and events; purposefully looking for ideas and solutions in order to transform; deliberately penetrating the supra-conscious to draw on novel, creative ideas; allowing for an incubation period where mental and physical relaxation takes place; and evaluating the forthcoming ideas for fruitful implementation; the student engages in the process of creativity. This needs constant practice, therefore a few techniques that could enhance these processes should be researched and utilised by AD practitioners and lecturers alike. Some of these techniques are discussed next.

b)   Techniques to facilitate creative problem solving

All the thinking methods which have been described under E can be utilised very successfully in order to develop creative thinking, and creative problem solving. These methods encourage learners to think differently, deeper and with more attention to new ways of thinking about concepts. They also encourage individual as well as group activities, sensitising learners to their own thinking patterns as well as those of others.

In addition, there are several techniques which are specifically designed to enhance creative thinking and which should be practised by learners on a regular basis. These techniques can be used in the process of creative problem solving "which contains the fundamentals to explore the supraconscious wisdom to release the dormant wealth of unknown potential which thinking alone cannot do" (Slabbert, 1998:209). The first few techniques focus on objective finding, fact finding

and problem finding, followed by idea generation, ways of solution finding, accepting and elaborating on the solutions, and eventually implementing the plan of action (Slabbert, 1998:209-223).

* Objective finding, fact finding and problem finding

These first three steps in creative problem solving are probably the most crucial, because it poses a real paradigm shift to the learner. To find or identify a problem where there is none urges the student to become proactive, to investigate something not because it poses a problem, but simply to see whether it could be different, changed or improved. This action should be encouraged and prompted whenever possible, by presenting learners with learning tasks where the problem is ill defined or apparently missing. The problem should, however, be in real-life context for it to be meaningful and credible. It should be new, original and creative and has to compel learners to become personally involved, stretching themselves beyond their perceived self-efficacy, enjoying the experience.

* Idea generation

This step in the process of problem solving or exploring an objective, is crucial in creative activity. The student discovers that to identify the problem and to find ideas in order to solve the problem are major tasks and that he/she cannot cope with it in an ordinary (linear) way. It demands right brain activity, like emotional, non-verbal, metaphorical, visual, imaginative, spatial and intuitive thinking. It also requires lateral thinking (De Bono, 1971:47) which presupposes the escape from old ideas and the generation of new ones. Lateral thinking can therefore be described as being generative, rich, provocative, illogical and making quantum leaps (Slabbert, 1998:213). The most well-known and widely used activity for the generation of ideas, is brainstorming. Another technique is morphological synthesis, combining aspects of a problem on a graph, which eventually leads to novel ideas found in the matrix formed by combining the two axis. A third technique is synectics, which Gilhooly (1996:229) describes as:

> *the joining together of different and apparently irrelevant elements by the use of metaphors and analogies.*

These techniques should be facilitated through encouraging learners, when they realise that linear thinking will not solve the problem, to think of irrational, radical solutions to the problem. They should be prompted to let go of old, proven ideas completely and generate totally new, innovative ways of solving the problems at hand, such as connecting irrelevant words, for instance tomato & hat; jump & house; speak & bird. This loosens the brain from logical, linear thinking, facilitating lateral thinking.

The result of these idea finding activities will be a vast number of possibilities and ideas for the solution of the problem or the creation of something new. The crucial next step will be to choose the best of these ideas that will lead to solution finding.

*   Solution finding

Slabbert (1998:216), has summarised a number of ways from existing literature in which to find the idea that would generate the best solution. These are the following:

~   **Hits**

One specific idea or a small number of ideas might simply present itself as the best idea(s). It therefore represents a hunch or intuition, from which to start working.

~   **Hot spots**

Hot spots are identified when a number of ideas are repeatedly identified as something special. Although the individual can make such identification over a period of time, it is best used in a group situation where individual priority lists are being compared, identifying the most popular or Hot spots. This activity relates to the nominal group technique as described by Robbins (1991:339).

~   **Nominal group technique**

This group activity follows directly upon the brainstorming phase. When all ideas have been presented and recorded, their evaluation and clarification can be discussed. After discussion, each member silently and independently rank the ideas. The final decision is determined by the idea with the highest aggregate ranking.

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~ **Using thinking tools**

To identify the best solution, the tools for thinking, like CAF, PNI, OPV, critical thinking, can be utilised. Critical thinking is inherent in creative decision making (Lumsdaine and Lumsdaine, 1995:247), because critical thinkers seek other views and evidence beyond their own knowledge (OPV). They decide which view is most reasonable, based on all the evidence, and make sure they use reliable facts and sources of information.

~ **Criteria**

Criteria may be created through brainstorming, according to which the ideas can be judged, in order to select the best solution. Again, a matrix can be used, listing the ideas on the left side of the matrix, and the criteria at the top. Each idea is then assessed by implementing one criterion at a time. These are then evaluated on a five point sliding scale, with the highest score being the most valuable solution.

Learners should be encouraged to believe in hunches or intuition at times, otherwise to rank solutions given by all the members in a group, to test them against set criteria and to evaluate the solutions which they have identified according to its thoroughness and effectiveness and whether they are challenging and appropriate. Using thinking tools should always be encouraged, as it develops higher order thinking, of which creativity is crucial.

When the best solution is found, the next step is to start making it happen. For this to succeed, the solution must be acceptable to most, otherwise there can be resistance to implement it. Table 4.1, taken from Isaksen and Treffinger (Slabbert 1998:219), is an example of a solution-finding matrix.

Table 4.1   **Solution finding Matrix**

IDEAS	CRITERIA								DECISION		
1.											
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											

*   **Acceptance finding - Elaboration**

The aim now is to elaborate the idea into a full-fledged solution, with all the necessary detail which will make it a workable solution. This implicates change, which again necessitates acceptance of the idea and implicates change. People feel threatened by change, because they feel secured in their old habits of doing things. (This kills creativity!) They will therefore resist change. In order to break down this resistance in a group situation, everybody should participate in the decision making process, solutions should be negotiated and accepted (Robbins, 1991:643-645). This can be facilitated, using a familiar questioning model.

~ **Questioning assistance and resistance**

According to a model designed by Isaksen and Treffinger (Slabbert, 1998:217), elements of assistance and resistance to the idea/solution need to be identified. They make use of the familiar questioning technique using who, what, where, when, why, and how to determine elements of assistance or resistance. In so doing, clear problem areas can be identified and ways anticipated to overcome these problems. This activity can be compared with the verification stage of the creativity process and the student learns to first evaluate and elaborate on the viability of an idea/ solution, before implementing it.

* **Implementation**

De Bono (1991) has developed the six action shoes, following on the six thinking hats, indicating that the thinking process or idea generation and identification, should be followed by action, otherwise we will never be able to change the world!

Other implementation strategies which can be used are described by Lumsdaine and Lumsdaine (1995:279-281). They are: copycat, 5-W method, and time/task analysis.

~ **Copycat**

If your idea is similar to one that has been successfully implemented before, you can simply copy the procedure with minor adjustments, therefore be a copycat.

~ **5-W method**

This method has already been utilised for the acceptance-finding stage. Elements of resistance and assistance are tested by asking the questions "who, what, where, when and why"about every task. It differs in this phase somehow, in that the required tasks are now being listed, and the questions being asked with regard to the tasks. Questions asked can be: Who will do the task? What will they do? Where will they do it? etc. This will set the stage for the implementation of the task.

~   **Time/task analysis**

This is a very simple work plan which is visually presented. A lined chart is drawn and the tasks listed on the left hand side, with the time scale across the top. The time required for these tasks to be completed is estimated and indicated on the chart. The time allowed for each task must be realistic though, for implementation to be done effectively

By deliberately deciding on implementation, asking the five W-questions, learners learn to act on decisions taken. They see the fruits of their problem solving exercise and this makes it a worthwhile and fulfilling experience.

iii)   **Meeting the criteria**

Being creative in all aspects: feelings, thinking and actions, is a continuously increasing demand. Seeing that the "new world" constitutes a total paradigm shift, reforming and adaptation of thoughts and products will not work. The cup needs to be emptied of its contents, and "new tea" needs to be poured into it, but the structure (the cup) must also be able to contain the new contents. It is therefore obvious that the change required, is paradigmatic; it implies a reconceptualisation of both content and structure (Slabbert, 1998:53).

In this transformative environment therefore, man needs to create his own future. The way in which this can be done, is by allowing the creative power/potential within to be released. The person who consciously releases his/her creativity, in order to want to co-create his/her world by finding novel ideas/solutions to old and new problems and by fashioning new products, will eventually be successful in meeting the demands of the future. This is an absolute must for the new world of work (3.6.1.4). Learners, world wide, cannot enter this working environment without being creative. They need to use their intuition and wisdom, penetrating the sub-conscious, to be able to create new solutions!

When reflecting on all the components included in the development of intrapersonal relationships, a very interesting and important connection between these components and metalearning is revealed. To understand the significance of this connection, it is important to investigate it a little more substantially.

4.3.4.2   Metalearning as integrated, applied competence for developing intrapersonal relationships

Slabbert (1998:142) states that higher order consciousness is a prerequisite for exploring human potential with the aim of maximising it. He (Slabbert, 1998:140) further says, that one way to facilitate higher order consciousness is through metalearning. On the level of the student, it is therefore imperative to develop metalearning in order for the demands of the future to be met (self-starters, self-motivated, being in control, using initiative, planning pro-actively and creatively).

i)   Metalearning, as applied, integrated component of the model, described

The term metalearning is derived from the psychological concept of metacognition, which literally means higher order (meta) thinking and memory processes (cognition). In simple terms metacognition means to think about thinking, or to reflect critically about what you have read, said, written or done (Biggs and Telfer, 1987:143).

*   Metalearning and metacognition

Metacognition is described by Flavell (1976:232), who introduced this concept in 1970, as follows:

[Metacognition] refers to one's knowledge concerning one's own cognitive processes and products or anything related to them, e.g., the learning of relevant properties of information or data. For example, I am engaging in metacognition (metamemory, meta-learning, meta-attention, metalanguage, or whatever) if I notice that I am having more

trouble learning A than B; if it strikes me that I should check C before accepting it as a fact; if it occurs to me that I had better make a note of D because I may forget....Metacognition also refers....to the active monitoring and consequent relation and orchestration of these processes in relation to the cognitive objects on which they bear, usually in the service of some concrete goal or objective.

Later, in 1979, Flavell also distinguishes between cognitive strategies and metacognition. He observes, that while the former are necessary to make cognitive progress, the latter must monitor and direct them (Mann and Sabatino, 1985:220).

As is indicated by the definition of Flavell (1976:232), metacognition is interpreted by educational and psychological researchers as involving cognitive self-awareness and regulation and control of strategic aspects of cognition (Mann and Sabatino, 1985:220). Metacognition therefore involves conscious access to one's own cognitive operations and reflections about them, being able and responsible to monitor and direct them.

* **Metalearning and self-regulated learning**

Self-regulated learning is a term often used by educational psychologists to refer to metalearning. It includes all the elements of metacognition and more. Zimmerman (1989:329), defines self-regulated learning as follows:

In general learners can be described as self-regulated to the degree that they are metacognitively, motivationally, and behaviourally active participants in their own learning process. Such learners personally initiate and direct their own efforts to acquire knowledge and skill rather than relying on teachers, parents, or other agents of instruction. To qualify specifically as self-regulated in my account, learners' learning must involve the use of specified strategies to achieve academic goals on the basis of self-efficacy perceptions.

This definition refers to cognitive, emotional and behavioural elements inherent in self-regulated learning. The student initiates and directs action and utilises strategies to this effect. Schunk (1990:71) elaborates on goal setting and self-efficacy perceptions in his definition of self-regulated learning:

Self-regulated learning occurs when learners activate and sustain cognitions and behaviours systematically oriented toward attainment of learning goals. Self-regulated learning processes involve goal-directed activities that learners instigate, modify, and sustain. These activities include attending to instruction, processing and integrating knowledge, rehearsing information to be remembered, and developing and maintaining positive beliefs about learning capabilities and anticipated outcomes of actions.

*   **Metalearning defined**

When incorporating views and definitions regarding metalearning, it can be described as an activity of the learner who applies metacognition to his/her learning process (Biggs and Telfer, 1987: 147). The learner is therefore intentionally aware of his/her learning actions and consciously plans, executes, monitors and evaluates it (Biggs and Telfer, 1987:161). This definition therefore includes metacognition and has the same elements of self-regulated learning. Thus, metalearning then meets the requirements of higher order consciousness, reflection and control, as being a prerequisite for exploring human potential with the aim of maximising it (Slabbert, 1998:142). Slabbert (1988:107) defines metalearning as follows:

Metalearning comprises the higher order learning activities or the control activities of learning such as planning, monitoring and evaluation. These higher order learning activities exert control over the lower order learning activities or executive activities of learning. Metalearning guides and directs (controls) the learning process.

Metalearning also indicates effective learning, according to Biggs (1985:185):

Effective learning under institutional conditions requires, first, that learners are aware of task demands and of their intentions of how, or even whether, to meet those demands, and second, that they assess realistically, and concert control over, their own cognitive resources. The fulfilment of such conditions involves a sophisticated kind of metacognition, here called metalearning.

According to Zimmerman (1989:332-335) there are three major determinants of metalearning which are assumed to be interdependent. These will be discussed next in an attempt to explicate the interrelatedness of metalearning with the identified components to develop intrapersonal relationships.

*   Personal determinants

Personal determinants of meta-learning distinguish between a student's knowledge of learning, meta-cognitive processes, goals, and affect or perceptions of self-efficacy (Zimmerman, 1989:332).

a)   Knowledge:
A distinction is drawn between declarative, conditional and procedural knowledge. Declarative knowledge being facts, or what I know; conditional knowledge being the ability to decide when and why to use certain strategies; and procedural knowledge refers to the how. In other words a student needs to have knowledge of mathematics (declarative), in order to draw up a daily time table (procedural), by dividing it up in daily tasks (conditional), because he/she wants to finish an assignment for the week. Another example may be that the student needs knowledge of learning strategies (declarative), in order to decide where and when he/she should use them (conditional), and how (procedural). The facilitator should facilitate this knowledge for learners to make informed choices about learning strategies when tackling different tasks. Table 4.2 is a handy table of such strategies (Pintrich, 1989:143), and the different aspects will be discussed when they become applicable.

b)   Meta-cognitive processes:
These processes include planning of the learning task, execution, monitor and evaluation of the

learning task (Slabbert, 1998:146-150).

~ **Planning:**

Planning is of vital importance in metalearning and forms part of the metacognition processes (Pressley,1986:147; Mann and Sabatino, 1985:222; Zimmerman, 1989:332). The aim with planning is to design a learning strategy complex within which the lower order learning activities are arranged in an organised unit. There are a few factors influencing the planning phase, which are:

> ***Learning task factors:** These include analysing or decoding the learning task according to content, competencies needed for execution of the task, and relationships to be established. These relationships are typically between the learner and the object to be studied, between the learner and other learners, and intrasubjectively, meaning a relationship with the learner's own meanings that he/she has already constructed (Slabbert, 1998:81). It also includes encoding of the learning task, meaning that the learner must reconstruct or represent the learning task according to his/her own perception, with the purpose of understanding it before tackling it. Selection of lower order learning activities, which are essential and suitable for the execution of the learning task, follows upon the decoding and encoding processes.

> *** Personal factors:** When planning for the execution of the learning task, some personal factors have an influence on the design of the learning strategy complex. The learner needs to adopt a certain learning approach and reveal a certain learning style.
>
> **Learning approach** refers to three approaches to learning, namely surface, deep, or achieving approach (Biggs and Telfer, 1987:147), based on what the learner's concept of knowledge is. If a learner thinks that learning means to know more, to memorise and acquire facts to reproduce, he/she has a quantitative concept of learning and adopts a surface approach, based on extrinsic motivation. When a learner, on the other hand wants to find the real meaning and understand fully what the learning task constitutes, and theorises and forms hypotheses about the task/subject matter, he/she adopts a deep approach to learning. This approach is based on intrinsic motivation: the student is interested in the task, wants to understand it, and is totally absorbed by the task. The

achieving approach is based on achievement motivation. The student will therefore make use of strategies that have to do with context, like making use of study strategies, such as summarising and paraphrasing, and goal setting. The aim is to be competitive, to be the best. The combination of deep-achieving style will result in an organised learner, wanting to understand the task, whereas the surface-achieving combination will result in an organised rote-learner (Biggs and Telfer, 1987:149). The meta-learner, being aware of the task demands and his/her intentions to meet those demands, will therefore plan for and adopt a deep approach to learning. Research has indicated that it is possible to facilitate a deep approach to learning, by reorientating the learner's concept of what knowledge is; enhancing applicable competencies like study strategies; and by consistently presenting learning tasks that demands a deep approach (Biggs, 1985:205; Mann and Sabatino, 1985:207; Kember and Gow, 1989:264).

Learning style refers to a learner's preferences with regard to his own learning, which is influenced by personal, environmental and cognitive characteristics of the learner. For instance, the way in which the learner observes, thinks, remembers and solves problems, together with environmental factors like class room atmosphere and study area, will influence the learner's preferred style of learning.

Learning strategy design implicates that the learner should take into consideration, his personal approach and style, as well as the learning task requirements, in order to design an effective learning strategy complex. This refers to the basic determinants inherent in metalearning, namely regulating the self, the environment, and the behaviour. Knowledge of learning strategies in order to plan which will be suitable for the specific task, is therefore required (procedural knowledge). This means that learners will have to become versatile in the design of alternative strategies in order to execute the learning task in the most effective way, producing the highest possible quality product. By so doing, he/she maximises potential!

During the planning stage specific relationships can be detected between metalearning and control over consciousness, intrinsic motivation, intrapersonal intelligence, practical intelligence, higher

order thinking, and creativity. The learners need to consciously think about his/her relation towards the learning task, evaluate his/her ability and willingness to execute the task, devising creative ways in which to tackle the task

~ **Execution of the learning strategy**

This follows the learning strategy design, which can only be done meaningfully after executive activities (summarising, memorising) and control activities (reflection, evaluation) have been planned. Higher order thinking strategies are therefore employed.

~ **Monitor**

To monitor the learning process plays a very important role in metalearning, for it implicates the management, regulation, and control of the process (Zimmerman, 1989:332; Jacobs and Paris, 1987:259; Mann and Sabatino, 1985:222). Monitoring behaviour will in this case refer to the learner's ability to control concentration, persistence, and stress levels, as well as including self-tests to determine affectivity.

The interplay between the determinants, self-regulation, behavioural regulation and environmental regulation, plays a determining role in the monitoring process, as the determinants act as feedback loop. Monitoring can be done by self testing, the aim of which is to determine if learning has been meaningful and the content fully understood. This can be done when the learners:

* anticipate and verify
* elaborate and verify
* make conclusions and verify
* reorganise activities within a strategy
* self-feedback (Slabbert, 1998:150).

Emotional intelligence can play a determining role in the monitoring process because the student must actively monitor and control his/her own behaviour and emotions as well as the environment. Higher order thinking, like verification and critical thinking, takes place, as well as practical intelligence where managing oneself, one's task and others come into play.

~ **Evaluation**

Evaluation is distinguished from monitoring, because as metalearning strategy, it comprises the

judgement of quality of the product, and the evaluation of the meaning of the whole process of learning. Higher order thinking is yet again involved.

The meta-cognitive process of planning, executing, monitoring and evaluating is directed by the goals which the learner wants to accomplish.

c)   Goals

According to Schunk (1990:71), a goal is what a learner is consciously trying to accomplish. A metalearner will therefore set goals according to his/her self-efficacy perceptions. Goals should be specific, attainable and proximal, in order to be effective (Schunk, 1990:74). An example would be to say: " By the end of this week I must read, summarise, understand, practise and write a self-test on chapter two of my Personnel Management handbook, getting at least 80%.

d)   Self-efficacy perceptions

Self-efficacy relates to metacognitive control and the setting of goals. A student with high self-efficacy perceptions will set challenging goals, plan suitable strategies and monitor behaviour in order to attain these goals. Intrinsic motivation reveals a goal oriented person, having high self-efficacy perceptions, wanting to fulfil his/her goals.

*   Behavioural determinants

Three highly interactive variables are distinguished when looking at the behaviour of the meta-learner or self-regulated learner, namely self-observation, self-judgement and self-reaction (Zimmerman, 1989:333).

a)   Self-observation:

Self-observation refers to a student's responses that involve systematically monitoring his/her own performance, in order to establish how well he/she is progressing towards his/her goals. Two common behavioural methods of self-observation are verbal or written reporting, and quantitative recording of one's actions and reactions. Research findings give evidence that prompting learners to keep records of their work and progress, affects their learning, motivation and self-efficacy

(Zimmerman, 1989:333).

b)   Self-judgement

Self-judgement refers to learners' responses that involve systematically comparing their performance with a standard or goal (Zimmerman, 1989:334). Methods that learners employ to judge own behaviour is checking procedures, such as re-examining their answers to mathematical problems and eventually discarding faulty strategies. Learners also rate their answers in relation to those of others or an answer sheet. Self-evaluation/judgement therefore depends on personal processes like self-efficacy (can I attain the goal), goal setting and knowledge of standards, as well as self-observed responses (Zimmerman, 1989:334).

c)   Self-reaction

A third class of learners' self-regulated response refers to their performance, and again involves such personal processes as goal setting, self-efficacy perceptions and metacognitive planning as well as behavioural outcomes. These processes are in reciprocal relation to each other, for instance, the initial level of self-efficacy perceived will determine which goal is set and what strategies are used. Feedback will determine whether the strategy is applicable, or the goal attainable, thereby indicating whether self-efficacy perceptions should change or not. Three self-regulatory classes of self-reaction strategies are distinguished:

~ **Behavioural self-reaction**, involves such strategies as self-administered praise or criticism when learners seek to optimise their learning responses.

~ **Personal self-reaction** refers to learners seeking to enhance their personal processes during learning, such as proximal goal resetting or rehearsing and memorising (Zimmerman, 1989:334).

~ **Environmental self-reaction** refers to ways be which learners seek to improve the learning environment by, for instance, structuring the physical environment (study space) and asking for assistance from other people or using books.

Control over consciousness, intrinsic motivation, emotional intelligence, higher order thinking,

multiple intelligence and creativity are all intrinsic in the behavioural determinants of metalearning.

*   Environmental determinants

Environmental experiences like social and enactive experience of own learning, as well as the structuring of the learning context and learning task, have an influence on the learner's self-efficacy perceptions (Zimmerman, 1989:335).

a)   Enactive outcomes

Enactive outcomes, also referring to own experiences, give feedback of personal efficacy, and of declarative and self-regulated knowledge, which motivates the student to select appropriate academic learning strategies, irrespective of what other learners may select for the same task.

b)   Modelling

Social experience can influence the self-regulation of learning, by modelling the behaviour of "similar others" with regard to efficacy. The "model" should cope very well with the application of effective self-regulating strategies, such as showing high concentration, persistence and increased effort. According to Bandura (Zimmerman, 1989:335), "the modelling of effective coping strategies can boost the self-efficacy of individuals who have undergone many experiences confirming their inefficacy, as well as the self-assured".

c)   Social support

Other sources of social experience are the support which the metalearner seeks from lecturers, knowledgeable people and fellow learners, as well as from literary and other symbolic forms of information, like graphs, figures and formulas. The meta-learner regulates this behaviour by looking for assistance on his own accord, he/she does not need not to be prompted by a lecturer.

d)   Structuring the learning context and task

Different tasks and contexts both have an influence on the metalearner's self-regulation. Difficult tasks need different strategies from easy tasks, and a noisy environment needs to be changed or rearranged. Metalearners understand the impact of the environment on the learning process, and

takes responsibility to adapt and regulate it, by the use of different strategies.

The environmental determinants of metalearning refer to the interrelations between the learner and his/her environment, and highlights the importance of including the development of interpersonal relationships in the AD-model.

It follows logically from the definitions and descriptions of metalearning, that there are a few assumptions and determinants inherent in metalearning, worth knowing when facilitating the process.

Within the context of this study the description of metalearning will focus on its context as the competence that includes all the other proposed components of the AD-model in an integrated, holistic way. Metalearning could therefore best be defined in terms of the characteristics of a metalearner described by Slabbert (1998:142-143):

A metalearner is in complete control over his/her own learning and is able to regulate it to achieve the required outcomes in the most effective way. But through continuous reflection on the learning process the learner seeks the highest possible learning quality outcome. A metalearner is therefore able to plan, execute, monitor and assess his/her own learning in order to achieve the highest possible learning outcome. A metalearner is an active, effective, independent lifelong learner in the quest of maximising his/her potential. This is done through the metalearning strategies indicated by a question checklist a metalearner uses. This question list is adapted by Slabbert (1998:151-154) and depicted in table 4.2.

TABLE 4.2   The metalearning strategies and a corresponding question list

METALEARNING STRATEGIES (THEORETICAL BASIS)	QUESTION CHECKLIST (FOR LEARNERS)
A PLANNING In planning, the learning task factors (1) and the personal factors (2) of the learner play an important part. The learning task has to be analysed very thoroughly as a starting point and the learner has to make sure of his understanding (1a, b) of the learning task. Through this he/she will discover what is required (1c) and then represent (1d) this according to his/her perception. The key question under each heading is in bold.	**A PLANNING** **1. LEARNING TASK FACTORS** **a. Topic** * **What is this all about?** * What do I know about this? * What does this relate to? **b. Detail** * **Do I know enough about this?** * Have I read it carefully and fully? * What are the most important parts? * How do the parts relate to each other? * How does this relate to what I already know? * Does this make sense? * What will I have to find out for it to make sense? **c. Task** * **What am I required to do?** * What will I have to do in order to complete the task? **d. Representation** * **How do I see the task?**

TABLE 4.2 (CONTINUED)

METALEARNING STRATEGIES (THEORETICAL BASIS)	QUESTION CHECKLIST (FOR LEARNERS)
A PLANNING (continue) Then the learner's personal factors (2) namely the preferences (2a) the learner has for learning (learning style: alone or with others; with or without music; lying down or sitting at a table; early or late; etc.) and motives (2b) for learning (learning approach: surface - memorisation; deep - discover meaning; achieving - good marks) have to be taken into account to eventually design the most effective learning strategy (3) which is the outcome of planning. The key question under each heading is in bold.	**2. PERSONAL FACTORS** **a. Learning style** * **How do I prefer doing things?** * Is this new to me? * How do I feel about doing this? **b. Learning approach** * **What is my motive for doing this?** * What will I get from it? * How can I use the outcome? * What if I don't do it? * How important is this? * How do I need to change to do this most effectively? **3. LEARNING STRATEGY** * **How will I do it?** * How will I tackle this? * What are the steps that I will follow to complete it? * Is there no other way? * How difficult will this be? * How much time will it take? * What do I predict the outcome will be?

TABLE 4.2 (CONTINUED)

METALEARNING STRATEGIES (THEORETICAL BASIS)	QUESTION CHECKLIST (FOR LEARNERS)
B MONITOR During the execution of the planned metalearning strategy, monitoring has to be continuous throughout the process. New knowledge (1) has to be recognised, understanding (2) must be elaborated upon, progress (3) must be maintained and the successful completion (4) must be the outcome. The key questions under each heading is in bold.	**B MONITOR** **1. NEW KNOWLEDGE** * **How does this new knowledge compare to what I previously knew or predicted?** * Do I have to change my understanding of what I previously knew? **2. UNDERSTANDING** * **Do I understand what I am doing?** * What will happen if....? * How does this relate to....? * Why does this happen? * How could this be...? * When does this not apply? **3. PROGRESS** * **Is this the best way of doing it?** * How am I doing? * Does this seem correct? * What should I do next? * Am I checking all possibilities? * Where will this lead me? * How do I feel about this? **4. COMPLETION** * **Have I completed this fully and carefully?** * What else needs to be done?

TABLE 4.2 (CONTINUED)

METALEARNING STRATEGIES (THEORETICAL BASIS)	QUESTION CHECKLIST (FOR LEARNERS)
C EVALUATION The product or outcome has now got to be evaluated in terms of its quality (1) and the satisfaction gained from it as well as its value for future (2) use. The key questions under each heading is in bold.	**C EVALUATION** **1. QUALITY** * **How could I have done this even better?** * Do I fully understand this? * What do I have to do to fully understand? * Do I understand enough to justify stopping? * How does mine compare with others? * How do I feel about this? **2. FUTURE** * **How can I use this in future?** * What did I learn from this? * When will I need to do something similar? * How do I feel now?

When one reflects on the components identified to develop intrapersonal relationships, a remarkable phenomenon is revealed. Every single one of these competencies is incorporated in an integrative, holistic way in metalearning! This is extremely significant because metalearning is therefore the suprastructure to holistically incorporate maximising the intrapersonal relationship. Reflecting on the metalearner's question checklist and according to the description of metalearning by Slabbert (1998:143) the integration between the separate components of the proposed AD-model for the development of intrapersonal relationships in metalearning can be identified. This integration is represented in the following concept map depicting the essence of metalearning:

Figure 4.3   Metalearning

Metalearning

Planning, executing and assessing one's own learning in order to maximise one's human potential

Depends on

Control over consciousness

Consciously planning, executing, monitoring and assessing one's own learning

Explores

Multiple intelligence
(including emotional intelligence)

When the highest possible quality of learning is pursued

Which requires

Thinking (Higher order)

Creativity

(To solve an existing problem)

(To create a problem to solve–
improving the quality of life)

Using

Using

Modes of thinking

Creative problem solving

During

Planning

through   through

Design questions

Objective finding
Fact finding
Opportunity finding

During

Monitoring

through   through

Tools for thinking

Idea finding
Solution finding

During

Assessing

through   through

Novel assessment tools

Acceptance finding
Implementation

Resulting in

Intrapersonal life competencies
(one of which is intrinsic motivation)

ii)   Facilitating metalearning

The kind of learning that will maximise human potential requires "the construction of meaning by the learner him/herself, who is then able to use it to create something new" (Slabbert, ...). It is therefore only the learner that can do this. Only through experience and not through explanation of whatever kind can this learning take place. It has to be facilitated, however, by others to be most effective. The facilitation should be focussed on initiating and maintaining learning.

* Initiating learning

To initiate learning, a learning task has to be presented to the student. This requires creating a challenging, eliciting and evoking situation where the student's focus is attracted towards that situation and results in spontaneous involvement (Slabbert, 1998:98). The design and operationising of the learning task are of vital importance and they have to be evaluated against certain very demanding criteria to be effective in facilitating metalearning.

a) Learning task design

For the learning task design the criteria are the following (Slabbert, 1998: 112-116):
It has to

~   be a problem in life context: Learning tasks can and should play an important role in introducing learners to the real world of work and all its demands. Through role play and simulation learners can solve problems which occur in real life context.

~   remove the boundary between the educational institution and reality: Learners need to experience that there is no boundary between the tertiary institution where they are preparing themselves for the world of work and the real life with all its consequences. Learners need to realise that they are already co-creating their future, whilst preparing themselves for a career.

~   be new, original and creative in nature: It is only that which is different, new, creative and original which will revive the natural curiosity of the learner (Slabbert, 1998:112). The

learning task therefore needs to induce creativity in the learner, compelling him/her to think laterally.

~ be credible: The learning task must always be believable even if it is a fictional one. To be credible the context, roles and rules must be very clear to all learners. Learners will not engage themselves in learning tasks that has no real value or meaning and the spontaneous involvement will be lost.

~ be a problem for the learner: The problem must be experienced as the student's own problem in order for him/her to become totally involved in finding the solution. It should not be presented as a problem for someone else like the facilitator.

~ claim complete personal involvement of the learner: This indicates that the learning task should compel the student to become completely and totally involved in the learning task, using all his competencies in all the domains of human existence, namely cognitive, bodily-kinesthetic, emotional and spiritual.

~ challenge learners to stretch themselves beyond what they believe their capacity is: The challenge is therefore to deliberately set the learning task above the current capabilities of the student. It has to elicit great effort from the student in order to overcome the obstacle/challenge because only through this process will potential be maximised.

~ compel learners to learn spontaneously: The learning task must be so exciting that learners will spontaneously become totally preoccupied with it, making the facilitator redundant during this time.

~ launch learners into a peak experience of happiness and self-fulfilment: "Self-fulfilment or self-actualisation is achieved through creating a new order of consciousness" (Slabbert, 1998:116). This level of consciousness can only be reached through a peak experience. The essential elements which create this peak experience are described by Csikszentmihalyi (Slabbert, 1998:116).

It must be a challenging activity that has never been done before and of which the outcome is uncertain. It must require the learner to explore the innermost wisdom of the unconscious mind and implement all competencies to his/her disposal (cognitive, bodily-kinesthetic, emotional and spiritual). If all the combinations and integration of competencies are exhausted, the learner is compelled to acquire new competencies. When the learner employs all his/her relevant competencies to cope with the learning task, the

merging of action and awareness takes place. He/she becomes completely involved and absorbed in the task, the result being that there is no excess psychic energy left to be aware of anything else. The activity therefore absorbs the full concentration of the learner. Because the learner has clear, set goals of completing the learning task successfully, he/she can get completely absorbed by it. The focus is therefore on the process and the feedback provided by the execution of an activity, which will give the learner information on what to do next, keeping him/her absorbed in the activity in order to achieve the set goal. This process of setting goals and reacting on feedback places the learner in control over what is happening. This sense of exercising control in difficult situations is a key element in the peak experience of happiness. While the learner is so fully absorbed in the activity that no psychic energy is left to consider anything else, he/she stops thinking of the self and starts exploring the innermost wealth of the unconscious mind. "The loss of self-consciousness in this sense, creates self-transcendence and an experience that the self has been pushed forward to excel its boundaries into maximising potential" (Slabbert, 1998:118). In this peak experience of happiness, time becomes an unconscious entity and should be measured and dictated by the rhythms of the activity and not by external measurements. The examination of learners within time limits therefore becomes redundant in the new paradigm.

These criteria for learning task design (LTD) are of the utmost importance for facilitating metalearning and all effort should be concerted to adhere to them all when designing the learning task, because everything else is determined by the LTD.

b) Learning task operationising (LTO)

The learning task has no use unless it is put into operation. This is done through three distinctive processes namely the presentation, execution and consolidation of the learning task, which will briefly be described.

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The presentation of the learning task is of crucial importance for the success of the LTO. It requires professionalism and artistry in the form of unique creativity from the facilitator. It may be done in the form of presenting the learners with a problem to be solved or some activity where the learners must identify the problem themselves. The learning task presentation (LTP) also needs to meet very demanding criteria (Slabbert, 1998:123-126):

~ The physical environment should create an atmosphere perfectly conducive to learning: This means that physical aspects in the environment where learning must take place, must portray all the necessary features entailed in the learning task like props, apparatus, lighting, boundaries, materials, music. The scene must therefore be set to be as near to real life as possible: The boardroom where serious negotiations are taking place; the space ship where data has to be gathered and sent to Earth; the street corner where a Saturday street market is in full sway; etc. Throughout the LTO, this conducive climate needs to be managed by the facilitator who has to decide, carefully, when to withhold or provide accessories, information and support. This needs exceptional skill, planning and insight and should be supported by establishing different roles which learners need to play.

~ Establishing roles and functions of the participants: Within the "set stage" everyone needs to be given a role to play, including the facilitator. This will induce spontaneous involvement of all learners. It is sometimes not easy to create a physical environment which simulates reality completely and this is where establishing roles, identified with some tokens like costumes, hats, name tags can come in handy. When facilitating different ways of thinking, for instance, learners should wear different coloured hats (six thinking hats). Even when the roles of participants are clearly established, nothing will happen until the next requirement is met.

~ Presenting the problem: the problem formulated for the learning task must be convincing in its life context. Verbally it should be presented in terms of:

♦ **Clarity**: The problem to be solved has to be absolutely clear to the learners

- **Importance:** The learners need to know exactly why they, and no one else, need to solve the problem

- **Urgency:** The learners have to be convinced that they need to solve the problem right now and not any later

- **Action:** The end of the presentation has to call the learners straight into action

It is very important to note, that although learners receive and execute the learning tasks within their various fields of study, it should also become cross-curricular with other fields of study which are similar, in order to eliminate the boundaries between disciplines.

After LTP the learning task is therefore executed by the learners only. This is the purpose of facilitating metalearning, because now, the learners are on their own, negotiating with themselves, using their own resources (cognitive, bodily-kinesthetic, emotional and spiritual) which manifests a continuous outcomes based assessment of their own learning, by themselves

Learners are, therefore, confronted with a challenging problem that will demand the employment of something the learner has not done before, which constitutes activities of maximising potential. Because of the challenge learners may, at any stage during the execution of the learning task, disengage from their activities. This will require an immediate intervention from the facilitator of learning to compel the learners to re-engage with the execution of the learning task which is manifested in maintaining learning.

* Maintaining learning

Metalearning is maintained or restored through learning task feedback or sharing meaning with the facilitator (Slabbert, 1998:225).

a) Learning task feedback

The purpose of feedback when facilitating metalearning is to make and keep the learner independent. The facilitator of learning, therefore, should not become a source of information,

answering learners' questions. Facilitating feedback places very high demands on the facilitator, who has to function on the highest peak of alertness in order to provide the most appropriate and creative feedback to compel the student to re-engage the learning task and keep on re-engaging in order to excel and maximise his/her potential. Feedback in itself consists of a number of actions which will be discussed:

~**Emotional encouragement and support:** If learners are learning well and the quality of their learning is sufficient, the facilitator of learning gives emotional support and encouragement, by saying things like: "I know you can do it" (support), or "You are really doing well" (encouragement).

~ **Asking clarification:** By closely observing the learners, the facilitator will be able to detect when the learners are getting off track or that the quality of their learning is not adequate. When he/she suspects that this is the case, he/she has to determine exactly where the learners are, by asking clarifying questions like: "What are you doing?", "Why are you doing this?", or "What do you want to do next?" This is the only instance where the facilitator wants an answer from learners and it has to be followed by a challenge for learners to metalearn.

~**Challenging learners to metalearn:** This can be achieved by engaging in a few actions, such as:

- Reverting learners' questions back to learners: When learners request assistance of any kind from the facilitator, he/she has to revert the question back to the learners by asking questions like: "What do you think?", or "What would you do?".

- Requesting reflection from learners for increased quality of learning: The purpose of the facilitator of learning is to have learners reflect on what they did, assess it and improve on it. Whenever the facilitator suspects that insufficient quality of learning is taking place, either through observation, or direct feedback from the learners, he/she will ask questions which will compel learners to re-engage with the learning task. These questions can be the following (Slabbert, 1998:259):

- ♦ Have you thought of everything?

- ♦ Have you considered all possibilities?

- ♦ Is this the best way of doing it?

- ♦ How many more can you find?

- ♦ Do you understand what you are doing?

- ♦ Do you understand why you are doing it?

- ♦ Is this enough?

- ♦ How will you improve this?

- ♦ How sure are you?

- ♦ How will you make sure?

- ♦ How well do you think you did?

- ♦ What is the meaning of this for your future?

Unlike the previous questions to clarify, the facilitator does not want any answers and might even leave in order for learners to re-engage on their own.

~**Reference to resources:** If learners cannot solve the problem despite the previous actions from the facilitator, then they should be referred to resources where they might find the information they need. Questions such as: "What do you need?" and "Where will you find it?" are appropriate because at no instance must the facilitator become the source of information! Metalearning is about taking control of your own learning. Obviously the facilitator will have made provision for such a possibility and would have made sure that the resources are accessible in the most realistic and appropriate way.

~**Auto-education:** If, at this point, learners are still seriously lacking in knowledge or skills to enable them to solve the problem, the facilitator will have made provision for learners to access a whole range of educational tools, methods, materials and resources on their own, in order to acquire the necessary knowledge and/or skills through auto-education. Note, that this will only come into play when the biggest resource available, namely the student himself, has been fully exploited (Slabbert, 1998:259). This stage is meaningful because learners have realised that they are lacking certain skills and/or

knowledge to solve the problem at hand and that they need to find it. They also learn to access and evaluate information for appropriateness, and become more independent.

Feedback, therefore, is crucial in maintaining learning because it is a deliberate action of the facilitator to negotiate the learner back to establishing a relationship with what is to be learned. This is a determining factor for potential to be maximised (Slabbert, 1998:256).

At the end of the learning period learners have to be asked to consolidate what they have learned.

b) Learning task consolidation (LTC)

Learning is maintained through LTC at the end of the learning period, when learners are requested to present what they have learned to the entire group of learners. During this phase it is very important for learners to (Slabbert, 1998:262):

~ Share what they have learned.

~ Learn from others.

~ Assess the rate of their progress.

~ Assess the quality of their learning.

~ Determine an appropriate point of departure and strategy for the following learning period.

It is equally important for the facilitator to (Slabbert, 1998:262):

~ Assess the rate of learners' progress.

~ Assess the quality of their learning.

~ Determine the nature of negotiation needed for the following learning period.

* The outcome of the learning task

The outcome of facilitating metalearning through the LTO is that learners need to provide one of three end product outcomes, or even all three, namely:

a) a product;

b) a decision; or

c) a service.

This should be presented in the most appropriate tangible form and should contain:

~The end product (product, decision, service) or the solved problem.

~ A clear description of how the problem was solved or the new, creative improvement was made.

~ A complete representation of the underpinning knowledge (knowledge acquired) in the form of a concept map. In so doing, learners check their understanding, they explain and share their construction of meaning, and in fact, can write their own textbooks! This creates feelings of pride and fulfilment and happiness, the result of maximising human potential.

iii)   Meeting the criteria

The metalearner can thus be described as being actively involved in his/her own learning, taking responsibility for the active construction of knowledge, cumulatively acquiring knowledge, competencies and skills; he/she is goal-oriented and sets realistic, attainable, yet challenging goals, based on his/her self-efficacy perceptions. The metalearner is metacognitively active in planning, monitoring and evaluating the learning process, by regulating the self, learning behaviour and the learning environment through the effective use of learning strategies. The metalearner is intrinsically motivated and has the will to persevere and increase effort. In so doing, he/she becomes an autonomous learner, an optimal learner, always endeavouring to stretch his/her abilities further, therefore maximising his/her potential. This becomes a lifelong endeavour, because the metalearner internalises these processes, making them part of his/her make-up. These competencies constitute a total paradigm shift when compared to the dependent, reactive, spoon-fed learner. It also constitutes the character of the individual learner being developed from within, through own effort and will. The outside-in quick fix approach is therefore not at work here, but the fundamental, inside-out character ethic as described by Covey (1992:5-10) and which is demanded from man for the future. The description of a metalearner therefore includes all competencies with which the employer in the new world of work is challenged universally, and

without which he/she will not survive! Facilitating this attitude and behaviour will therefore result in workers having the correct maps, competencies and attitudes which are demanded from the new world of work.

Most important of all is the fact that all the demands of the future and consequently all the components that need to be included in an AD-model in order for it to adhere to/comply with the demands of the future, are already meaningfully, effectively, functionally and holistically incorporated in metalearning. Metalearning therefore represents the holistic, integrated, applied competence to maximise intrapersonal relationships.

The inevitable consequence of metalearning which is the culmination of all the components of the model, is acquiring intrapersonal life competencies (life skills) with which the individual steers and lives his/her life.

iv) The consequence: Intrapersonal life competencies

As has been indicated in the concept map figure 4.3, metalearning has as inevitable consequence the acquiring of intrapersonal life competencies. Intrapersonal life competencies culminate from mastering the demands which have up to now been described as being vital for learners to prepare themselves for the future world of work. These competencies are described by Slabbert (1998:225-227), and they can be facilitated as described above.

* Self-confidence

Confidence means having faith in one's own abilities. This is developed and strengthened through metalearning, where the student has control over his/her actions and sets his/her own goals, based on self-efficacy perceptions. The positive feedback which the student receives by his/her own efforts, builds self-confidence when the student realises that he/she can do, and has done it all by him/herself. Confidence is manifested in being decisive, fearless, courageous and willing to take risks. (Profile of the creative person.)

* **Common sense**

Making good judgements, based on having as much information as possible, and being able to verify and view a situation from more than one angle, can be seen as having common sense. Using one's past experience to assess a situation and passing judgement, is a competency which has been developed by the AD-model, specifically through thinking and problem-solving.

* **Responsibility**

The AD-model's aim is to develop independence, of which responsibility is a precondition. Taking control over one's actions, setting goals, planning and deciding for oneself, means that one has taken responsibility for one's own life. The intrinsically motivated student does not need external control, rewards or demands. He/she is self-disciplined, uses initiative and persevere, because he/she knows, that nobody or nothing external can be accountable for his/her actions, but him/herself.

* **Independence**

When taking responsibility for one's own life, one truly becomes independent. It is then that the student realises that no one else but he himself can do the things that need to be done. No one can learn on his/her behalf, or exert effort, or be motivated on his/her behalf. It has to be done independently, and these actions facilitate the maximising of his/her own potential.

* **Peacefulness**

To be content means that one is at peace with oneself, having reached what one intended with one's life. The independent metalearner, who controls his/her learning, also controls his/her destiny, which brings him/her in touch with his/her inner self (potential). Being in touch with the inner self, leaves one with the realisation of the vast untapped potential still remaining. The learner acknowledges that the journey of maximising potential has just begun, but is content and at peace in the knowledge that he/she is in control of the process.

*   Motivation

Through metacognitive actions of planning, monitoring and evaluation, the student develops perceptions of self-efficacy, based on successes or failures. The perceptions of self-efficacy determines which goals he/she will pursue, and when he/she achieves these usually challenging, yet realistic goals, it brings a feeling of exuberance, because he/she has control over the learning process, which enhances motivation, the "wanting to do it", goal directedness, and the enjoyment that goes with the task. (The profile of the internally motivated person.)

*   Initiative

The student who has developed all the competencies included in the AD-model, will also have developed initiative, to take control of his/her actions, because the necessary self-knowledge has been acquired to believe in own strength and capabilities. This student does not need to be prompted into action, he/she becomes self-activated, based on intrinsic motivation and interest in what he/she is doing.

*   Effort

The motivated metalearner understands that effort brings the rewards he/she is looking for. The student who wants to maximise his/her potential, continually adjusts, corrects and modifies the input, exerting effort for rewarding outcomes. This is also true of the creative process where the individual has to engage in conscious effort in order to produce novel ideas and solutions (the preparation stage, C).

*   Perseverance

Perseverance is manifested in not being distracted from what one is doing and not to give in to temptations. It is also manifested in the control and responsibility which the student personally takes for completing the learning task. Completing the task is, in any case, the reward for the intrinsically motivated metalearner. Perseverance is also the essence of being a lifelong learner.

*   Joy

Conquering obstacles like the successful completion of a challenging learning task, brings happiness and joy. The more so, when the student realises that he/she did it through own effort, will, perseverance and control. This experience builds self-esteem and leads to the individual becoming a positive, joyful person, who sees his/her life as an adventure, full of challenges and victories.

*   Love

When the student, who has developed the competencies described in the AD-model realises the depth and power of these competencies, he/she becomes aware of the greatness of the gift bestowed upon him/her, and realises that it can only be a gift from God. Through this realisation the student is committed to lifelong maximising of his/her potential, as he/she needs to take care of this gift and has the responsibility not to neglect it. This realisation also results in appreciation of all creation, and ultimately leads to caring for not only the self, but also for everybody and everything around, resulting in deep love.

These intrapersonal life competencies are the inevitable consequence of the aim of the AD-model, namely to develop independent, self-fulfilled, metalearners who will meet the challenges of the future with joy and self- confidence. The list of mega life skills (intrapersonal life competencies) constitutes a supra structure within which all the latest generic competencies as described by Burroughs (Slabbert, 1998:227) fit as composites.

4.3.4.3   Developing interpersonal relationships

Interdependence is the highest of human values according to Covey (1992). Not only is interdependence or interrelatedness something that learners need to pursue because of its value, it is also a necessity in life because we are, as humans, interdependent. We therefore have no choice as to develop sound and productive interpersonal relationships.

It is very important to make this statement, namely that the aim of the AD-model is not to fragment the development of intrapersonal, interpersonal and suprapersonal relationships (which will be discussed later), but to see it as developmental stages, interrelated, and building upon each other. All these aspects should be represented in the same phase of development (for instance during the first year), only increasing in quality with the following phases. Interrelatedness should pose very strongly. The perceptions of self-efficacy, for instance, are established not only through self-evaluation, but also through environmental factors like comparing oneself with peers or role models. Learners are mostly in class situations and need to work with others, although they also need to know themselves first, in order to relate better to others. Similarly, employees do not work on their own. The demands of the future, as discussed in chapter three, implicate emphatically that employees should become effective teams workers, learning to cooperate and plan together, to deal effectively with interpersonal relationships and to take part in decision-making processes on all levels in the corporate world. This implicates, that employees need to develop interdependent competencies, and need to understand the importance of holism, as against fragmentism, which was the prevailing view of the old paradigm.

From chapter three the following components became evident for inclusion in the AD-model. The development of emotional intelligence on another level, namely to handle relationships and work with others (Goleman, 1996:36); interpersonal communication; interpersonal intelligence; team work; and cooperative life competencies, are all the result of developing an interdependent attitude.

In the subsequent discussion of each component for developing interpersonal relationships, the component as it relates to the proposed model will be described, then the implications for facilitating it will be indicated, and lastly a reflection will reveal whether the particular component will comply with meeting the criteria for the proposed AD-model.

A   Emotional intelligence

Building on the development areas for intrapersonal relationships, the model should elaborate on emotional intelligence, because although emotional intelligence refers to intrapersonal abilities,

it also refers to interpersonal skills like handling relationships, being flexible and working with others (Goleman 1996:36; Ryback, 1998:2).

i)   Emotional intelligence, as component of the model, described with reference to interpersonal relationships

Emotional intelligence and interpersonal intelligence go hand in hand, as they are important competencies for building team spirit, for positive cooperation, being flexible, and having excellent communication skills to deal with inter personal relationships. These are all aspects which were highlighted in chapter three as being vital for the new world of work (Harvey et al. 1997:288-291).

Two domains of emotional intelligence which needs to be described now, (the other three were dealt with under intrapersonal development), when developing interpersonal relationships, are empathy and handling relationships (Goleman, 1996:43).

*   **Empathy** refers to being sensitive to other's feelings and concerns. It means to be able to stand in someone else's shoes, seeing things from their perspective and appreciating different views. Learners who are secure in themselves, who know who they are and what they want, should be able to develop a social consciousness, to be able to accept other's views and to have empathy towards other's feelings and concerns.

*   **Handling relationships** successfully, means to be able to deal with and show understanding for the emotions of others. Learners should therefor develop social competencies and social skills alongside self-development.

Emotional intelligence provides flexibility, for the individual is "listening to", regulating and adapting to his/her own as well as other's emotions. Developing this competency is especially important in the complex work- place of the twenty first century. To explain this statement, Ryback (1998:52) says:

Our prehistoric ancestors used their emotions: They used fear to survive, joy to bond with one another, anger to help defend their territories (physical and psychological), love to procreate.

In the twenty first century workplace, emotions can be used in a different way - to clarify intent, to consolidate bonds of supportive teamwork, to motivate, and, not least, to bring personal meaning into the hours spent in our working day.

The autocratic captains of industry of yesteryear are "dinosaurs" in the current business environment. In today's business world, there is so much dependence on the knowledge factor, on communication skills, and on team effort, that it is difficult if not impossible for a single individual to carry the crux of responsibility without support from others What is needed today is emotional intelligence.

ii)   Implications for facilitating emotional intelligence for interpersonal relationships

Learners can develop emotional intelligence through various practices, involving group work. The researcher facilitates a model whereby learners develop counselling competencies, mainly by focussing on communication skills which involves being sensitive to other people's needs and feelings, and to express their own fears, concerns, feelings and emotions in a trusting environment. When learners learn to express their feelings and respect other people's feelings, they become emotionally intelligent. To feel respected, appreciated and supported in the working environment, should be the aim of organisations which want to raise the EQ (emotional quotient) of their employees (Hein, 1999:1), therefore learners should already develop these relationships and competencies in class situations.

*   Developing emotional intelligence through communication skills

By sensitising learners with regard to various aspects of a person's communication, like his/her body language, the use of specific words, i.e. negative or positive words, feelings underlying conversation, cultural aspects, and values directing a person's behaviour, they become emotionally intelligent. The model which the researcher uses towards this goal, (De Jager, 1996) is discussed under the following headings.

~ **Awareness of others**

Learners are being sensitised towards the emotions and attitudes of others, by making them aware of other people's attending behaviour. This includes mostly non-verbal behaviour, like distancing yourself from another person, not having eye-contact, showing lack of interest, fiddling around during a conversation, or being extremely rigid. These behaviours are not conducive to effective communication, and should be avoided. Learners learn to be attentive, open, relaxed, encouraging and to make eye contact when addressing others, or being addressed by others. In this way, open, clear communication is facilitated and people feel encouraged to talk because of the interest shown in what he/she has to say.

~ **Roadblocks to effective communication**

Different ineffective communication styles, which can become roadblocks to effective communication are being demonstrated in class Some of these are: ordering or commanding; threatening; preaching or moralising; advising; arguing; judging or criticising; extensive praising; ridiculing; analysing or diagnosing; sarcasm or withdrawal. Examples of scenarios where these communication styles are used, and where learners have to identify their feelings when being talked to in that fashion, sensitise them towards the use of more positive, encouraging styles of communication. Learners are sensitised towards the impact which words have on feelings. They learn to choose their words carefully, avoiding these roadblocks.

~ **Emphatic listening**

To be able to listen to, not only the content of what a person is saying, but also to the feelings behind the words, is the crux of emphatic listening. It is gaining an understanding (through listening) and demonstrating that understanding (by responding). Learners should work in groups of two, one listening, and one talking about something which bothers him/her. Afterwards, the listener should paraphrase, what he/she understood, thereby responding. The response should be on the content of what was said, but also on the feelings behind the content. For instance if the communicator said that he/she wants to quit his/her studies because he/she doesn't like it any

more, the respondent should paraphrase: "You say that you want to quit. Is it because you are unhappy with your course?" In this way finding out what the cause of the underlying problem really is, showing real interest and compassion, developing a sensitivity towards other people's concerns, fears and feelings.

~ **Questioning techniques**

Questioning people can sometimes be experienced as threatening or abusive. An example of this is the "why" questions: "Why are you so stubborn"; "Why didn't you tell me?"; "Why are you always late?" Learners are sensitised to how other people experience questioning, and learn how to master the competency of asking questions in such a way, that it is not experienced as mere sensation seeking or prying into private lives of others. The importance of body language that conveys genuine interest, as well as the way in which questions are posed, is highlighted. Open questions are far more effective than closed questions, as they encourage a person to explore his/her thoughts and feelings, by leaving him/her free to answer in many ways. Examples of closed and open questions are: "Don't you care what your father will say?" (closed); "Tell me about your feelings towards your father"(open). This use of communication develops openness, which lies the foundation for a caring and nurturing environment, which is one of the important factors, raised by various authors, needed in the new work environment (Rudnitski, 1996:83; Herbst, 1996:34; Hunt, 1992).

~ **"You" and "I" messages**

The detrimental effect of sending "you" messages are pointed out to learners during role play and case studies. Instead of attacking somebody with a "you" message like "you are always late", learners learn to construct an "I" message for situations where another person's behaviour affects them. They have to disclose how they feel about the other person's behaviour, in saying for instance: "When you arrive late, I feel annoyed, because then we cannot secure good seats for the match." In this way, conflict is minimised and people have the chance to explain their feelings and behaviour, without attacking one another personally. Understanding how your behaviour

influences other people is important in the world of work, where people of different cultures and demographic attributes are thrown together in teams. By sending messages of disclosing your feelings, better relationships can be built, based on mutual respect and understanding.

~ **Decision-making process**

Learners learn to make responsible decisions (or solve problems), based on their values. Problem scenarios are sketched where moral issues are raised, and learners have to work through a five step decision-making process, keeping their values in mind:

a) Identify the central issue or problem, by discussing it.

b) Explore the issue or problem. Here, the learners should look at alternative solutions, and the consequences of various solutions.

c) Choose the most effective solution.

d) Act upon your choice.

e) Evaluate the results. Start over from step b), if the solution decided upon, failed.

Through this exercise, learners are sensitised towards other people's values, which determine the way they make decisions. In this way, they learn to understand and be tolerant towards other's views and beliefs, an important aspect when working in teams.

A specific communication competency that is of paramount important when working in teams, is conflict resolution. This competency needs specific attention when developing learners to be effective team members in a future working environment.

* **Conflict resolution**

Nearly all conflict involves underlying emotional issues, and the stronger the feelings, the more difficult the solutions. Hein (1999:1), suggests a conflict resolution model based on emotional intelligence, and which has its roots in the proverb: First seek to understand, then to be understood.

The development of conflict resolution should ideally follow on the general development of communication competencies as discussed under A) above. When learners have mastered these competencies, conflict resolution becomes a relatively easy competency to master. Learners can be grouped in two's, each group given a case study in which the object is to solve conflicting views. When student A is actively listening to student B's views, feelings and concerns, having empathy, seeking to understand the cause of the feelings, confirming accurate understanding by paraphrasing and identifying underlying emotional needs, he/she is seeking to understand. The parties should always agree on honest and open communication about both thoughts and feelings, in a trusting and respectful atmosphere, where no one is the "superior" (Hein, 1999:1). In seeking to be understood, student A should also share his/her feelings, needs and concerns, and make sure that student B confirms accurate understanding. The goal is ultimately a win-win situation, where both parties feel that an acceptable solution is found. This can be accomplished by brainstorming, (important aspect is to withhold judgement and criticism), thereafter discussing each other's feelings about the alternatives, and then making a selection of alternatives which maximises positive feelings and minimises negative feelings. This exercise can be repeated in bigger groups, when a class atmosphere of mutual trust and respect has been established. A meeting can for instance be held, where learners have to decide whether men should be allowed in women's hostels or not.

Self-awareness is the keystone of emotional intelligence (Ryback, 1998:37), and by recognising negativity as stress or anxiety, (often caused by conflict) the student can counter these feelings by deliberately doing physical exercises or relaxation techniques, which are included in the AD-model (4.4.1), and facilitated by the AD-practitioner.

Character building through sound principles is specifically addressed through development of emotional intelligence. Finally, Hein (19991) says:

> *It is our belief that educators offer the best potential to make a significant difference in raising the general level of Emotional Intelligence.*

iii)   Meeting the criteria

Emotions have the potential to unite and connect us (Hein, 19993). Being connected with people around us, with nature and the universe, is amongst the demands cited in chapter three as being vital for survival in the new world order (Land and Jarman, 1992; Bateson, 1979, Schwan and Spady, 1998). It also constitutes a paradigm shift when compared to the fragmented view of the prevailing paradigm (scientific revolution). According to the predictions of Maynard (199927), the personal orientation of people will develop from separateness from others, to interrelatedness and cooperation, to eventual unity. To create trusting relationships and serve each other will be the challenges. Mgibi (199751) supports this idea when he advocates a new spirit in the workplace, of mutual trust, respect and unconditional acceptance amongst employees. So, increasingly, the universal demand is for people to become emotionally deft, to rely on intuition, to act through wisdom from within, realising their potential through, amongst others, actively developing emotional intelligence.

B   Interpersonal intelligence

Interpersonal intelligence is synonymous to emotional intelligence, in that it builds on the core capacity to notice other people's emotions and underlying feelings, motives and intentions, without their revealing it openly (Gardner, 199323). It is therefore a meta competency, requiring advanced and highly sophisticated forms of interpersonal knowledge and communication, mostly found in therapists, spiritual leaders and successful politicians. Interpersonal intelligence is therefore realised in interpersonal relationships. The same facilitation procedure for developing emotional intelligence can be employed to develop interpersonal intelligence. By continuously confronting learners with group assignments and group discussions, we are sensitising them to the differences in human beings and the importance of being able to work together towards accomplishing important goals.

C   Team work

The societal shift described in chapter three from being dependent (communal system), to becoming independent (trend of the twentieth century), to ultimately recognising our

interdependence (Covey, 1992, Bateson, 1979, Senge et al. 1994, and Land and Jarman, 1995), has influenced the world of work in that collaborative team working is becoming very important and even crucial for decision making and planning throughout companies. Democratising of the workplace is taking place and therefore at all levels, and across functions, teams are working together, addressing the pressing issues of running a competitive company in a democratic, inclusive fashion. Learners, therefore, need to master these skills for future employability.

i)   Team work, as component of the model, described

Team work refers to small groups of people working together towards a common goal (Cooper, Robinson and McKinney, 1994:74).

Senge et. al (1994:90) says that for the new interrelated, cooperative, shared, interconnected views of the new millennium, systems thinking is regarded as essential. Whereas systems thinking refers to holistic thinking, it needs team work to get all the perspectives: to look from all angles at the whole picture; to get all role-players, involving culture, gender, experience; to see things as processes and not structures. Individual needs are being replaced by group needs and individual purpose by institutional purpose. Team work is responding to the urgent need to counter fragmentation, to become connected and have an interdependent orientation whereby better solutions and more effective work processes can be gained. Employees are urged to take part in all decision-making, planning, and problem-solving exercises. They therefore need to develop the ability to work effectively in teams (Senge, 1994; Verville, 1995; and Somerville and Mrotz 1997).

ii)   Implications for facilitating team work

Team working skills such as: good communication skills; social deftness including the building of relationships, trust, being approachable, showing empathy and consideration; and multi-cultural awareness are all important aspects in developing the social nature of man (Herbst, 1998), and can be facilitated through team work.

There are, inevitably, ethics underlying team work, the do's and don't's, which is important when dealing with teams and team behaviour. It will be valuable to incorporate these when facilitating team work.

*   **Developing team ethics**

Ryback (1998:62), refers to a new team ethic for the twenty first century. This means getting in tune with your co-workers, by knowing what goes on in their minds as well as their hearts. The focus shifts from the individual decision maker to the self-managed group, resulting in less conflict, more cooperation, mutual support and enhanced communication skills (Ryback, 1998:63). The five principles of the new team ethic, according to Ryback (1998:64) is:

~ **Building trusting relationships and effective communication through openness, listening carefully, respecting others' viewpoints, and valuing consensus decision making.**

Learners can develop these competencies through various cooperative activities. One of these activities, structured controversy, was developed by Johnson and Johnson (1988:58-64), and has been used and adapted by the researcher to good effect. An example is having a class debate with a controversial topic such as abortion as theme. One half of the class needs to defend the legalisation of abortion, while the other half opposes it. The rules are: (a) that each student should have the opportunity to state his/her argument, free from interruptions, therefore enhancing active listening by the others; that learners should openly state what their feelings are with regard to abortion, without fearing ridicule from the others; that the arguments should be logical and reasonable. When half of the time allocated for this activity has passed, the facilitator instructs the two groups to change sides. The group defending the legalisation of abortion now rejects it and vice versa! This allows for the development of empathy. The groups must now feel what the other group was feeling, believe what the other group believes, respect the other group's views and convince themselves as well as the others that their views have changed. This exercise allows for openness, flexibility, understanding and acceptance. It will enhance consensus decision making, because both sides of a very difficult, emotional problem have been thought through by everybody.

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~ **Creative innovation through group discussions that foster openness and playful opposition.**

By utilising any of the thinking methods, like CAF, which was described under E, higher order thinking, and by deliberately focussing on the playfulness and innovation of the activity, explaining that the group discussion is not about competing but rather about getting new ideas, this principle of the new team ethic is being realised.

~ **Fostering a sense of self-appreciation and team-pride through group discussion which focusses on patterns of successful decision making and appropriate action, based on emotional insights.**

To enhance this principle, the six thinking hats can be utilised most successfully. It is individual as well as team-effort, and successful decision making can be enhanced, by not only focussing on the unemotional, logic patterns of thinking. The red hat thinking (emotional), green hat (new, innovative ideas) and the yellow hat (positive thinking) should specifically be enhanced. The blue and black hat, responsible for monitoring the thinking and judging the ideas for effectiveness, leads to effective decision making, although does not play an overpowering role.

~ **Learning to distinguish between decisions based on fact and those based on emotion, as well as finding the most effective balance between the two for each individual.**

Learners should realise that it is not necessarily the logical solution that is the most effective. Through creative problem-solving activities, more often than not, emotional insights produces the A-HA experience for the novel solution. In group activities, the AD-practitioner should encourage all kinds of thinking, critical, emotional, and creative. In this way, wholeness is also enhanced. Hein (1999:1) makes a very valid statement, which could become a slogan for learners to use whenever they are dealing with problems: You can't solve an emotional problem, or heal an emotional wound, with logic alone. It happens very often, that a person's solution for a problem

are being invalidated by others, by saying: "You are not being rational. Let's look at facts". This can cause conflict, it can also result in the person's withdrawal from the group, resulting in unbalanced decision making.

iii)   Meeting the criteria

Working in teams is a new concept to employees, who have been used to work alone and independent from other's ideas and insights. This new challenge is essentially part of the new paradigm where connectedness and interrelatedness is of utmost importance. It is demanded from future places of work and is seen as vital for keeping the cutting edge in international, global competition. Working in teams develops multiple intelligences, it develops interdependence, holistic connections, meta competencies and, therefore, potential. Teams include anybody and everybody, thereby heightening their effectiveness.

When reflecting on all the components included in the development of interpersonal relationships, a very interesting and important connection between these components and cooperative learning is revealed. To understand the significance of this connection, it is important to investigate it a little more substantially.

4.3.4.4   Cooperative learning as integrated, applied competence for developing interpersonal relationships

For team work to be realised as one of the major needs in organisations of the future, learners should learn in cooperative groups. It was also clearly indicated in chapter three that everything in the universe is interdependent and connected. No survival is possible without realising this fundamental fact. Land and Jarman (1992:167) emphasise the importance of interdependence when they say:

> *Growth, change, and ultimately evolution occur as individuals, organisations and society increase the depth of their relationships by continually broadening and strengthening their interdependent connections.*

Traditionally learners learnt individually, and in competition with each other. Studies indicate (Parker, 1985:48) that learning in cooperative groups, however, enhances the learning process, the acquiring of social skills, a positive attitude towards learning tasks, problem solving skills, and enables the learner to become actively involved in the learning process; constructing meaning together with others.

Slabbert, (1998:231) refers to research done by Wielemans during 1993 which has led to a new paradigm of man in which man is being described as a nodal point of relationships. In this regard, Slabbert (1998:232) says:

> *To educate for maximising man's relatedness in terms of interdependence is, therefore, an imperative. Education should therefore aim at facilitating learning experiences where the learner discovers himself or herself as a nodal point of relationships in its diversity and versatility. Our educational aim should therefore be the optimisation of the learner as a nodal point of relationships, by the learner being involved in active learning, developing competencies to cooperate in constructing and sharing meaning and, in so-doing, take co-responsibility for participating in directing the universe to its ultimate goal.*

One therefore has to pay close attention to cooperative learning as learning experience for maximising human potential.

i)   Cooperative learning, as applied, integrated component of the model, described

This is a concept, referring to small group activities, where learners apply team effort in order to accomplish a common goal (Artz and Newman, 1990: 448). In cooperative learning, learners share their constructed meanings with one another. Slabbert (1998:233) says in this regard:

> *It must be emphasised that the prerequisite for cooperative learning is that the learner must have constructed meaning available - which might have been constructed through metalearning - to share, if cooperative learning is to have any effect.*

Slabbert (1998:233 defines cooperative learning as follows:

Cooperative learning manifests when learners in small groups cooperate to learn with a deliberate attempt to maximise their human potential.

Within the context of an AD-model, cooperative learning can best be defined in terms of the requirements for cooperative learning to take place: Cooperative learning must take place in very specifically composed, small groups of learners; who are positively interdependent; individually accountable; have face to face interaction; and develop cooperative life skills as outcome. Frequent and regular evaluation of how well the group cooperates is crucial for assessment of the progress of maximising interpersonal relationships and eventually human potential.

A cooperative learning group should be established heterogeneously, i.e. gender, ability, culture, and should be relatively small (4-6) to be beneficial.

Within these groups, learners can verbalize their understanding of the learning task, differ with each other and reach consensus - in so doing they develop important communication and interpersonal skills (Parker, 1985:50). According to Artz and Newman (1990:148), group cohesion is established when learners constantly learn in groups, they develop feelings of "safety" where group members feel free to air their views, become motivated and develop self-esteem as they become accepted within the group and share responsibilities. Positive interdependence is, therefore, a prerequisite for effective cooperative learning.

Individual accountability is a vital requirement for cooperative learning. Group members want to feel that everyone is contributing to the activities and not only the "leader" or "bright" person. The value of cooperative learning lies in the fact that everyone should contribute, learn and develop.

Interaction between learners is direct and therefore deliberate and with the purpose to learn from each other. In this way learning is maximised, the individual develops and grows to eventually maximise interdependence (Slabbert, 1998:238). Evaluation of groups should be done at least

once a week when learners as well as the facilitator raise their expectations. A set of ground rules are then drawn up against which the groups can be assessed. The progress in developing cooperative life skills should continuously be noted.

There are many roles and skills pertaining to the learning tasks, which learners can take up in order to develop cooperative skills. Some of these are listed by Slabbert (1998:236) and adapted from Johnson & Johnson (1990:103-104,117) and Kagan (1992:6-8,14). It is depicted in table 4.3.

Again, a very interesting phenomenon is taking place. When one reflects on the components which were identified to develop interpersonal relationships, it is revealed that all these components are integrative to cooperative learning! (A similar situation occurred with the development of intrapersonal relationships, where the components culminate in metalearning.) This is of extreme significance because cooperative learning is therefore the suprastructure for holistically incorporating maximising interpersonal relationships.

Reflecting on the cooperative learning skills and the description of cooperative learning, the integration of the separate components of the proposed AD-model for developing interpersonal relationships in cooperative learning can be identified. This integration is represented in the following concept map depicting the essence of cooperative learning; figure 4.4.

Table 4.3   Roles and corresponding functions in Cooperative Learning

	ROLES	FUNCTION
Learning **Task** **Skills**	Problem restater	Analyses the learning task (problem) and represents it to the group
	Relater/evaluator	Relates problem to something familiar
	Strategy suggester	Seeks and suggests alternative strategies to solve the problem
	Approximator	Determines the range, scope and quality of the answer expected
	Reviewer/mistake manager	Manages strategy execution and mistakes being made to determine what can be learned from them
	Evaluator	Evaluates the solution to the problem and determines how it can be improved
Cooperative **Learning** **Skills**	Encourager	Encourages all members
	Praiser	Praises others for their efforts
	Celebrator	Celebrates accomplishments
	Gatekeeper	Equalises participation
	Helper	Helps others
	Help seeker	Asking for help
	Checker	Checking for understanding
	Taskmaster	Checking for staying on task
	Recorder	Records ideas
	Reflector	Reflecting on group progress
	Silencer	Prevents disturbing others
	Materials monitor	Effectively distributing and collecting materials
	Mediator	Mediating conflicts

Figure 4.4   Cooperative Learning

Cooperative Learning

Small, heterogeneously formed group of learners, sharing their constructed
meanings with one another in a deliberate attempt to maximise human potential

requires

| Specifically formed small groups of learners | Positive interpendence | Individual accountability | Face-to-face promotive interaction | Cooperative life-skills | Formative evaluation |

depends on

Emotional Intelligence

Consciously being sensitive towards others' ideas and feelings, developing skills
to handle relationships
AND

explores

Interpersonal Intelligence

When the highest possible quality of social interacting with others is pursued

manifested in

Team work

Realised in relationships
of this nature

| Emotional | Social | Cognitive |

Resulting in
Maximising interpersonal relationships
and human potential

ii)   Facilitating cooperative learning

The researcher has facilitated many such group activities, of which there are numerous models, to enhance cooperative interdependence. There is, however, a definite relationship between metalearning and cooperative learning.

Slabbert (1998:251) describes the relationship between metalearning and cooperative learning, when cooperative learning is the point of departure, as follows:

> *Cooperative learning provides the means through which the learner realises the necessity for reflection during metalearning when the learner has to share his/her constructed meaning with him/herself to maximise his/her potential.... Cooperative learning supplies the instrument through which reflection on one's own learning is obtained but the individual still has to internalise this to become an effective, independent, autonomous, lifelong learner. It is the requirement of **individual accountability** that serves as a bridge between interdependence in cooperative learning and independence in metalearning.*

On the other hand, when metalearning is the point of departure for cooperative learning, it will be the requirement of positive interdependence which will serve as the bridge between independence in metalearning and interdependence in cooperative learning, where the learner needs others to obtain a goal (Slabbert, 1998:252).

It is very important, therefore, to realise that the individual must first and foremost construct his/her own meaning and share it with him/herself (reflection) in an ongoing way until it has been optimally constructed. Only in this way, will the individual be able to maximise his/her potential individually and will he/she have "ultimate meaning to share with others in cooperative learning" (Slabbert, 1998:252).

It is important to note that facilitating cooperative learning does not differ basically from facilitating metalearning. In both cases, the responsibility for learning is placed on the learners. They have to construct meaning individually (metalearning) and then share it with others in order

to maximise interdependence. Learning must be initiated and maintained, as in metalearning. The learning task, however, needs to compel learners to learn cooperatively. The requirements for cooperative learning need to be met diligently as well.

a) Structuring the groups

It is important for the facilitator to group learners according to heterogenous principles, as this has been proven to be more effective (Nattiv, Winitzky and Drickey, 1991:216; Adams and Hamm, 1996:6). Heterogenous groups should include both sexes, different cultures, strong and weak learners. For optimal effectiveness, the facilitator should also adhere to the following principles. Aims and objectives must be stated clearly and concisely; groups should be relatively small (4-6 members); individual accountability must be called for; positive interdependence should prevail; the facilitator should play a supportive role; and a safe atmosphere of mutual trust, respect and acceptance should prevail (Nattiv et al. 1991:216; Cooper, Robinson and Mckinney, 1994:74).

b) Facilitating cooperative learning through the learning task

The learning task should be designed in such a way, that it compels the learners to study cooperatively. Learners must feel the need to cooperate with each other and support each other to learn in order to achieve success in completing the learning task. The requirements for cooperative learning must be met when formulating the learning task. This is especially important with reference to the requirements of interdependence and individual accountability. It can be acquired by presenting a learning task that is broken up in four (or six, depending on the group size) independent, but equitable tasks for each member in the group to execute. (The Jig-saw method is a good example of this.) Each member is therefore individually accountable for his/her sub-task, but the success of the learning task as a whole is dependent upon the integration of these sub-tasks. The two very important requirements of cooperative learning, namely positive interdependence and individual accountability are thus met.

c)   Models for developing cooperative team work

When facilitating cooperative learning or group work, the facilitator should ensure that the groups are not aimlessly involved in general discussions, but work towards a common goal. The facilitator should always play a supportive role, constantly monitoring and evaluating the activities to ensure goal-directedness. The models discussed next, lend themselves to being facilitated in this way.

*   Jig-Saw

This model can be used when learners need to understand a complex concept. It is described by Gunter, Estes and Schwalb (1990:167-184). The problem of Aids can, for instance, be taken as concept, and learners should, at the end of the activity, be able to understand all aspects of Aids, from how it is contracted, to the length of the incubation period , what all the symptoms are, what the moral consequences, as well as the economic consequences are, etc. Each student in the heterogenous group is given a subsection of Aids to research. It is the sole responsibility of that person to gather all the information pertaining to the particular subsection. It is also his/her sole responsibility to make sure that he/she understands it fully and can explain it to the others in a comprehensive way, so that it will not be necessary for any of them to study it on his/her own as well. In so doing, the subsections become parts of a puzzle, waiting to be synthesised into one whole body of knowledge once everybody in the group has presented the subsections for which they were responsible. This method is excellent for developing interdependency, while at the same time enhancing individual responsibility and accountability. Learners learn to analyse the topic under discussion, and to eventually synthesise it into a whole. Promotive interaction takes place during face to face discussions, and cooperative skills, such as dealing with feelings and different views, are developed. Evaluation of the individual groups should be done once all the groups have shared their information. Groups can evaluate the quality of their learning against those of other groups, deciding where and how they should improve.

*   Cooperative controversies

This model is described by Bredenhoft (1991:122-125) and is similar to classroom debates where controversial issues are discussed to enhance critical thinking, problem solving, or emotional intelligence. A theme for debate can be chosen, like smoking being prohibited in all public places. Learners are grouped in small groups of four, two learners against the prohibition and two for. The eventual objective which is given to the learners, is that all of them should, at the end of the activity, be able to deliver a well- reasoned speech on the topic. Individual accountability is required, when each student is asked to research the recent debates on this controversial topic in the media. Positive interdependence is required when two in the group only researches the one side of the story and the other two the other side. In the group the activities can thus be geared towards gaining a deeper understanding of the controversy, hearing other people's views and being able to give an objective, well-structured view of the problem. Through this exercise, promotive interaction takes place and learners realise that there are two sides to a story. Selective perception (a result of bias, upbringing and experience) diminishes and they develop a real interest in the topic. Higher order thinking, like critical and evaluative thinking is enhanced, because learners learn how to think and not only what to think (Bredenhoft, 1991:124).

Nattiv et al. (1991:216) describe three diverse methods, which are playful and enhance active participation for cooperative groups.

*   Round table

This method develops creativity and diversity. The facilitator asks a question which can have various possible correct answers. An answering sheet is circulated among a group of eight learners. (The group size is bigger for creativity to be enhanced.) Each student writes down a possible answer, which should differ from those already written down. Answers are collated at the end, including all answers from the whole class. Much fun can be had in deciding which ones are really correct, and in appreciating the creativity that has taken place. Although this method focusses on creativity, it incorporates all the requirements for cooperative learning: Learners are grouped in heterogeneous groups; positive interdependence and individual accountability are

required in so far as each student must ensure that he/she has a different answer. Cooperative skills such as sharing, interaction and dealing with feelings are enhanced. Evaluation of the group's creative ability is done when all the ideas of the class have been collated.

*   Numbered heads together

Each group is given a number. The facilitator asks a question that needs elaborate discussion. When the facilitator has allowed enough time, according to his/her evaluation of the degree of difficulty of the problem, he/she calls a number, and the group with the corresponding number must be ready with a comprehensive answer. The groups therefore work in competition; they need to concentrate on the problem at hand, communicating face to face, are positively interdependent, and do not waste time on trivial matters. Individual accountability is required when every member must give at least one point for discussion of the problem at hand. This is a very important exercise to prepare learners for competitiveness in the work place. They need to learn to concentrate on the urgent matters and to work under time pressure, adhering to the standards of effectiveness and productivity. Cooperative skills are developed, such as accepting one another, forgiveness (when one is wasting time for instance), dealing with feelings (stress) and love, being considerate and available. Evaluation of the group's effectiveness is done when their input is compared with those of other groups.

*   Pairs check

Learners pair off in their groups, i.e. in two's, three's or four's, alternately teaching and engaging in problem solving, thereby staying active, investigative and intentionally focussed on the learning task. This method can result in having learners totally absorbed in the learning task, which leads to enjoyment and fulfilment. The student learns that to be submersed in an interesting, challenging activity, brings joy and happiness, he/she therefore will transfer this experience to the workplace, seeing work as fulfilling, and not just to earn money.

All these methods combine metalearning and cooperative learning in that learners, individually constructing meaning, share it with others and then again, cooperatively, construct meaning.

d)   Facilitating cooperative learning through feedback

The facilitator can regard the members of the group as resources when wanting to maintain learning through feedback. When a student needs help in the form of resources other than him/herself, when his/her knowledge has been depleted, the facilitator might refer him/her to the other members of the group as resources, in order to obtain what is necessary to complete his/her individual learning task.

e)   Assessment

In the same way as metalearning, cooperative learning "manifests a continuous outcome based formative assessment by the learners of their own learning. It ultimately assesses not only learning, but maximised potential in cooperative life skills" (Slabbert, 1998:253).

iii)   Meeting the criteria

The most important demand, which is realised through the facilitation of cooperative team work is that it **prepares learners for the universal new world of work.**

In chapter three, the challenges which the new world of work places on learners have been spelled out. Interactive team-work, which implicates cross-cultural and cross-functional relationships (Verville, 1995:77), interdependence and shared decision making, can be realised through cooperative activities. Communication within and across teams, with clients, between management and staff, is especially becoming more and more important, and can be enhanced through developing emotional intelligence. The importance of being able to think and act independently is of paramount importance, but so is the realisation that, when working together we can accomplish far more than one person alone can, no matter what his/her attributes are. In sharing knowledge and competencies, we have access to the vast resources and potential of others (Slabbert, 1998:232). Through cooperative learning, learners acquire the cognitive, emotional and social competencies needed for the twenty first century, namely to become individually accountable for their own thinking, but also being caring, supportive and open towards others,

having the ability to communicate feelings as well as ideas. In a report published by the Centre for Public Resources (USA) in 1982, it was emphasised that one of the main reasons for the dismissal of people from highly paid careers was their lack of interpersonal competence which resulted in unsuitable group behaviour (Park, 1995:44). If learners are to become effective employees, the participation in cooperative learning should create ample opportunities to develop the competencies needed.

Most important of all, however, is that all the demands of the future and consequently all the components that need to be included into an AD-model in order for it to adhere to the demands of the future are already meaningfully, effectively, functionally and holistically incorporated in cooperative learning. Cooperative learning therefore represents the holistic, integrated, applied competence to maximise interpersonal relationships.

iv)   The consequence: interpersonal life competencies

As has been indicated in the concept map, figure cooperative learning has inevitable consequences resulting in acquiring the interpersonal life competencies. These competencies are built on the intra-life competencies of metalearning, which are an absolute prerequisite for interpersonal competencies.

Through cooperative learning, learners acquire more than mere knowledge, they are prepared for life, they realise their potential, or as Slabbert says (1998:239), they are being confronted with experiencing real interdependent life.

To acquire interpersonal life competencies is undoubtedly the most fundamental requirement in order to prepare learners for the new world of work. Working effectively in teams with all the various cognitive, emotional and physical competencies it implies, is definitely the highest priority for future employees to master (Verville, 1995; Herbst, 1998; Carruthers, 1997; Harvey et al., 1997). These competencies are derived from logical deduction when scrutinising the interpersonal development components and described as **outcomes** of cooperative group work:

The following mega cooperative life skills are listed by Slabbert (1998:239), and are briefly discussed.

* **Democratisation and humanisation - How do I see you?**

Through cooperation, learners learn to really become aware of others; their weaknesses and their strengths, their values and views. They learn that everybody is equal in value, although different and unique as human beings. This then constitutes democratisation as well as humanisation of human beings.

Equality in value does, however, not make us one of an insignificant mass (Slabbert, 1998:239), we are all unique in appearance, and especially in potential. In acknowledging this, through the development of self-knowledge, and through working in close relation with others, learners are in awe of their fellow student's potential and realise that they have to work together in order to fulfil their purpose in life. Cooperation is therefore also a prerequisite for learners to maximise their potential.

* **Communication - How do I interact with you?**

Through the development of emotional intelligence and metalearning, the foundation has been laid for effective communication with the self as well as with others. Reflection, as described within metalearning, motivation and controlling consciousness, are in actual fact communicating and interacting with oneself in order to maximise one's potential. Cooperative learning is impossible without interaction, which implies communication. According to Slabbert, (1998:240):

> *This interaction manifests in **recognising** the other as a human being, **respecting** one another correspondingly, and **appreciating** what we can learn from one another through **listening** while all are **sharing**. It also manifests when **decision-making** is eminent through **negotiation** where **conflict-management** and **conflict-resolving** might become inevitable.*

It is clear that through the proposed model for developing emotional intelligence, these competencies are all addressed.

Slabbert (1998:240) refers to different levels of communication, which are all being introduced in various cooperative group activities.

~ **The level of acquaintance and trivialities**

The first level of getting acquainted and sharing trivialities is very important, for it is here that the first interaction takes place. Learners get to know each other, without getting personally involved.

~ **The level of sharing information**

The second level starts when learners share information. This is still a safe level, because the involvement is purely for personal gain, learners may stop sharing at any time with no personal risk involved.

~ **The level of personal interest and involvement**

The third level is a risky level, where learners really get to know one another, getting interested in the other person as a human being. This kind of communication requires openness, with corresponding vulnerability. It is at this level that possible growth and maximising potential starts.

~ **The level of sharing feelings**

This is the highest level of communication, and the only way to really understand interactive behaviour. Learners need to understand one another's feelings, fears and concerns to be able to communicate with real empathy. When reflecting on the development of emotional intelligence through communication competencies it is clear that the highest level of communication is being addressed.

*   Dealing with feelings - How do I react to you?

During interactive cooperative learning, learners learn that reaction to feelings determines their interrelatedness and interdependence. Only by analysing their own feelings and ascertaining what they really are by searching for the source of the feelings and verifying the validity thereof, can learners react in an appropriate way towards others. If learners carry on acting out their feelings, they are still on the dependent level of blaming someone or some outside source as cause of these feelings. They are on the level of no self-control and not being able to reflect on their inner feelings. Being able to recognise one's feelings for what they are (jealousy, inferiority, superiority or being threatened), one can much better deal with these feelings, and choose to react in such a way, as to create a win-win situation.

*   Justice and forgiveness - How do I want you to react to me?

In cooperative learning, learners become aware of the importance of being fair to one another, to accept one another without judging and with unconditional acceptance. Learners learn the importance of "doing unto others as you would like them do unto you" (Matt 7:12). According to Slabbert (1998:241), this will manifest in honesty, truthfulness, sincerity, obedience, virtue, generosity, trustworthiness, and candour. All of which are attributes which are essential for workers in the new millennium (Land and Jarman, 1992; Harman, 1988; Leonard and Murphy, 1995; Hunt, 1991:343).

*   Love - How do I care for you ultimately?

Being in an interdependent relationship with their fellow learners, which manifests itself in the cooperative activities, learners learn that they cannot fulfil their purpose without the others. They therefore have to care for one another, with sincerity and compassion. According to Slabbert (1998:241), this is manifested in being available, courteous, tactful, flexible, humble, meek, gentle, but also concerned, considerate and compassionate.

*   Leadership - How effectively can I lead you to maximise your potential?

Becoming independent metalearners and interdependent co-learners, learners develop certain competencies which are attributed to leaders. These competencies manifest in having sound principles from which personal values evolve and a strong character-ethic is adhered to (Turner, 1995). In cooperative groups learners learn to stick to the rules, which mostly refer to ethical behaviour. These learners have inner goal-directedness and a definite purpose, pulled by a compelling vision, which is, to fulfil their potential. They become trustworthy by building interpersonal trust through cooperation and by validating other people's opinions. They earn respect by being knowledgeable, competent and committed to their goals, principles and values. They learn to handle relationships by communicating with empathy. They learn that people can be empowered, by giving everybody the chance to participate, to be responsible and to show initiative.

Leaders are thus born when the development of intrapersonal and interpersonal relationships are facilitated effectively. These leaders have a sphere of influence awarded to them with one purpose only, namely to produce leaders, one of the important demands for all people of the future (3.6.2.1).

4.3.4.5   Developing suprapersonal relationships

It is the complete synergy between the intrapersonal and interpersonal relationships that constitute a truly integrated human being. Such a synergy can only be achieved when it is guided by universal principles which lie "outside" or "above" the person. This requires leadership as interpersonal life competence ultimately to be principle-centered leadership. This constitutes in essence the development of suprapersonal relationships.

In chapter three (3.4.2) the paradigm shift from a personality ethic to a character ethic was described. It was described as a principle-centered, "inside-out" paradigm, where universal principles like love, respect, integrity, justice, and courage are virtues. The "disintegration" and alienation which characterise modern man evolve from the self-centered, individualistic,

disconnected attitude. In order to live a life of suprapersonal relationships, man needs to be connected with himself, others and the universe. Man needs to be guided by universal principles aligned to his value system, and a clear vision or purposeful destination to pursue.

The synergistic element of becoming whole, principle-centered, connected, and maintaining suprapersonal relationships can be distinguished when studying recent literature on leadership (Turner, 1995; Schwan and Spady, 1998; Herbst, 1998; Georgiades and Macdonell, 1998; Walsh, 1997; and Covey, 1992). It is, therefore, necessary to include leadership development and principle-centeredness as components in the third phase of the proposed AD-model.

A   Suprapersonal leadership

It was clearly indicated in chapter three (3.6.2.4) that all people should develop leadership qualities, for these qualities resemble the challenges which man faces for the 21st century.

i)   Suprapersonal leadership, as applied, integrated component of the model, described

Presently, a distinction is made between managers and leaders. Whereas managers focus on efficiency, leaders focus on effectiveness (Covey, 1992:101). Managers have a top-down, rigid, control orientation, whereas leaders share leadership. Leaders are visionaries with personal attitudes towards their goals, which seem to be embedded in themselves; they relate to people in a caring, emphatic way and are principle-orientated. Leaders share their views, respect others' views and are committed to the institution, community or field which he/she serves (Georgiades and Macdowell, 1998:97, and Rudnitski, 1996:85).

ii)   Facilitating suprapersonal leadership

The facilitation of leadership qualities emanates naturally from the previous phases where intrapersonal and interpersonal relationships are facilitated, because the modern leader of today is described as a visionary, leading from inner wisdom, focussed on the future, and leading by example (Schwan and Spady, 1998:13). Under 3.6.2.4 all the qualities of leaders are highlighted

as they evolve from the demands of the future. All of these qualities are enhanced through the model which has been proposed.

When facilitating intrapersonal relationships, learners develop the following leadership attributes: having self-knowledge in order to develop full leadership potential and self-confidence; functioning/leading from an inner core driven by universal principles and values; having purpose, vision, initiative and wisdom; controlling own quality and effectiveness through effort and will; planning, monitoring and evaluating own progress, that of the group, as well as the company's progress; in so doing, creating their own future. These qualities also coincide with the intrapersonal life competencies.

When facilitating interpersonal relationships the global, principle-centred leadership theory (table 3.5) is being realised, namely: shared leadership; caring nurturing relationships; commitment to the group; professionalism and having a moral obligation towards others.

iii)   Meeting the criteria

It is obvious that the third phase of the proposed AD-model is a natural consequence of the facilitation of all the components in the first and second phase. The criteria for the AD-model will, therefore, be met:

The characteristics of leaders are totally different from those of managers; it is indeed a paradigm shift (see 3.6.2.4). Leadership attributes, which is demanded from today's leaders, are in line with the demands of the future for man, it urges man to realise his potential, and it is universally demanded from all to develop leadership qualities.

B   Principle-centeredness

The principle-centered, inside-out paradigm was extensively discussed under 3.4.2. For this reason, only the main ideas will now be highlighted.

i)   Principle-centredness, as applied, integrated component of the model, described

Covey (1992) and Turner (1995) describe people who are principle-centered as being responsible, competent and trustworthy, proactive and internally driven by a strong sense of purpose and vision. They rely on universal principles, sound values and inner wisdom to guide their lives. People living a principle-centered life enjoy an abundance mentality, rooted in high morality and ethical standards.

ii)   Facilitating principle-centeredness

Through facilitating all the components which have already been discussed, character building takes place. When the intrapersonal life competencies and interpersonal life competencies are realised, a sound work ethic, value system and moral base will also be realised. Learners will develop an abundance mentality which is characterised by being responsible and trustworthy, having a clear vision, pro-actively pursuing life goals, driven by universal principles and values. The principle-centred person is therefore an outcome of the proposed model. When the life competencies are scrutinised, this becomes clear.

Learners should be referred to their professional domain/field of study, and should be encouraged to develop a unique code of ethics which will be universally applicable, but also specific to their field. This code of ethics should emanate from the changed view of themselves, their fellow human beings and the universe, because this is the essence of the proposed model, that it should facilitate a fundamental shift, a change in world view!

iii)   Meeting the criteria

When learners become principle-centred leaders with sound values and are committed to a work ethic based on their principles and values, all the criteria of this AD-model are met. It is indeed a paradigm shift from the prevailing paradigm which suggests that leaders are born and nothing can be done about those who are not "born leaders". The new paradigm suggests that all humans are born with full potential and that it should be maximised through facilitating lifelong learning.

Therefore, all humans are leaders. This is also demanded for the 21st century, it is universally true and applicable to all (3.6.2.4).

The development of these competencies which will meet the criteria of the proposed AD-model and which will prepare learners for the future world of work, is therefore the aim of the proposed model. The structure according to which the model will be implemented needs to be clearly defined.

4.3.5 STRUCTURE OF THE PROPOSED AD-MODEL

The proposed AD-model needs to be structured for it to be effective. It becomes quite clear that this is a model of magnitude and that it incorporates HE in its entirety. It represents a total paradigm shift and can therefore be described as a reengineering model (3.5.1.5), with a totally new structure. Figure 4.5 is a representation of a reengineering model

4.3.5.1 A reengineering model

According to Senge et al. (1994:36-37) three design elements are necessary to implement change which, in this case, is a reengineering model to be proposed. These will be explicated in the paragraphs to follow. It will also be indicated how the proposed AD-model will be implemented.

A Guiding ideas

The guiding idea which guides and directs this model is maximising human potential through facilitating lifelong learning. It is the purpose and vision of this proposed AD-model and it constitutes a new paradigm (Slabbert, 1998).

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FIGURE 4.5   The reengineering AD-model

```
                    ┌─────────────────────────┐
                    │      Guiding idea:      │
                    │ Maximising human potential │
                    └─────────────────────────┘
```

Guiding idea:

Maximising human potential

Theory:

Intrapersonal

Interpersonal

Suprapersonal

Relationships

Methods:

Facilitating

lifelong

learning

Tools:

Components

of the

AD-model

Metalearning and

Cooperative learning

Innovations in

infrastructure:

Include whole

institution
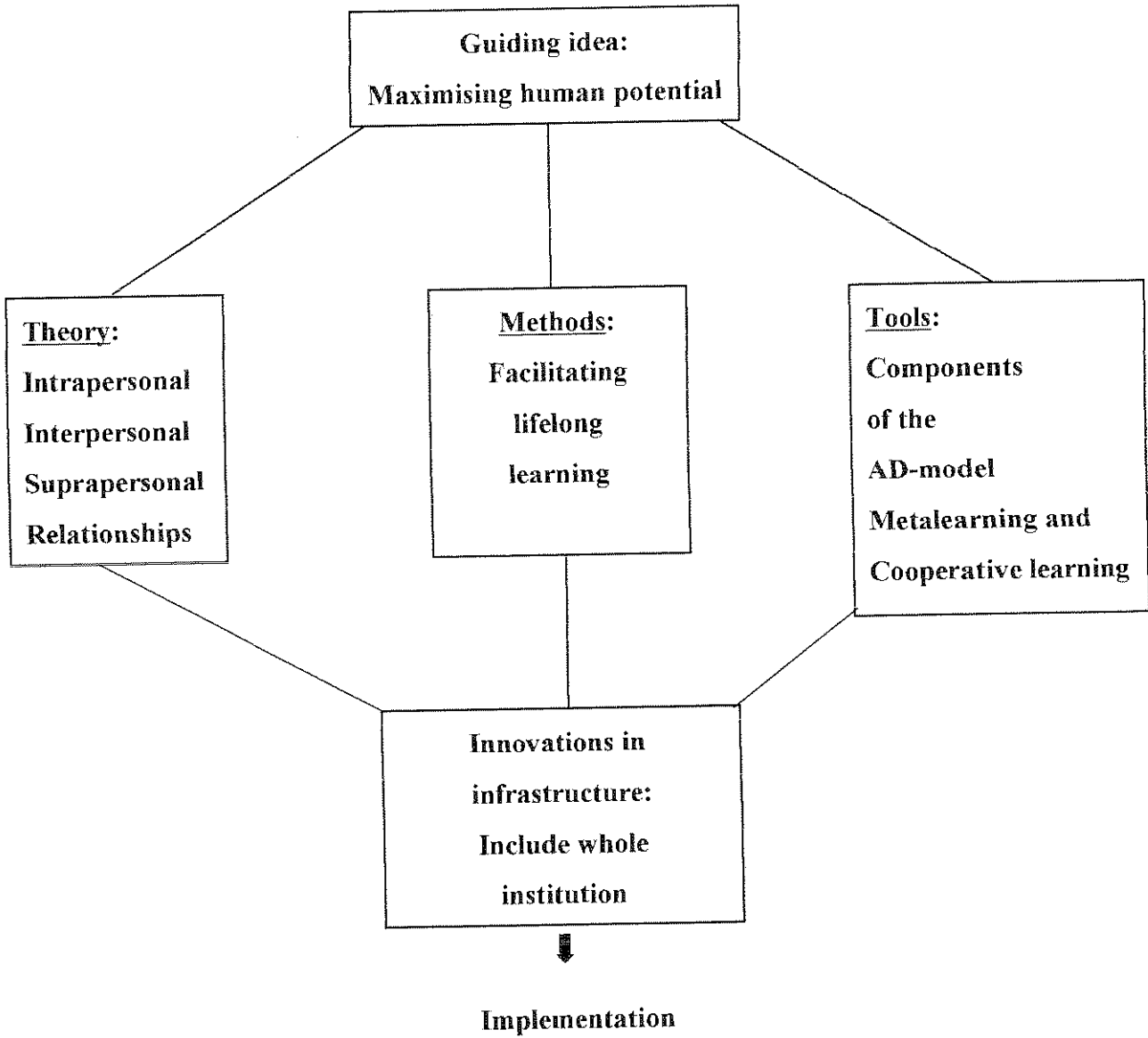
Implementation

*   A paradigm shift is needed

It will be of no use to try and implement the proposed model if whole institutions do not undergo the paradigm shift necessary for this model. In chapter three the whole concept of a paradigm shift was discussed. It was stated that unanswered questions/problems of the prevailing paradigm, urge paradigm pioneers to find new, radical, breakthrough ideas in order to solve these problems. It has become a universal problem for the world of work, that learners are not prepared for the challenges and changing needs and that HEI's are not responsive to the demands of the future world of work (Harvey, et al. 1997: 293-294). A reengineering process needs to be initiated and facilitated, for whole institutions to be responsive to the said demands. It is not sufficient to adapt, reorganise or simply change existing programmes. The whole concept of AD, its main aim and function should be reengineered. For this process to be realised, the whole institution must be involved. The role of AD practitioners in this process is crucial. It can be that of paradigm pioneers: trusting their intuition, taking the plunge, be committed and in good faith "sell" the vision and create an environment where facilitating lifelong learning will maximise learners' potential within reengineered institutions. AD practitioners must encourage people in their institutions to stretch goals and to think creatively (Hammer and Stanton, 1995:25).

B   Theory, tools and methods

With the guiding idea as suprastructure in place, the reengineering model needs to explicate on its theory, tools and methods.

* Theory: The superstructures, manifested in the development of intra- inter- and suprapersonal relationships serve as theory, with well developed concepts. The proposed AD-model eventually culminates in:

> ~ intrapersonal learning (metalearning) for acquiring intrapersonal life competencies;
>
> ~ interpersonal learning (cooperative learning) for acquiring interpersonal life competencies; and
>
> ~ suprapersonal learning (principle-centered leadership) for acquiring suprapersonal competencies.

* Tools: The components of the superstructures, metalearning, cooperative learning and principle-centred leadership learning which are proposed for the AD-model serve as the tools whereby maximising human potential can be realised.

* Methods: The facilitation of learning through the various components represent the methods.

The AD practitioner needs to initiate and facilitate the reengineering process. He/she must curriculate these components as a process, not as a training programme, which must form an integral part of all academic programmes and which must be facilitated, not presented as skills. Reengineering must not be a slow process, it must be done quickly, with some tangible results within a year, in order for it to gain momentum and support (Hammer and Stanton, 1995:30).

C   Innovations in infrastructure

The existing infrastructure must be innovated to accommodate the resources and opportunities for operationising the guiding idea, and for reengineering to be effective. One does not "pour new wine into old wineskins", both content and structure need to be reengineered (Slabbert, 1998:53). These innovations are therefore explicated next.

*   Include the whole institution

Including the whole institution has certain implications. It means that management, AD practitioners, lecturing personnel, personnel from staff development, academic programmes, and learners are affected.

~   **Include management:** It is interesting that, during the field research, when interviewing respondents, the involvement of management was often mentioned (see phase five, data interpretation, structuring of AD-units). When management of an institution is directly involved in AD of learners, it becomes a purposeful and effective endeavour, because they can facilitate change and make funds available. Management needs to understand and appreciate the importance of the demands of the 21st century and that it is paradigmatic.

They need to realise that HEI's are presently not preparing learners for the challenges and pressing needs of the future world of work. Stumpf (1998:84) says in this regard that if institutions of higher education want to be relevant, they need to react sensitively towards the changing needs of society and focus on the development of career-oriented programmes, as well as competencies which enhance interdisciplinary cooperation demanded from the work place. It is at managerial level that decision to change takes place. It is therefore imperative that management be involved in the proposed AD-model.

~ **Include AD practitioners:** It seems logical that AD practitioners, or staff dealing exclusively with the academic development of learners, can not be excluded from the proposed AD-model. They should initiate, communicate, persuade, and prove their conviction of the new proposed AD-model. They should facilitate the paradigm shift and act as change agents throughout the institution, before thinking of implementing the model.

~ **Include lecturing personnel:** The magnitude of the proposed AD-model, the aim thereof as well as the criteria indicates that this model cannot only be presented by the few AD practitioners employed by HEI's. The model needs to be implemented institution-wide, on all levels, in all academic programmes. Lecturers lecturing in academic departments, therefore, need to undergo training in facilitating the proposed AD-model. They need to be able to adapt the essence of the components of the model to their various fields of expertise.

~ **Include staff- development personnel:** The staff-development section at HEI's is responsible for the in-house training/development of staff. The implication of including lecturers in the AD- model is that personnel from the staff- development section need to understand and underwrite the proposed AD-model. They will be involved by being responsible for training the lecturers to implement the model.

~ **Included in academic programmes:** The major problem which the researcher identified and which was supported by the SAAAD findings (SAAAD, 1997), is that AD programmes are characterised by fragmentation. The new paradigm rejects fragmentation and suggests holism. The proposed AD-model should thus be implemented across all faculties, in all academic programmes and for all learners. This is already in the planning stage for some institutions (G,U and W), although it does not include the components as identified by this report.

Facilitating all the components of the proposed model is therefore the challenge for lecturers and AD practitioners alike. Curriculating programmes to include these components should be done in such a way, that it is part and parcel of every day's facilitating in lecture halls. It should form part of the subject content and should be realised through facilitating the subject content. This would be the challenge for lecturers, to undergo the paradigm shift, in order for the proposed components of the AD-model to be a natural outcome of it.

~ **Include all learners:** It is the conviction of the researcher that all learners be included in the proposed AD-model. This model does not segregate learners. It is a proactive answer to the universal call for man to realise his potential. Institutions of higher education should not focus on where the student is when he/she enters HE, but rather where he/she should be going! It is a deception to stoop to the student's level, for then he/she is under the illusion that HE does not represent a challenge. Universities and technikons then become artificial in that they do not deal with the realities of a changing world represented by monumental challenges. It is the student who should undergo these changes and it should be facilitated through a well defined, thoroughly researched model which will aim at realising human potential, thereby being responsive to the future needs.

D Implementation

The structure of the AD-model should be planned according to a natural development continuum indicating how implementation can be facilitated.

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* **Following a natural developmental continuum**

When planning and implementing the proposed AD-model, the components should build on one another and some should be the outcome of previous components. It should therefore follow a logic pattern. This also refers to the natural developmental stages of the student when entering higher education.

~ **Intrapersonal development:** When learners enter HEI's, normally at the age of eighteen, they are in the so-called post adolescent stage. This stage is characterised by identity forming, or trying to get answers to the question "who am I?" (Garbarino, 1986:285). This is therefore the ideal stage to facilitate intrapersonal relationships through discovering the inner self, own potential, becoming responsible for one's own learning and, for that matter, one's own life, through the competencies of a metalearner. Facilitating intrapersonal development includes the following:

i) Exploring and controlling consciousness

ii) Intrinsic motivation

iii) Emotional intelligence, concentrating on the individual level of self-knowledge

iv) The realisation of multiple intelligence

v) Higher order thinking

vi) Creativity

vii) The realisation of metalearning

viii) Intrapersonal life competencies

~ **Interpersonal development:** When learners are comfortable with themselves and have developed self-esteem, courage and know that they are in control of their lives, they will be ready to enter into interpersonal relations with others. To substantiate this statement, Havinghurst (Garbarino, 1986:289) indicates the following:

...one important task of adolescence is to establish oneself outward from family to friends and community. Adolescents are first achieving emotional independence from parents and other adults; second, achieving new and more mature relations with age mates of

both sexes; and third, desiring and achieving socially responsible behaviour. In order to make this transition smoothly (and thus to gain some sense of self-esteem and competence) adolescents need to decipher what it is that they must do.

When learners have established self-knowledge, self-esteem and have the courage to enter into mature relationships with others, they are ready for the facilitation of interpersonal relationships, the next step on the continuum, and proposed for the AD-model. Facilitating interpersonal relationships, includes the following:

    i)   Emotional intelligence, dealing with relationships and interdependency

    ii)   Interpersonal intelligence

    iii)   Cooperative group/team work

    iv)   Interpersonal life competencies

~   **Suprapersonal relationships:** The desire towards socially responsible behaviour, according to Havinghurst, (Garbarino, 1986:289), can be fulfilled through facilitation of a principle-centered life . This includes leadership potential to be developed and nurtured; the development of a professional-specific, as well as general, work-ethic; being driven by a sound value system and principle-centred life. This can culminate in an attitude of serving others and the universe; the ultimate demand for the unfolding fourth wave.

Facilitating suprapersonal relationships includes the following:

    i)   Realising of leadership qualities for all

    ii)   Becoming a principle-centred person

    iii)   Pursuing a sound work ethic

    iv)   Developing professionalism

    v)   Creating opportunities to experience the real work situation

The suprastructure of the proposed AD-model can be depicted in figure 4.6

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FIGURE 4.6   **The suprastructure: Maximising human potential through the proposed AD-model**

Maximising
human
potential

Suprapersonal development
Facilitating principle-centredness

Interpersonal development
Facilitating lifelong cooperative learning

Intrapersonal development
Facilitating lifelong metalearning
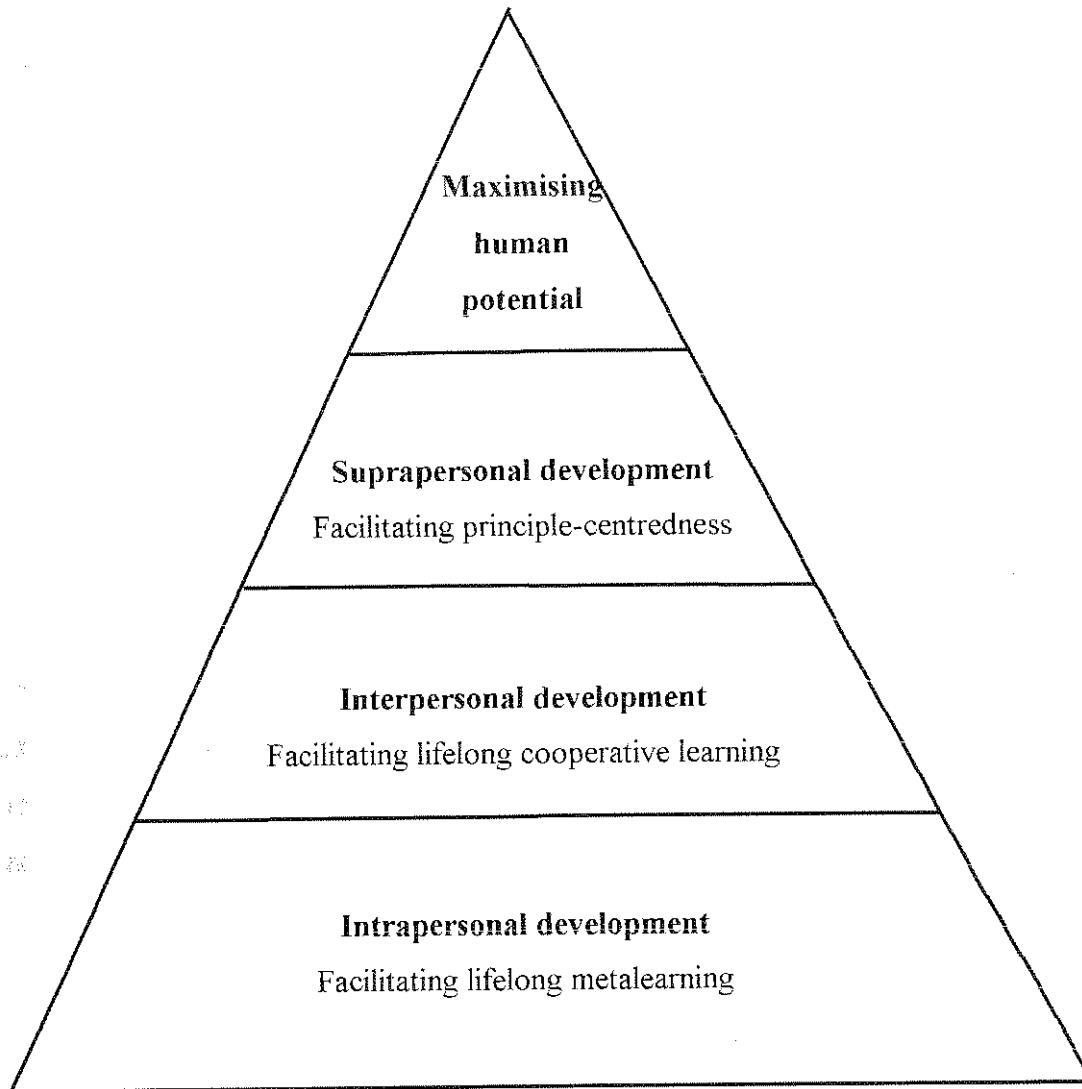
From their first through to their final year, learners should be confronted with all these phases of the proposed AD-model. The proposed AD-model is not meant to be fragmented. It does not indicate that the components which are included in the model should be facilitated in a fragmented, first, second or third level basis. It was indicated all along, that the components overlap and are consequential of each other. Already in their first year learners should be confronted with all the components of the proposed AD-model. They should become metalearners, cooperative learners and principle-centered leaders. They should meet the realities of the world of work by experiencing real work situations This will enable them to gain contextual insight into the real world of work and in a meaningful way, to maximise their potential. The proposed AD-model is meant to be progressive; to "grow in quality with the student". By their final year, learners need to have a clear picture of what their profession/future work entails and how they should prepare themselves to be responsible, effective workers. They need to have the correct maps to follow in order to realise their potential, as this is the challenge of the 21st century.

The intrapersonal life competencies which are a consequence of metalearning, and the interpersonal life competencies, which follow as a consequence of cooperative learning, culminating in the suprapersonal, integrated person act as the **fulfilment** of the demands placed on employees for the future world of work. This is true for the individual, the team, as well as leaders.

By adopting the life time practice of continuous growth in all dimensions of being human, learners are maximising their potential. Through the facilitation of becoming metalearners and effective team workers, learners tap into their potential, releasing more and more potential and developing more and more talents, fulfilling the needs of the future world of work, and their own needs for self-actualization. This development is best described by the information ladder of Norman Longworth, as depicted in figure 4.7 (Longworth and Davies, 1996:93)

Figure 4.7   The ladder of information

WISDOM
INSIGHT
UNDERSTANDING
KNOWLEDGE
INFORMATION
DATA
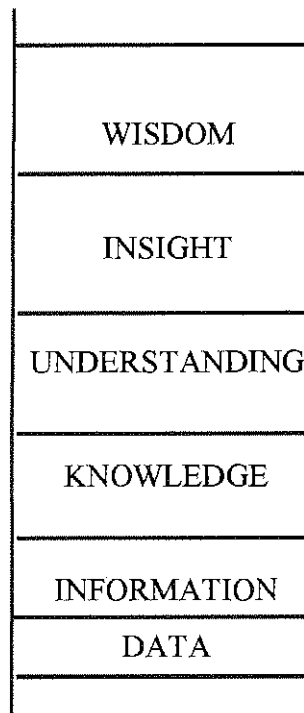
Maximising potential is transcending the mere collecting of data/information and acquiring of knowledge. It is a lifelong endeavour of truly wanting to fathom, penetrate and understand the self, others and issues, eventually gaining wisdom, peace and fulfilment.

4.4   CONCLUSION

Abraham Lincoln (Cooper and Sawaf, 1997:79) once said:

> *I am not always bound to win but I am bound to be true. I am not always bound to succeed but I am bound to live up to the light I have.*

If learners understand that they must be true to themselves, and not to pursue what they think others want of them, namely to win or succeed at all cost, they will be bound to live up to the light within themselves, the potential which is unique to every person, and which only he/she can fulfil.

People pay a terrible cost when living their lives according to the outside-in paradigm. They feel

that outside factors control their lives and that they are being pushed forward without choice, without being true to their inner selves. The effect of this disastrous paradigm can be seen in the moral decay of the last few decades of the twentieth century, namely the increase in drug abuse, violence, broken-up families, religious carelessness and non-commitment to any worthwhile cause. It is as if people have lost their purpose in life, and this is quite understandable, if one allows the outside-in paradigm to take control of your life. If people are not living their lives from the inside-out, from their own unique core of values and deeply rooted principles, they will not have a predominating purpose to pursue and will drift around aimlessly, adhering to whims and outside pressures.

It is the responsibility of educators and AD-practitioners to be the paradigm pioneers, to change student's perceptions of what they can achieve, by facilitating lasting change and lifelong learning through which maximising of their potential will be accomplished. It is for this reason that the proposed AD-model should be implemented throughout HEI's. It constitutes a reengineering model with a set of guiding ideas or vision, guiding principles (the theory) and the methods and tools to execute it (Senge, et al. 1994: 36-37):

* Guiding ideas supply the purpose and vision. In this case, fulfilling the challenging demands of the future through facilitating lifelong learning, with the consequential maximising of human potential.

* Guiding principles for the AD-model are constituted in the concepts of the metatheory which culminates in the three phases of the model, namely: metalearning/intrapersonal relationships; cooperative learning/interpersonal relationships; and principle-centered leadership/suprapersonal relationships.

* The methods and tools for the AD-model can be found in the components and facilitation of the proposed AD-model.

* Innovations in infrastructure can be found in the re-structuring of whole institutions, according to certain specific criteria.

Being paradigm pioneers, AD practitioners need to take the plunge, be bold and "sell" this reengineering model to managements of HEI's. Resistance to change is inevitable, therefore,

understanding the weaknesses of the old process and acknowledging the demands of the new paradigm will be the starting point to overcome resistance to change. Confronting management with the whole, reengineering model that will shatter long-held assumptions and present them with the ideas, theory, methods and tools will convince them that reengineering is absolutely inevitable and that they have no option. Involving whole institutions in this endeavour will give ownership, motivating people to become part of the effort (Hammer and Stanton, 1995:131).

Academic development will eventually not be centralised as a unit, department or section, although the concept and principles will stay: It will function in an across academic departments, where AD-practitioners will function as facilitators of learning where learners have to execute the learning tasks.

AD-practitioners should adopt these words from Theodore Roethke, US poet and educator (Cooper and Sawaf, 1997:277.), to motivate and inspire them in the mammoth task which they are taking up:

What we need is more people who specialise in the impossible.

AD-practitioners should realise that creative people, paradigm pioneers and change agents always encounter obstacles and almost inevitably encounter resistance. But with persistence, ongoing research and positive outcomes, this paradigm is bound to set the whole world on fire, resulting in peace and harmony, fulfilment and joy. The challenge for AD-practitioners has only begun!

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CHAPTER 5

Conclusions and recommendations

5.1   INTRODUCTION

In chapter one the problem with regard to academic development of learners at higher education institutions was highlighted. Because of the primary aim of AD in South Africa as well as in countries like America, Australia and the United Kingdom, which focus on remedial support for "at risk" learners (SAAAD, 1997), AD has become an "ambulance service". Chapter two provided evidence for this view of AD where it was clearly indicated that AD practice is characterised by add-on, fragmented programmes, focussing on ad hoc academic support. AD should fulfil a much more important function. It should focus pro-actively on an unknown 21st century and prepare learners for the demanding new challenges of the world of work they will face. It is for this reason that this research was done.

5.2   REFLECTION

When one looks at the problem statement of the research, the aim of this study and the consequential research questions, one is able to conclude what the achievements and shortcomings of this research are.

In chapter one the aim of the research was indicated:

> *To design an AD model for higher education institutions, that will maximise the potential of learners to excel in the demands of a challenging unknown future.*

The research question resulting from this aim was:

What is the best possible model for AD programmes at higher education institutions in South Africa that will facilitate learners to maximise their potential so that they will excel amidst the challenging demands of an unknown future.

A number of sub-questions resulted from the research question, which this report aimed to answer. These were:

1. What is the current state of AD?
2. What are the demands of the future for learners in HE?
3. What should the AD model consist of in view of these demands?
4. What should the best AD model be, to prepare learners adequately for the unknown future?

The researcher will endeavour firstly to indicate the achievements of this research report, based on the fulfilment of the aim.

5.2.1 ACHIEVEMENTS

In order to answer the overarching research question and fulfil the aim, the current state of AD practice in HEI's in South Africa had to be established. The researcher made use of multiple resources to assist in investigating this issue, namely, human, technological, funding, transport, literature and data bases. She also employed multiple methods for gathering and interpreting the data, thereby adhering to criteria for qualitative research and heightening the validity/trustworthiness of the research.

5.2.1.1 Research methodology

Qualitative research was implemented for this study because a better understanding of the phenomenon being studied needed to be acquired. The qualitative research design allowed the researcher a variety of choices and actions to execute. The design permitted the choice of employing various strategies of enquiry, depending on the purpose of the study, the nature of the

research question and the skills and resources available to the researcher (Morse, 1994:223). The researcher, therefore, employed various guiding paradigms (critical theory and constructivism); methodologies (like grounded theory and action research); and data collection and interpretation methods, adhering to the qualitative concept of trustworthiness (validity and reliability). Throughout the research, the researcher adhered to the strict demands of the qualitative research design as far as the skills and resources allowed her to do so. She deviated from the pure forms of the research methodology only as far as the former restricted her. It can therefore be seen as an achievement of this research, that it adheres to the rigorous standards of qualitative research as far as the restrictions allowed the researcher to do so.

5.2.1.2 The current state of AD in South Africa

By implementing a qualitative grounded theory methodology, executed in an action research format, the investigation of the current state of AD practice lead to a grounded theory of AD as it currently exists in South African universities and technikons. The structuring of AD, profile of AD practitioners, as well as the way AD is implemented, will be the topics of the next discussion.

*   The structuring of AD

The structuring of AD is centralised at all but three of the sample included in the research. This indicates that AD is a coordinated activity within these institutions. It functions as independent units with own staff, line functions and purpose. The activities are sometimes decentralised into faculties, involving not only AD staff, but also faculty staff. This can be an indication of the relative importance of AD, in that it is acknowledged by institutions. It is, however, not the case in all institutions. Some AD units face rationalisation or complete closing down, with so-called decentralisation of the activities into faculties, but no plans are in place to facilitate the AD function within faculties. AD is therefore marginalised in these institutions and it is sad to note that it is a very recent trend.

AD of learners is regarded as an academic, rather than "student affairs" issue. This became clear when scrutinising the line functions of the various AD departments. This can be interpreted, in terms of this research, as a positive and a negative factor. If AD resorts under student affairs, it would mean that it is perceived as a counselling, supportive, remedial function only, *reactive* to *student* needs (negative). Resorting under academic affairs the focus is, however, on academic progress of learners, on the *institutions' need* for learners to be successful in their studies (seemingly positive). It remains, however, that when AD focus on academic progress of learners, it is a reactive process, instead of pro-actively focussing on what the future demands, namely employability!

It was a concern, regarding the structure of AD in most institutions, that the management is very often not actively involved with AD of learners, therefore, *adequate* resources like funding, staff, and infrastructure are lacking. Some AD practitioners might see the need for implementing AD across the whole spectrum of the institution, but the said factors may be a handicap towards implementing their ideas. If they have no representation on management level, it is very difficult to sell their ideas.

* Profile of AD practitioners

The profile of AD practitioners was clearly established through this research.

The current profile of AD practitioners is that they are mostly post-graduates, specialising in the educational, linguistics and psychological fields. It was interesting to find that the most *preferred* profile, as indicated by the respondents, is for AD practitioners to have post degrees as well as experience in the educational field. Apart from the academic competencies like curriculum development, research and facilitating AD programmes, preferred skills for AD practitioners seemed to be related to social, interpersonal skills.

The conclusion can therefore be made that AD practitioners are generally highly trained people, with skills and experience that would be conducive to implementing the AD-model as proposed. The questions remain, however: Do AD practitioners realise that they should be preparing learners

for employability? Do their interventions aim at realising student potential? Are they flexible in order to adapt to changing roles that would be expected from them? Are they assertive and persuasive to act as change agents, and do they have first hand knowledge of the realities of the world of work? In order for them to facilitate the shift, they should be able to deconstruct the current programmes and interventions, for these are proved to be an outcome of the old paradigm. New models/programmes should be *reconstructed*. Welmans (1997:12) describes this phenomenon quite clearly when he says:

> *In South Africa, there is a desperate need for the development of human potential. It is, however, tragic to see how the previous systems are being re-visited and the past being re-created. Our total focus is on second level (processing) thinking. This level relies on logic and linear thinking ability, but logic does, however, not produce the answers since it merely produces answers consistent with the initial "concept package". This reasoning is in line with the functioning of a computer, which has huge logical efficiency and can now take over second-level thinking.*
>
> *The answer lies in first-level, or innovative thinking, which unfortunately does not receive any attention in either education or research. We cannot just assume that the future must be built on the past; or that the past (and current) education and development systems and practices must merely be adapted for use in the new South Africa. We need to expose our first-level thinking abilities which manifest themselves mainly in the unconscious mind...This is especially relevant in this transitional period when the future must be **discovered** and not based on past paradigms.*

The current state of AD can further be identified by scrutinising current AD aims, programmes and methods.

*   AD aims, programmes and methods

The findings in chapter two indicate clearly, that AD of learners is regarded as a reactive response to the (seeming) inability of learners to perform well at tertiary institutions. The aims which were cited, are proof of this deduction made: to improve throughput figures, for access and redress

purposes, to maintain academic standards, to address high failure rates amongst first entry learners. It is, therefore, not surprising that the interventions, programmes and methods used for AD of learners reflect a remedial, supportive focus.

Mostly, the programmes are characterised by presenting learners with various skills, be it academic, social or personal. These programmes are fragmented, presented apart from main stream programmes, even outsourced to colleges, and label learners as being "at risk". Many are voluntary programmes, therefore not effective. These programmes aim at fixing the problem, quickly patching up where learners are lacking. Learners are presented with reading and language programmes, life skills, and are taught how to write effectively, in academic context, aspects which should have been dealt with at school level. These interventions can, at the most, add to a student's general competence level, it cannot maximise his/her potential. It is also negative in the sense that learners are labelled.

Current AD practices also focus on cooperative skills. It is facilitated through small group tutoring, within the SI-programme which is presented at quite a few institutions. These programmes aim at improving academic performance, developing social skills for working together, communication skills (learners learn to express themselves), and personal skills such as becoming interactive, assertive, developing self-esteem and interdependency. The questions remain, however: Do learners take responsibility for their own learning, or do they rely on the tutor and fellow learners to support them within the group? (attitude of dependency). Do they become emotionally sensitive to others' needs or are these tutoring sessions focussed on rational, logical reasoning, linked to academic outcomes? When focussing on logic at the expense of emotions, it tends to alienate people and diminish their potential (Hein 1999:1).

Another approach is to integrate AD of learners into main stream programmes. In these programmes AD interventions are added to the normal curriculum, enrolling learners for a longer period that the norm for specific programmes (extended, credit-bearing programmes). It is true that these programmes have excellent results as far as academic progress of learners is concerned, and that AD practitioners seriously aim at academic excellence *but* it is still a quick-fix model. The focus is still on where the student is when entering HE, instead of where he/she should be going.

Some institutions went a step further, introducing AD as an integrated part of the subject content. This can be a worthwhile effort, because the problem of fragmentation is addressed. The fact remains, however, that learners are still labelled, for these programmes are presented in extended courses only.

The all-inclusive approach was proposed as being in the planning stage by a few respondents, meaning that all first years should undergo AD programmes, or that tutoring programmes should be run for all learners with problems in academic performance. Only one institution (W) indicated that their future plans are to include all learners, on all levels, in AD programmes. Their aim is still, however, "the development of 'generic' (core) skills such as writing, critical thinking, communication, numeracy and computer literacy" (quoted from respondent's informative letter). The question remains: Do these programmes focus on facilitating lifelong learning whereby human potential is maximised? Whether only some or all learners are included; whether AD programmes are fragmented or integrated; the problem of not responding to the needs and urgent demands of the future world of work, remains.

When respondents were asked whether their programmes would enable learners to realise their potential, many were in doubt, but a few believed that it would. When scrutinising the programmes and methods as well as the aims used by the latter, the researcher has some reservations. Respondents say, for instance, that the potential of their learners is realised, because statistics show that their academic progress has increased. In trying to be responsive to the demands for access, redress and higher throughput rates, AD practices focus on these, and succeed. But, what do they do with regard to the demands from the future workforce?

When reflecting on the current state of AD, as it is implemented and perceived at HEI's, it seems as if the present aim of AD is imposed upon universities and technikons by forces from outside. Socio-political forces appeal to these institutions to give access to learners from disadvantaged backgrounds, to redress imbalances from the past. Sound financial management is partly dependent upon state subsidies which is based, not only on number of enrolled learners, but also on throughput figures, therefore, learners must stay in the system and pass! Human rights movements claim that everybody has the right to higher education, so from a humanitarian

perspective, HEI's are forced to comply. Simerly (1997:39) says in this regard that as we prepare for the 21st century, society at large is concerned with higher education's accessibility, affordability and accountability, amongst others, and that political demands emerging from current world wide changes will be important in determining the future of HEI's . It may , therefore, well be that these and other forces are causing AD to have this reactive aim of supporting learners. It is the contention of the researcher, that *all these aims can be achieved,* and much more, when the holistic development of all learners is addressed in the way proposed by the AD-model. All learners will be in a position where facilitating lifelong learning will eventually maximise their potential. It will be a proactive outreach towards meeting the needs of the future and the 21st century work place.

5.2.1.3   The demands of the future for learners

In chapter three, views were derived from an investigation done through literature research in order to find what futurists, human visionaries, scenario planners and philosophers project to be expected from human endeavours in the unknown future. Through grounded theory methodology and causal action research, the current state of AD was assessed against what the future demands from learners.

The wave theory (Toffler and Toffler, 1995, 1999; Debold, 1998; Maynard and Mehrtens 1993; and Maynard 1999) and the curve theory of Land and Jarman (1992) are convincing of a universal pattern of change which, in our time, is accelerating and proves to be more challenging to people's minds than ever before. Celebrated futurists and management gurus have proclaimed the end of the Information Age and the beginning of the Knowledge Age (Liang and Schwen, 1997:19), indicating that the idea of lifelong learning is indeed an urgent and very real demand for the future. It reflects the inside-out paradigm of Covey (1992), because lifelong learning is an attitude which starts from the inside of a person. The desire to know and keep on exploring in order to know more, cannot be imposed upon a person from outside forces. It is a internally motivated decision. The researcher, therefore, did not focus on mere attributes that are demanded from employees for the future. She went beyond that and focussed on man and all his relationships and how these changes impact on man. It has become obviously clear that demanding challenges

of an unknown future which man are faced with is fundamentally paradigmatic in nature and requires nothing less than a total paradigm shift.

*   Changes that impact on man's intra- and interpersonal relationships

The findings in chapter three reflects paradigmatic changes that impact on man's inner life world. The described awakening of a new spirituality, scientific proof of the interconnectedness of everything in the universe, and ultimately, the new concept of mind/consciousness that gives rise to matter result in a total, fundamental change of word-view. The inside-out paradigm is an example of this view. Man, who has for centuries been confronted with a fragmented, reductionistic, objectivistic, deterministic view of the world including himself, is now challenged by quite the opposite. Wholeness, controlling own consciousness, subjective experience, cooperation and interdependence are now important scientific and philosophic views which are projected as having a profound influence on man of the 21st century.

Yet, according to the findings of this research most AD practices still adhere to the outside-in paradigm. They do not focus on facilitating the total change in world-view which chapter three indicated, and which will give learners an advantage when competing for employment in world class companies. Learners' concept of own potential stays flawed, they do not realise that their potential is vastly untapped, when struggling to make the grade.

*   Demands from the future world of work - employability

When scrutinising the demands which were clearly indicated and discussed in chapter three, they also represent a total paradigm shift. Workers must focus on lifetime employability. They must change from:

~   **mindless to mind workers:** from operating like mindless mechanistic machines to operating as knowledgable people, using their "minds" to initiate, create, solve and lead.

~   **followers to leaders:** from following instructions blindly to using own initiative, having a clear purpose and vision and leading by example.

- **being reactive to becoming proactive:** from reacting only when prompted by outside causes to foreseeing problems, advantages and opportunities and acting on them, planning around them for future success.

- **working alone to working in teams:** from being the independent loner, who thinks he/she alone can perform certain tasks to becoming the team player, contributing to the success of the institution.

- **being rigid in their career paths to becoming flexible and employable:** from staying in the profession/job which marked the start of their career to switching jobs and even careers in order to be employable and live a fulfilling life.

- **mass thinkers to individual, creative thinkers:** from being influenced by the thoughts of the masses which eventually leads to uninspired, biased, conforming, lower order thinking to original, creative, inspiring, higher order thinking, which also includes critical evaluation.

- **being employees to becoming entrepreneurs:** from having the mindset that one can only be employed by others to having the entrepreneurial mindset that one can, and should, start your own business using creative ideas, inisiative, taking bold, risky decisions trusting their success.

- **being company-oriented to becoming client-oriented:** from focussing on the company's needs such as making huge profits to focussing on client needs like excellent service.

- **being efficient to becoming effective:** from knowing how to get the job done to knowing what the job is which needs to be done!

- **being responsible for oneself to becoming responsible towards society and the environment:** from being self-centered to becoming a caring, nurturing, self-less person.

- **working for money to volunteer work, serving others:** from doing the ordinary eight hour a day job to extending your service to others, voluntarily, or for exchange of other services.

- **adhering to a personality-ethic to a principle-centred character ethic:** from building your life around what you think other's would want you to be like to finding your true self and developing your life along universal principles based on values.

When current AD practices are assessed against the demands of the future, the findings in chapter three indicate clearly that current AD practices do not focus on these demands. What they do focus on, is academic skills like reading, writing, note-taking, thinking, study skills, exam writing techniques, language development and computer literacy. Projects, like tutoring and mentoring of which individual counselling also forms part feature in many institutions. Some respondents indicated that learners need to be prepared for the world of work and then refers to curriculum 2005 which will eventually produce learners who will know more about the world of work. This view is probably derived from the philosophy of integrating education and training, thereby emphasising vocational and technical training, as well as "industry training" (Department of Education, 1997:13) and focussing on skills like computer literacy.

All these programmes are, however, run with the aim of academic success. The questions are, what are the results of these interventions? Do they facilitate a total change in attitude? Are learners proactively responding to the demands of the future after undergoing these programmes, controlling consciousness, pursuing first level thinking, always taking on new challenges driven from an inner belief system, willing and able to take control of their own lifelong learning, being flexible, creative and having an entrepreneurial orientation, always pursuing excellence? (3.6.1). Do learners understand the importance of being excellent, supportive team workers, interdependent, cooperative, emotionally intelligent people, able to work in diverse teams? (3.6.2). All of which will distinguish them from the rest and make them employable, effective citizens.

When one reflects on all the changes, demands and challenges, one comes to the conclusion that an attitude of lifelong learning and the subsequent maximising of human potential, is at the basis of these demands. Maximising human potential is therefore what AD practices should focus on and this can be achieved through facilitating lifelong learning . It is only then that learners will be prepared for the dramatic changes facing them in the new world of work.

The consequence is, therefore, that a new model for AD of learners should be developed for implementation in HEI's. This was the aim of the third and fourth research questions, and this aim was fulfilled in chapter four.

5.2.1.4   A proposed AD-model to prepare learners adequately for the unknown future

The achievements of chapter four was that a grounded theory was constructed in the form of a theoretical model that will guide AD practice to fulfil the demands of the 21st century. This chapter is therefore a resultant action research phase, caused by the discrepancies found between the current state of AD and what the future demands in this regard. This model was guided by a new paradigm in education (Slabbert, 1997) and has as aim, to maximise learners' potential through facilitating lifelong learning. The challenge of finding the courage to develop a new and innovative way to nurture and develop human potential was therefore taken up. The researcher reflected on the essence of all the changes and demands depicted in chapter three, and had the AHA-experience that, in order to answer to all these needs, a continuum model should be followed, where learners develop intrapersonal, interpersonal, and eventually suprapersonal relationships, in order to become fully integrated, whole people, that will excel through the demanding challenges of the new millennium with enthusiasm and courage.

*   Facilitating intrapersonal relationships

Adhering to the criteria which were set for the proposed AD-model to fulfil its aim, facilitating intrapersonal relationships included components which will develop all learners to become aware of their unique potential. Learners are challenged to explore and eventually control their unconscious mind, where all the untapped potential lies waiting to be released. Through actively gaining self-knowledge (including awareness and development of all the intelligences and abilities), and building self-esteem, learners become confident, self-reliant, autonomous metalearners, planning, executing and evaluating their own learning, with creative first-level thinking abilities, driven by an internal locus of control and purpose, in order to excel in life. Facilitating lifelong learning results in an *attitude* which manifests in a *purposeful endeavour* to consciously control and steer one's life to the fulfilment of one's purpose on earth, namely maximising potential.

Seeing that the AD-model's aim is derived from what the 21st century demands of man (chapter three), it can be concluded that current AD practices focus on past and present needs (5.2.1.2), instead of those of a rapidly changing, fundamentally new future (5.2.1.3).

Realising intrapersonal relationships is, however, the basis for realising interpersonal relationships, the focus of the next development aim on the continuum.

*   **Facilitating interpersonal relationships**

The essence of the paradigm shift, as it was described in chapter three, and derived from new developments in the natural, cognitive and noetic sciences, is the interconnectedness of the whole universe. Man can, therefore, not deny this fact. Learners need to develop an attitude where cooperative, interdependent, harmonious relationships with others as well as the environment are crucial.

The components included in the proposed AD- model, aim at facilitating this attitude. Becoming emotionally intelligent, being sensitive to others' needs and respecting their views, working together in functional teams, trusting one another and sharing information as well as feelings in an interdependent way, are what is gained from facilitating interpersonal relationships.

The consequential achievement of intrapersonal life competencies (4.3.4.1 H) and interpersonal life competencies (4.3.4.2 D) are fulfilling the aim of the first two phases of the proposed AD-model. These two sets of competencies culminate, however, in the last phase of the proposed AD-model. Becoming fully integrated people with suprapersonal relationships, aiming at life-time employability is the aim of the last phase on the development continuum, and is also the fulfilment of having developed intrapersonal and interpersonal relationships in order to excel in a turbulent future.

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* **Facilitating suprapersonal relationships**

The demands for employability implicates that people need to undergo a paradigm shift. They need to become principle-centered, maintaining suprapersonal relationships with themselves, others, and the universe. They must align their principles and values to those of an effective, dynamic and enduring organisation, pursuing the mission and vision of fulfilling the purpose of their organisation, because organisations of the future will embody the values of staff in that purpose (Schwan and Spady, 1998:44).

All workers should become leaders, for the role of managers have already changed to that of facilitators, of involving staff on all levels to participate in decision making. Mehrtens (1999:270) and Debold, (1998:2), have projected that the *role of the manager* will eventually be *none* in the new world of work. This may indicate that everybody will be responsible for their own progress, setting own standards, evaluating own performance, and that teams will be setting goals, planning and evaluating their outcomes. Becoming leaders and having a strong work ethic, aligned with professionalism, therefore, are crucial.

These needs were addressed in the third phase of the proposed model. Facilitating integrated, suprapersonal relationships aims at the development of social and environmental responsibility, a caring and nurturing attitude towards the work place and others, a service-orientation, culminating in a principle-centred, wholly integrated person. The importance of allowing for learners to gain practical experience in a real work situation is crucial during this phase. Practical intelligence is therefore realised through this endeavour.

The conclusion can be made, therefore, that:

> Current AD practices fail in being responsive to the demands of the future. They fail in preparing learners for lifetime employability. They fail to facilitate lifelong learning, thereby maximising human potential, the ultimate demand for a challenging 21st century.

The structuring of the new proposed AD-model was achieved by following the criteria set for this purpose, and which aligned with those of the proposed AD model.

*   Structuring of the proposed AD model

The criteria which guided the structure according to which the proposed AD-model should be implemented, are that it must be a paradigm shift, it should be institution-wide and it should follow the natural developmental continuum of learners at HEI's (4.3.5). In so doing, the researcher is convinced that institutions will become accountable, through being responsive to the needs, challenges and demands of a future where change accelerates at an alarming pace and a fundamental paradigm shift is demanded.

AD should be transformed and restructured into the model which is proposed in this report, constituting an institution wide paradigm shift including management, AD staff, lecturing staff, personnel development staff, all learners and all academic programmes. It should follow the natural development continuum that learners undergo at tertiary institutions, including the components of all three phases proposed, during every academic year of every student, increasing in quality and content over time. Lifelong learning is not only meant for learners, but for institutions as well! Hammer and Stanton (1995), Land and Jarman (1992), and Senge, et al. (1994) advocate lifelong learning, not only for people, but also for organisations and societies.

The conclusion can be reached, that the proposed AD-model needs to be a reengineering model (4.3.5). It should be structured with the criteria of a reengineering model as guidelines:

i) There must be a guiding idea. In this instance, maximising human potential through facilitating lifelong learning.
ii) The theory, methods and tools must be clearly developed. In this report, the intra- inter- and suprapersonal relationships represent the theory. The components are the tools and the facilitation of learning represents the methods. All of these were extensively discussed in chapter four.

iii) Innovations in infrastructure will include the restructuring of AD to reveal a new infrastructure. The said restructuring according to the criteria of a paradigm shift and an institution-wide change will represent the new infrastructure.

iv) The implementation of the reengineering model is proposed as following a natural developmental continuum, which should increase in quality, over time.

If AD of learners is structured along the criteria proposed, where whole institutions are involved, then *all learners* can enter their place of work with courage and enthusiasm, with the conviction that they are fulfilling their purpose in life.

Although the research resulted in a body of very valuable achievements, scrutinising through reflection revealed a number of limitations or shortcomings that will be discussed.

5.2.2   LIMITATIONS OF THE STUDY

In order to answer the research question and fulfil the aim of this study, the current state of AD practices in South African institutions of higher education needed to be established. A qualitative grounded theory methodology was followed, concluded in an action research format. Several phases followed upon each other, each phase evaluated and revised, in order to plan and implement the next step, to improve the quality of the subsequent action. Questionnaires were sent out twice, followed by personal interviews of AD practitioners. This whole process revealed upon reflection the following limitations.

5.2.2.1   Not all-inclusive

Not all AD practitioners of practising AD institutions were included in the research as respondents, however, nor were the decision makers of these institutions consulted. The reason being, that when the researcher made contact with these institutions, she requested assistance in reaching the most appropriate persons who could complete the questionnaires. She included more that one questionnaire when mailing it to the institutions, but always, received only one completed questionnaire. On only two occasions was she referred to more than one person for interviewing.

In many instances, the head of the AD department conducted the interview/completed the questionnaire, but equally, in many instances, it was one of the AD practitioners working in the department. Other reasons for not including all AD practitioners are, limited resources like time and finances. The researcher could not spend more time at institutions, insisting on interviewing all AD practitioners, because of financial and time restraints. She had limited time allocated to study leave, as well as limited finances. The question is, whether including all AD practitioners as respondents in this research, would add to the value of the findings? Including decision makers in the research, however, could give more light on future plans with regard to AD. It could be detected from the interviews that in certain institutions, future plans were in place and that these were communicated to the AD departments. For instance, the integrated approach which is foreseen for a few institutions was indicated, as well as plans to outsource AD to colleges or implement them in a decentralised way, in faculties only. Where future plans were in place, or were applicable, an AD practitioner was in a position to give that kind of information, it seemed.

One of the criteria for trustworthiness in qualitative research, is that saturation of data should be indicated. The researcher is satisfied that this is the case. During phases five, six and seven of the research (chapter two), the researcher indicated the occurrence of saturation of data, because certain patterns could clearly be detected when analysing the data. Consistency and dependability of data was reached, indicating saturation and trustworthiness.

It can, therefore, be deduced that the data is trustworthy. The current state of AD as depicted in chapter two and earlier in this chapter can, therefore, be regarded as a true picture. This is also confirmed by recent research in the same field (SAAAD, 1997). The fact that not all AD practitioners and decision makers in practising institutions, were included in the study will, therefore, have little influence on the current picture of AD, which cannot change the fact that AD practices are not responsive to the needs of the future.

5.2.2.2   No tape recordings made

It can also be seen as a limitation that interviews were not recorded and transcribed. It might have contributed to the trustworthiness of this research. The researcher felt, however, in qualitative

terms, that the answers to the questionnaires should give a sufficiently accurate account of what the current state of AD is. The aim of conducting personal interviews, at the point when it was deemed necessary to do so, was to motivate the AD practitioners of practising institutions, who had not responded to the questionnaires, to do so forthrightly, as the researcher will be visiting them, asking about their practices. The questionnaires, therefore, acted as an original source of information, and the interviews, originally designed to obtain the information lacking in the questionnaires, probing further, resulted in valuable qualitative addition, wanting to obtain an "insider view" of AD practices, of the feelings and attitudes of practitioners and the way they see their role as AD practitioners. The researcher is satisfied that the data received through face-to-face interviewing was indeed very rich, revealing, and contributed to developing a grounded theory of the current state of AD practice at South African HEI's. Vague answers, uncertainties and ambiguities found in the answers to the questionnaires could be cleared and eliminated. The researcher paid close attention while conducting the interviews, taking notes and probing. She made use of thick descriptions when entering the data into the tables in chapter two. Direct responses, in the words of the respondents, were therefore given.

It might be, however, that some important information could still have been missed by not recording the interviews. The researcher anticipated this, and followed up by doing participant checks by sending the interpreted data to a sample of the respondents, requesting them to verify the validity or truth value of the data. The results of this action proved valuable and the researcher remain confident that the technical limitation of not fully recording all interviews did not impact the research in a negative and untrustworthy way because of the measurements employed to overcome the limitation.

5.2.2.3   Consult more knowledgable people

The researcher made use of a critical reader and qualitative researcher as form of triangulation and peer evaluation. More persons could be included in these activities, however. Having discussions with more colleagues and knowledgable people in the domain of this research, might heighten the trustworthiness. By including more critical readers and having more critical discussions, neutrality, a criterion used by Guba (Poggenpoel, 1998:348), could be enhanced; neutrality, in the sense that

the research procedures and results are a function solely of the informants and conditions of the research and free from other biases, motivation or perspectives. Again, it is a problem of time and finances. The researcher is fairly isolated, working on a satellite campus, situated in a more or less rural area, far from other AD practitioners or colleagues who could render interesting and stimulating discussions. Having to visit identified colleagues and knowledgeable people, spending time with them, takes a lot of the said restricted resources. The researcher, however, had numerous discussions with knowledgable people, attended many workshops, seminars and conferences in order to be in a stimulating environment. Through conducting the interviews, the researcher was in a position to share ideas with colleagues, as the interviews were conducted in a semi-structured way, leaving space for informal discussions. Technology was also utilised, through making use of E-mail conversations with colleagues.

The researcher is confident, however, taking into account the isolation of her physical location, that the measurements employed to overcome the said limitation are adequate and contributed to the comprehensiveness of this research as far as it was possible.

5.2.2.4   Language limitations

In chapter three, views were derived mainly from an investigation done through literature research in order to find what futurists, human visionaries, scenario planners and philosophers project to be expected from human endeavours in the unknown future.

Although literature research was done extensively, it was limited to literature in English and Afrikaans. Ideally, literature resources should include all languages in order to encompass all relevant research done or information which can enlighten the research topic. English is, however, an international language and most literature of international value or standard, is being translated into English. Related languages to Afrikaans, which are fairly accessible and of which the researcher has some knowledge, are Dutch and German. When reading for research purposes, however, these languages could pose a problem of possible misunderstanding, which would be detrimental to the study.

The fact that only English and Afrikaans literature resources were used, will not necessarily influence the trustworthiness of this study in establishing the demands of the future. Since technology has introduced the "super highway" where information from all over the globe can be accessed and the world becomes a global village, it is fairly safe to assume that the demands of the future, as depicted in this research, are comprehensive.

5.2.2.5   Use of secondary resources

At first glance, it is clear that during this research, a more than often use was made of secondary resources instead of primary resources. This would normally be regarded as a research limitation. However, the fact that a more than usual secondary resource inventory is identified does not mean that the primary resources were ignored, not consulted or not used for verification of the secondary resources. It is with recognition of the primary resources that the secondary resources were used as reference, because of the particular context related to the research question that the secondary resources have already established.

Although this issue is discussed under limitations of the research, this paragraph actually serves only as an explanation of the phenomenon.

5.2.2.6   Incomplete reengineering

The proposed AD-model is presented as a reengineering model for AD practice. It provides the guiding ideas, principles, theory, tools and methods, as required. It can be seen as limitation, though, that the tools and methods have not yet been developed completely. This should, however, not be surprising because the process of reengineering is in itself a developmental process that needs to develop the most appropriate and applicable tools and methods to fulfil the vision of the new paradigm. Research should reveal more tools and methods whereby facilitating lifelong learning for the consequential ongoing maximising of human potential can be realised. This research therefore recognises that the tools and methods suggested in the proposed AD-model are not complete or extensive. It should be an endeavour for future research, to develop these on a grand scale.

5.3   RECOMMENDATIONS

The recommendations are two-fold and will deal with suggesting research measures to rectify limitations as future research as well as research that may be demanded from the projected challenging future.

5.3.1   RECOMMENDATIONS REGARDING THE LIMITATIONS OF THIS RESEARCH

Adhering to qualitative research which is, for this study, manifested in the grounded theory research methodology one can engage in yet another action research phase to address the limitations of this research. The "back-and-forth interplay with data" which is central to the grounded theory methodology (Strauss and Corbin 1994: 282), could be developed even further.

The point must at some time be reached, however, where the researcher decides to leave the field of investigation. In this instance, the researcher was satisfied that data saturation has occurred to such an extent that trustworthiness could be established. It is the conviction of the researcher, that little, if any, value would be added to the research regarding limitations except for the limitations regarding the tools and methods for reengineering AD.

Tools and methods for reengineering the AD-model need to be developed further as discussed (5.2.2.4). The tools which are suggested as components of the proposed AD-model of this study does not implicate that it should be the only tools, nor that they should be static. Reengineering is a lifelong endeavour, it relates to change, which is part and parcel of life, therefore tools should continuously be developed, reconstructed and re-employed. The methods to facilitate learning should be elaborated upon for the same reason. The researcher does not maintain that the methods proposed for facilitating lifelong learning in the proposed AD-model are absolute, extensive or exclusive. Ongoing research will continuously reveal new tools and new methods which could be employed successfully in the proposed AD-model, adhering to the changing demands of the future. This should also be an endeavour for future research, therefore.

5.3.2   RECOMMENDATIONS WITH REGARD TO FUTURE DEMANDS

Future research implies both the future as *source* of research in terms of an anticipated future, and research still to be undertaken in view of its value or necessity for literature or praxis research (Slabbert, 1998:47)

5.3.2.1   The future as source of research

In terms of researching the future as source of research, ongoing research is needed to determine what the future holds in store. Anticipating the future and all its demands and challenges, is a dynamic endeavour and can never be seen as a task completed. Researchers, all over the world, therefore, should be engaged in ongoing research about the future.

5.3.2.2   Future research still to be undertaken

The AD-model described in chapter four, is a proposal based on the findings of chapter two and three of this research. It reflects the way in which an AD-model could be employed in order for the demands of the 21st century to be met. This model has not been implemented and tested, however. It should, therefore, be the purpose of future research.

The following recommendations regarding *implementation* of the AD-model are based upon the conclusions of this research.

a) The current practices of AD in HEI's in South Africa need to be reengineered. It needs therefore a set of guiding ideas, principles, tools and methods (Slabbert, 1998:53-54). The proposed AD-model fulfils the requirements of a reengineered model, as proved under 4.3.5.1 (chapter four). Research with regard to the engineering of AD practices should continue.

   i) The guiding ideas of this AD-model is constituted in its purpose and vision, namely to meet the demands of the future, which is the maximising of human potential through facilitating lifelong learning. It also constitutes a new paradigm with a new structure and

content. These guiding ideas should be facilitated throughout institutions by AD practitioners who are convinced of its worth.

ii) A "new generation" of AD practitioners should evolve from this endeavour. They should become paradigm pioneers, facilitating the shift throughout institutions. They should act as change agents, sharing the vision always and everywhere, convincing colleagues that change is real, it is fundamental, it is demanded, and would bring about outcomes of magnitude, if yielded to. Colleagues must understand, that the old paradigm is redundant and would be disastrous to pursue. They must, therefore, be confronted with the new paradigm in order to appreciate its value and take ownership of the vision.

iii) The principles for the reengineered model are contained in the meta-theories of the model, namely, metalearning or intrapersonal learning; cooperative learning or interpersonal learning; and principle-centered learning or suprapersonal learning. These are the outcomes of the proposed AD-model and the facilitation thereof, are of the utmost importance.

iv) AD should be facilitated because it cannot be presented. The new paradigm needs to become a new way of life and not another skill to master. Facilitation, therefore, need to take place throughout institutions, deliberately and consciously activating the thoughts of learners, staff and management towards the realisation that only through lifelong learning will the challenging demands of the 21st century be met.

v) The tools and methods which were developed for the proposed AD-model are contained in the criteria, components and structure of the model. Programmes and methods should reflect a fundamental new approach, recognisable through new aims, focusses and structures. Old programmes should not be revised or adapted, a totally new model, as was proposed, should be implemented. These endeavours should meet the criteria for the proposed model which was discussed in chapter four (4.3.3). It should include all the components of the proposed model and structured to include the whole institution: management, staff, programmes and learners. AD practitioners need to

facilitate the change, they need to become the paradigm pioneers, as was discussed in chapter four (4.3.5.1). This would enhance the accountability of HEI's towards society and, specifically, towards the world of work. The development of tools and methods should be expanded, however.

b) Action research by AD practitioners needs to be done when implementing the proposed AD model, assessing it and revising it where necessary. The effectiveness of the described AD-model can only be evaluated in relation to practice because it has been derived from practice.

c) The pressing demands of the future world of work as well as for man in general need to be met. The demands described in this research culminate in the need for human potential to be maximised. Facilitating lifelong learning will fulfil this need and must therefore be included in any endeavour of AD.

d) A longitudinal study could be undertaken, in order to establish the dependability of the research, heightening trustworthiness (Guba and Lincoln, 1994:114). Institutions where this model is implemented, should follow up on their learners after graduation, in order to establish whether they do indeed live meaningful lives, pursuing lifelong learning and maximising their potential. The world of work should also be included in the investigation. They could give valuable information as to the effectiveness and employability of these learners, in meeting the demands of a new profile for workers in the 21st century. The aim of future research for this study, would thus be to test the proposed AD-model, to validate it and to disseminate the findings to a larger audience.

e) Research is never completed, but is ongoing. There is not one truth only, change is dynamic and immanent; therefore, research is a lifelong endeavour.

5.4   CONCLUSION

Finally, the value of this research can be seen in the fact that it is a quantum leap. According to Wolf, (1981: 2) the quantum leap is, literally, a small but *explosive* leap that a fraction of matter undergoes when it moves from one position to another. "New physics" indicate that all particles constituting the physical universe should move along in this manner, lest it should stop existing! In taking the quantum leap, this study has surpassed the reactive, deterministic, cause and effect paradigm by taking the risk, having the faith and courage to take a spiritual leap, follow intuition, maximise potential and create our own future. We will not stop "existing"!

26 August 1997

The Head
Student Academic Development

Dear Colleague

ENHANCEMENT OF STUDENT LEARNING

I am currently involved in a project to improve student learning at tertiary institutions.

Since we are all involved in this mammoth task I took the liberty of approaching you and/or your staff members to cooperate in a small way to achieve this aim to the eventual benefit of us all.

Requiring about 15 - 20 minutes of your time I humbly ask you to provide me anonymously with some vital information.

Since I believe you express yourself best through your own means, I have only supplied you with the questions and the choice of how and on what to answer it, to yourself. The only serious request is to put the number of the questions next to the corresponding answer.

I am awaiting your response in great expectation before the end of September because I know that you have a terrible schedule with the exams approaching in October.

Thank you for your cooperation.

Yours sincerely

M CELLIERS
HEAD : STUDENT GUIDANCE AND COUNSELLING

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INFORMATION

SECTION A

This section deals with the composition of your organisation.
1.   What is the name of your tertiary institution?
2.   What is the name of your department/section within the tertiary institution?
3.   Make a diagram of the composition (structure) of your department/section and indicate your position on it clearly.

SECTION B

This section deals with your position description.
4.   What is the title of your position?
5.   What is the minimum educational requirements for the position?
6.   What is your highest educational qualifications with regards to the position?
7.   What is the minimum skill requirements for this position?
8.   What is your highest skill performance?
9.   What is the minimum practical experience required for this position?
10.   What is your practical experience in this position?
11.   What is the main function of your position?
12.   Give a task analysis of your position (or describe the activities you position requires).
13.   Make a table with two columns. In the first column write down as clearly as possible the five major activities you are ACTUALLY involved in, in order of frequency (highest to lowest) and indicate the approximate frequency (number) per day / week / month / semester in the second column.

SECTION C

This section deals with methods and programmes.
14.   Make a table with three columns. In the first column write down the five major methods and/or programmes you are using in order of frequency. In the second column describe the method and/or programme clearly but briefly and in the third column indicate the approximate frequency usage (number per day / week / month / semester).
15.   How and when do you use the computer.

SECTION D

This section deals with student performance.
16.   How do you keep record of student performance.
17.   What is your aim of keeping the record of student performance.

SECTION E

This section deals with Curriculum 2005.
18.   How do you see the influence of Curriculum 2005 on what you are doing.

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

ADDENDUM B

Dear Colleague

ACADEMIC DEVELOPMENT

I have written to you some time ago requesting information on what your institution is doing regarding the development of students' academic performance/skills.

It is clear from the responses I received (very few) that the questionnaire was too vague. I would therefore repeat my request, but will furnish you with more information regarding my aim with this research project.

I am currently enrolled for M.Ed studies at the University of Pretoria and heading the Student Guidance and Counselling Bureau at the Technikon Pretoria's Nelspruit Satellite Campus. My job is not merely guidance and counselling, but expands more to the pressing need of students with regard to study methods and skills, enhancing reading fluency and concentration, remedial work in problem subjects like maths and English. The list can became endless. It is in this section of our work that my interest lies. I want to establish:

1. What is being done at all South African tertiary institutions regarding the development of "academic skills", (as discussed above), to enhance life long learning.

2. How institutions organise this "unit" - Is it part and parcel of the career guidance/counselling or do you have a separate unit, with specially skilled people manning this unit.

3. What is the task description of the person dealing with academic skills development?

4. Do you undertake research programs to establish the value of above programs?

The general aim of this research is therefore, to establish what is being done in South African tertiary institutions to enhance students' academic performance, to look at the demands laid down by the new Curriculum 2005, the White Paper on Education as well as the NQF and SAQA, and to act on these changes with a re-look at what we are doing.

I will therefore continue with a small questionnaire which I request you to complete for me. (Disregard the previous one if you haven't completed it yet.) If there are various people working in the field of enhancing academic skills, could they please complete the questionnaire as a combined effort, or each complete their own.

Thank you kindly

M CELLIERS

PS. Please send this questionnaire to the correct person(s) if it was misdirected to you.

QUESTIONNAIRE

1. Draw a diagram of the composition of your Department, indicating the various positions according to tasks. Indicate the division dealing with academic development of students with an arrow please, e.g.
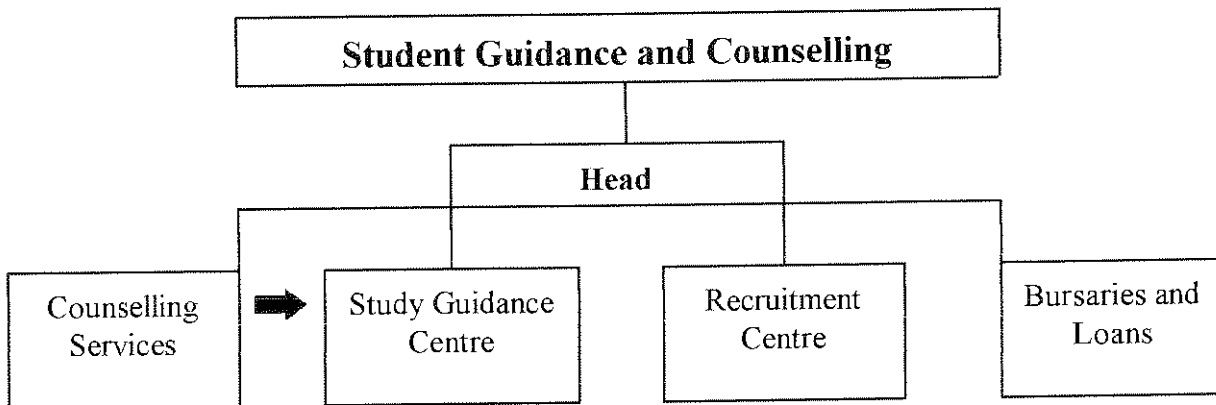
YOUR OWN DIAGRAM

2.a) What is the present profile of the person filling the position that deals with study guidance/academic skills development? (Your position)

QUALIFICATION: ....

EXPERIENCE: ....

SPECIAL SKILLS: ....

2.b) What do you think would be the ideal profile of the person referred to in 2.a?

QUALIFICATION: ....

EXPERIENCE: ....

SPECIAL SKILLS: ....

3. For this question it might be necessary to focus on the academic skills development tasks rather than counselling please. Task analysis of position described in Question 2.

Major activities in order of frequency, that you are involved with, regarding academic skills development.

LIST OF ACTIVITIES IN ORDER OF FREQUENCY	FREQUENCY			
	Daily	Weekly	Monthly	Semester
1.				
2.				
3.				
4.				
5.				

4. Which methods and / or programmes do you make use of to enhance academic skills development i.e. reading programmes, study skills, special programme that you follow, etc.
(Please attach more information if you have)

Five major methods/ programmes in order of frequency	Short description of each, i.e. is it computerized?	Frequency of application			
		Daily	Weekly	Monthly	Semester
1.					
2.					
3.					
4.					
5.					

5. If you undertake research programmes regarding the value of programmes and methods used to enhance student performance, would you make the results available to the other researchers?

YES [ ]   NO [ ]

6. Do you run "bridging" programmes for "under prepared" students?

YES [ ]   NO [ ]

6.1 If YES, is it run by your section/self or different Academic Departments at your institution?

SELF [ ]   ACADEMIC DEPARTMENT [ ]

6.2 If YES, briefly describe the different programmes, please (or attach leaflets).

....
....
....
....
....

7. How do you see the influence of Curriculum 2005 on what you are doing presently? Would it have an effect on the way you address academic skills development?

....
....
....
....
....

8. If the need arises for me to phone you in order to collect more data, please list the names of people I should contact.

....

....

....

Thank you

M CELLIERS

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