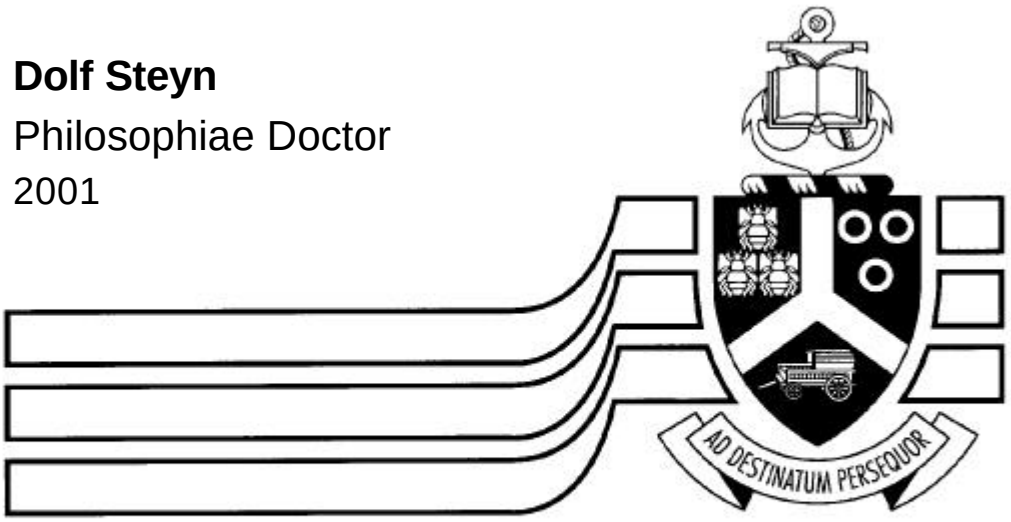
Creating a Learning Organisation, using information technology

Dolf Steyn

Philosophiae Doctor

2001



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Creating a Learning Organisation, using information technology

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Creating a Learning Organisation, using information technology

By

Adolf Bosman Steyn

Thesis

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Abstract

Creating a Learning Organisation, using information technology

A thesis by

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Department:	Information Science
Degree:	Philosophiae Doctor
Institution:	University of Pretoria

This thesis reports on a literature survey followed by an internet-based enquiry into best practices in academic support, with particular reference to the use of information and communication technology. It was found that higher education is a rapidly changing environment in which there is a constant demand for support, some of which may be provided by information technology. Learning organisations, however, need to be grown within the reality of existing attitudes and learning cultures. The reasons cited for failure of current methodologies are: understaffing/time constraints, money/budgetary limitations, faculty too busy or disinterested, perceived credibility/non-academic status of development practitioners and the perceived level of importance of teaching.

No single solution will satisfy everybody; nor do simplistic answers or options exist. Four issues seem to stand out. They include the willingness of staff to be involved in developmental interventions (receptivity), the availability, clarity and accessibility of information (lucidity), the need for networking (dependency) and the use of technology.

It would seem that these aspects are interrelated in that the relative levels of receptivity, lucidity and dependency may determine the degree of technological intricacy that staff are likely to tolerate as a medium through which to channel organisational learning interventions.

Abstract

Key Terms (in alphabetical order)

- ✓ Change
- ✓ Dependency
- ✓ Development
- ✓ eVelopment
- ✓ Higher education
- ✓ Information Technology
- ✓ Learning organisation
- ✓ Lucidity
- ✓ Receptivity
- ✓ Staff support and development
- ✓ Technology

…oOo…

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VES

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Chapter 1

"Zulke schitterende perspectieven voor modernisering van onderwijs en leren, en zo grote traagheid om er gebruik van te makern. Hoe zouden we dat kunnen doorbreken?"

(Harry Brinkman, 2000)

1. Prelude

This research sets out to explore issues surrounding the following question:

> Which factors need to be considered in order to exploit the opportunities of information technology to optimise support to higher education staff during times of change in order to create a functional learning organisation?

2. Introduction

The saying goes that change is the only constant and Taylor (1999) rightfully accepts change as a ubiquitous phenomenon. Education, like the rest of the world, is in a state of change. This is echoed by the Dearing committee (1997) and the West committee (1998) who regard change in higher education as inevitable. They also concluded that the pace of change is accelerating.

Even transformation and equity, which are often cited as motivators for change, are not unique to South Africa. Other countries also have different nationalities to incorporate in their education systems e.g. Hispanics, African-Americans and East block nationalities.

Change may not impact equally across educational institutions, but factors influencing the institution, the lecturers or the learners themselves, in whatever way, should at least be considered as potentially important. Bryant (1999) advocates a "focus on stakeholders" as well as "a shift towards a shared vision". While this study will focus on higher education, education cannot be isolated from the influence of change in wider contexts. Globalisation, overpopulation, the AIDS threat, technological growth, ever widening gaps between rich and poor, governmental re-engineering and legislation are but some of the factors which will need to be investigated. This study will also explore attitudinal interventions and motivators to employees.

The accusation is often levelled that education is not keeping up with change and that students are inadequately prepared for the world of work upon completion of higher education (Roberts, 1995). While this may not be true in all cases and since lecturers face demanding challenges (Felder, 1994) it is unfortunately not entirely false either.

> *"In the current volatile context of higher education, academics are grappling with complex issues in a way that has never previously been required of them* (Adams, Marshall and Cameron, 1999)".

Those academics who do want to face up to the challenges of the times are not without problems either. They often find their efforts hampered by bureaucratic hurdles and stumbling blocks. Internal politics caused by threatened colleagues and line managers often create a myriad of technicalities and de-motivators (Naidu and Steyn, 1999). Staff members may find themselves unequipped to deal with all of these issues and eventually succumb to mediocrity.

Stagnation is not an option available to South African academics. Multiple legislation dictates changes directly impacting on higher education and Table 1.1 lists some of them:

Year	Legislation
1995	South African Qualifications Authority Act [No. 58]
1996	Intellectual Property Laws Rationalisation Act [No. 107]
	Constitution of the Republic of South Africa [No. 108]
1997	Education Laws Amendment Act [No. 100]
	Higher Education Act [No. 101]
1998	Employment Equity Act [No. 55]
	Skills Development Act [No. 97]
1999	Skills Development Levies Act [No 9]
	Higher Education Amendment Act [No. 55]
	National Student Financial Aid Scheme Act [No. 56]
2000	Promotion of Equality and Prevention of Unfair Discrimination Act [No. 4]
	Higher Education Amendment Act [No. 54]

Table 1.1: South African legislation important to Higher Education

The main educational shift in South Africa is currently towards learner-centred outcomes-based education. A change on such a scale calls for drastic recurriculation and didactic reform. The majority of academics are ill prepared and unequiped to face such changes (Naidu and Steyn, 1999). Webb (1996) even calls staff support and development an "institutional necessity".

Structures providing adequate awareness with sufficient interventions are simply not in place, admittedly often as a result of ignorance. A recent study done at the Technikon Witwatersrand, found that only 5% of the respondents felt that they needed no additional support (Naidu and Steyn, 1999).

At the same time we have to cope with the emergence of a technologically linked society. There is an increase in the number of users with access to e-mail and internet facilities. A global network of cognitive support is already in place between academics. One example of such a network is ITForum which can be visited at http://itech1.coe.uga.edu/itforum/home.html.

In many instances globally there is a move towards better utilisation of benefits of information technology. These benefits need to be explored and contextualised. Technology changes the way we do things. As Argeron puts it:

> *"Change and Information Technology is part of the content and not just part of the context."* (Argeron, 2000)

Merely to be able to use new technologies is not enough either. Information technologies need to be used in the appropriate way to allow for the availability of both technology and competencies (Norman, 1993). What works elsewhere may not work within a South African context.

This study will explore local situations and investigate successes elsewhere. It will recommend a frame of reference from which to approach the use of technology in supporting and developing staff in Higher Education. This study will also investigate ways in which creative staff support and development can deal creatively with possible constraints and exploit advantages of information technology within this context.

This study will not only highlight developmental needs, but also highlight methods used and successes reported by other institutions. It will focus on the benefits that information technology can offer to the development of a strategy where South African higher education institutions could optimise staff development in order to successfully support staff in the globally changing educational sector.

For the purpose of this study, making optimal, yet responsible use of electronic means to augment staff support and development is called **eVelopment**.

The research undertaken is conceptually represented in Figure 1. There are three tensions namely:

- ✓ the provision of services to busy academics within a changing environment,
- ✓ changes in the educational sector and
- ✓ the user uncertainty regarding the correct utilisation of Information Technologies

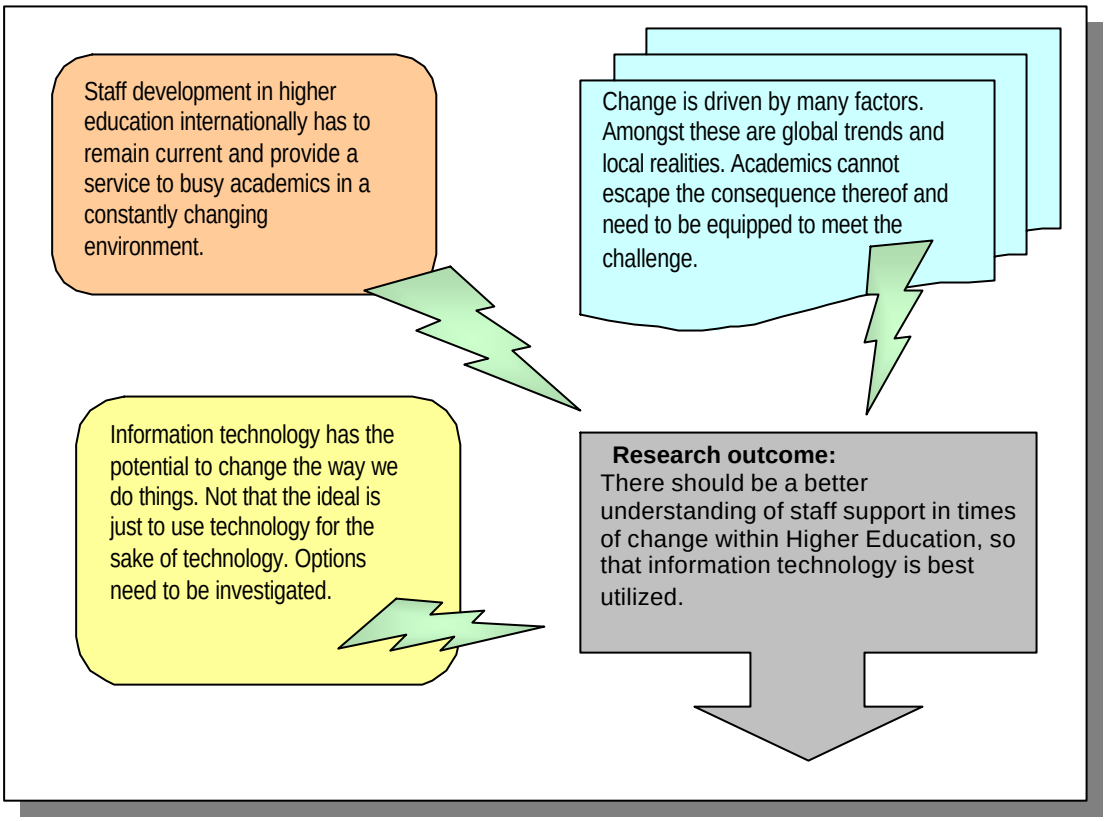


Figure 1: Graphic representation of the research focus

As shown in Figure 1 above, this research will define the shared context for information technology, change and best staff development practice. It is necessary to investigate and analyse current staff development practice in order to identify components to accommodate and incorporate in a local eVelopment approach.

3. Research question

The major research question addressed by this research is:

> Which factors need to be considered in order to exploit the opportunities of information technology to optimise support to higher education staff during times of change in order to create a functional learning organisation?

Exploring this issue within the context of higher education, the following issues and sub-questions arise:

3.1 Change

3.1.1 What is change?

3.1.2 How do people react to change?

3.1.3 What is the extent of change required from South Africans?

3.1.4 What are the effects of change on staff members in higher education?

3.2 Staff support/development

3.2.1 What are the characteristics of successful staff development elsewhere?

3.2.2 What is the extent to which staff members need support?

3.2.3 What are the dynamics between change and staff support?

3.3 Information technology

3.3.1 What are the possibilities and constraints of information technology as a vehicle for development and support?

3.3.2 Which changes need to be made to staff support and development practice to exploit the possibilities of information technology?

4. Literature review

The literature reviewed for this study covers the following aspects:

4.1 Change

- ✓ Phenomena resulting in change in higher education. This will include global trends impacting on institutions, faculty members and students.

- ✓ Factors requiring change in South African higher education e.g. international competitors, African renaissance, legislation, learner profiles and lecturer qualification and competence.
- ✓ Human reaction to change.
- ✓ Methods of dealing with change.

4.2 Academic staff development

- ✓ Methodologies and approaches to academic staff development worldwide.
- ✓ Vital elements in academic staff development.
- ✓ Change theory as an impacting factor on staff support.

4.3 Information technology

- ✓ Information technology as alternative/supplementary communication resource.
- ✓ Possibilities and constraints of information technology within the context of change provision and staff development.
- ✓ Factors impacting on technological adaption.

5. Value of the research

This research will provide information pertaining to:

- ✓ factors to be considered when dealing with eVelopment;
- ✓ issues surrounding higher education and the resulting impact of those changes on the lives of faculty members; and
- ✓ current ways of supporting and developing academic staff;

which should culminate in a better understanding, tempered by local realities, of the means of exploiting the benefits of information technology towards optimally

supporting and developing staff members to meet the challenges of a changing higher education arena.

6. Research plan

6.1 Type of research

This research will consist of a qualitative study;

- ✓ supplemented by literature studies;
- ✓ guided by surveys to identify field leaders;
- ✓ augmented by quantitative perspectives where possible; and
- ✓ informed through case studies;

in order to identify commonalities in centres of excellence.

6.2 Subjects of this study

A number of institutions of higher education (world wide) with relevant experiences were identified and thereafter staff members involved in staff development at these institutions were contacted and surveyed using questionnaires (598 pages – see introduction Chapter 4) that were subsequently analysed.

6.3 Data collection methods

A combination of methods was used to collect relevant data. The instruments used to collect the data are discussed in 6.3.1 and the cross reference between the specific data gathering instruments and the related foci within the research is explained in Table1.2.

6.3.1 Description of instruments

- ✓ Literature review: This covered relevant legislation, journal articles, books and electronic documents available.
- ✓ Internet mailing lists: A number of mailing lists were identified and consulted in order to obtain nominations for institutions or other individuals with relevant experience.
- ✓ E-mail postings: Identified individuals were contacted electronically. Correspondence with respondents were mostly also via e-mail.
- ✓ Web pages: Pages were consulted to obtain details on the activities of interested parties.
- ✓ Questionnaires: Structured, open-ended questions were used.

Method/Question	Literature review	Mailing lists	Direct e-mails	Web pages	Questionnaires
What is change?	✓				
How is change dealt with elsewhere?	✓	✓		✓	✓
What is the extent of change required from South African educators?	✓		✓		✓
What are the effects of change on staff members in higher education?	✓		✓		✓
What are the characteristics of successful staff development?	✓			✓	
What is the extent to which staff members need support?	✓	✓	✓	✓	✓
What are the dynamics between change and staff support?	✓		✓		✓
What are the possibilities and constraints of information technology as a vehicle for staff development and support?	✓			✓	✓
Which changes need to be made to staff support and development practice to exploit the possibilities of information technology?	✓	✓	✓	✓	✓

Table 1.2: Matrix to indicate data collection relevance

7. Output

7.1 Description of the product

The explicit outcome in this thesis specifies contributing factors as well as the possibilities and constraints of alternative methodologies. It also suggests tacit knowledge beyond the proven facts. Some of these issues and surrounding complexities and are captured in Chapter 6 as suggestions for further research.

Another outcome of this research is improved insight and further questions in the mind of the researcher. These can but be acknowledged. Table 1.3 gives an overview of the thesis.

Chapter 1	Background	The framework within which the problem is situated outlines the main points and provides a general overview of the study.
Chapter 2	Description of methodology	The reliability of the outcome of the study will depend on the reliability of the methods used to reach those conclusions. This describes and motivates the methodology. It also includes a description of the tools used in data collection.
Chapter 3	Literature review	An exploration of the relevant factors namely change, staff support and development and benefits from information technology. It provides information on how these factors impact on higher education and how to deal with them.
Chapter 4	Feedback received from questionnaires and results.	Information stemming from feedback gathered. This chapter also identifies commonalities and possible trends.
Chapter 5	Discussion	Supposition formed, combining literature (Chapter 3) and practice as represented by the feedback received (Chapter 4). This is supplemented by focused discussion of factors impacting on the eVelopment arena. This Chapter: ✓ highlights primary factors; ✓ identifies methods by which behaviour can be understood; and ✓ refers to key concepts.
Chapter 6	Conclusions and recommendations	An overview of the research and drawn conclusions. Recommendations with guidelines for implementation. Limitations of the study as well as areas for possible further research are listed.

Table 1.3: Thesis overview

8. Conclusion

Research undertaken in this project shows that staff support and development need to adjust responsibly to changes in the educational environment. Change management strategies should allow for differences in personality types and their reactions to change. The variety of new possibilities and technological options available to staff developers requires more than technical competence. This research acknowledges that a combinational approach is called for and proposes a framework within which the role of receptivity, lucidity, dependency and intricacy could be interrelated to inform on issues that will impact on acceptance of new strategies. Technological options can find their rightful niche within the realities of providing educational guidance to academia.

Chapter 2

1. Introduction

Chapter One provides an overview of the research and gives a broad indication of the approach followed in securing information relevant to the study. Chapter Two provides the detail on the design of the research. The various sources are stipulated and defended in terms of their relevance to the project.

This chapter is divided into the subsections mentioned below. Apart from the paragraphs that introduce and conclude, each of these sections represents and elaborates on a specific data collection source, namely;

- ✓ Research approach
- ✓ Utilisation of formal literature
- ✓ Expert and peer group contributions
- ✓ E-mail
- ✓ Web pages
- ✓ Questionnaires
- ✓ Integration

As a summary of this research design, Table 2.3 near the end of this chapter, indicates which questions rely on which data sources for information exploration.

2. Research approach

This primarily qualitative study explores the experiences of field experts in order to harvest some of the tacit knowledge imbedded in their everyday professional practice, so that some of it can be converted into explicit constructs. Much of it contrasts with the Western approach that has ingrained traditions to view "*only formal and systematic – hard (read quantifiable) data and set procedures*" as useful knowledge (Nonaka, 1991). Nonaka proceeds to contrast the approach to that of successful Japanese learning organisations by stating: "*Rather, it depends on tapping the tacit and often highly subjective insights, intuitions, and hunches of individuals … and making those insights available*" (Nonaka, 1991).

2.1 Limitation

An obvious limitation of Nonaka's (1991) approach is that it would be hard to replicate such a study. Firstly it would be difficult to trace the same respondents and secondly, given that time will have elapsed, those very respondents may well have changed their minds on certain aspects or gained new insights.

It is the purpose of this thesis, therefore, to present a detailed **snapshot** of the situation as it emerged at the time when the research was concluded. No claim is made that any of the conclusions will hold true indefinitely.

2.2 Research classification

Mouton (1983) advises that a selection be made between qualitative and quantitative methodology based on an analysis of the research topic. Mouton and Marais (1990) supply a useful table comparing qualitative and quantitative research approaches. Their comparison is based on three factors namely the concepts, hypotheses and exploration.

The next three tables measure this research approach in terms of these aspects. In each of these three tables, the first two columns indicate the Mouton and Marais (1990) distinction and the third column indicates the scenario for this study.

The table below shows the first factor namely the way concepts are dealt with.

Concepts		
Qualitative	**Quantitative**	**This study**
Excess meaning – can be interpreted in a number of ways	Singular, unique meaning	Explore, reveal, analyse and discuss Qualitative
Sensitised concepts and meaningful descriptions	Define identified terms	Different interpretations encountered in field Qualitative
Intuitive experience leads to descriptions	Result of specific measured quantities	Culmination from encountered phenomena Qualitative
Fair amount of connotative meaning	Strive towards complete denotative meanings	Fair amount of connotative meaning Qualitative

Table 2.1: Concepts: An enriched application from Mouton and Marais (1990)

In terms of all four aspects in Table 2.1, the approach of this study correlates strongly with that of the qualitative approach.

The next comparison, in Table 2.2, compares the way the various approaches deal with hypothesis statements. Here again the approach of this study compares favourably with the qualitative approach.

Hypothesis		
Qualitative	**Quantitative**	**This study**
Often not mentioned or stated in a general research aim	Explicitly stated- at least in terms of research question	Exploration of complexities Qualitative
Emerging from the progress of the investigation	Should be formulated prior to testing	Better understanding emerging from the process Qualitative
Often can't be dismissed	Not disputable	Ascertained probability Qualitative

Table 2.2: Hypothesis: An enriched application from Mouton and Marais (1990)

The last table in this series, Table 2.3, deals with the exploration of information.

Exploration		
Qualitative	**Quantitative**	**This study**
Subjective	Objective	Objective analysis of subjective opinions Qualitative
Researcher involved	Researcher remains detached	Researcher's interpretation Qualitative
Spontaneous examples	Pre-planned observations	Samples of convenience Qualitative
Open	Often pre-categorised	Open Qualitative
Unexpected result can be registered	Controlled content	Inclusive Qualitative
Happens in non-structured way	Results scaleable	Open structure Qualitative

Table 2.3: Exploration: An enriched application from Mouton and Marais (1990)

From Tables 2.1 through 2.3 above, it becomes clear that in order to understand better the complexities surrounding the transformation of a Higher Education institution into a learning organisation, this research uses:

- ✓ a qualitative approach;
- ✓ supplemented by literature; and
- ✓ feedback received from identified field experts
- ✓ to explore commonalities and suggestions from specifically identified centres of excellence.

2.3 Validation

This research is concerned with securing valid and reliable information in an ethical manner. The contrast in terms of expectation from different approaches are underlined by Firestone's distinction:

> *"…the quantitative study portrays a world of variables and static states… By contrast the qualitative study describes people acting in events*" (Firestone, 1987).

Validity in this context is not sought through exact experimentation, repeated objective measurement or universal truth statements, but rather derived from a perspective of "*understanding as the primary rationale*" (Merriam, 1992). Two angles namely internal and external validity will be considered.

2.3.1 Internal validation

Internal validation deals with the question of how research findings match reality. (Merriam, 1992). Becker (1993) suggests that "*reality is what we choose not to question at the moment.*" While possibly facetious, it does hint towards the unlikelihood of absolute consensus amongst multiple practitioners. This potential hurdle to internal validation can be overcome by utilising these same multiple perspectives and to attempt understanding through more open-ended approaches

rather than to interject overly-structured data collection instruments (Lincoln and Guba, 1985).

In view of the above, a well thought out, substantiated comment by a single respondent could carry as much weight as the average of comments by the group. It is not only the number of instances that matter, but also the quality and associated importance of comments given by individual respondents. Hence the particular design of the questionnaire as discussed in section seven and the original selection of 367 practitioners as described in section five of this chapter.

2.3.2 External Validation

External validity is concerned with the extent to which the findings of one study can be applied to other situations (Merriam, 1992).

> *Qualitative research, however, is not conducted so that laws of human behaviour can be isolated. Rather, researchers seek to describe and explain the world as those in the world experience it."*
> (Bednarz, 1985)

Since human behaviour is hardly ever static, Donmoyer in Merriam (1992) suggests the use of a non-random sample precisely because the researcher wishes primarily to understand and not to generalize.

Another strategy is to use many cases to study the same phenomenon (Schofield, 1990; Yin 1994).

For these reasons the respondents as described later were not randomly selected, but were carefully selected from 254 institutions of higher education (world-wide) which were identified as having relevant experiences. Individuals thus identified as well as prominent individuals selected from electronic communities of practice made up the 367 Individuals involved in staff development and change, identified and contacted as the original sample.

2.4 Triangulation

While mentioned as a separate heading here, many researchers view triangulation as but an element of ensuring internal validation (Denzin, 1970; Mathison,1988 and

Merriam, 1992). Mathison (1988) also states: "*triangulation may produce data that are contradicting or inconsistent*."

> *"Shift the notion of triangulation away from a technological solution for ensuring validity and rely instead on a holistic understanding of the situation to construct plausible explanations about phenomena being studied*." (Mathison, 1988)

Any possible perceived lack of traditional triangulation in this research should thus offset not only against the multiple other sources of information utilised to ensure validity, but also against the existence of different preferences in terms of research approach.

> *"[Researchers] …conducting qualitative investigations do not want to wait for the research community to develop a consensus as to the appropriate criteria for assessing the validity and reliability, if indeed that is possible."* (Stake 1994)

A practical suggestion taken up in this research comes from Connelly and Clandinin (1990):

> *"Each inquirer must search for, and defend, the criteria that best apply to his or her work."*

In view of this, the multiple sources of information (returned questionnaires, e-mail correspondence, web pages and more traditional forms of written documentation as well as peer opinion) were combined and interrelated. These provide a rich representation of existing practice and eludes to the tacit knowledge of practitioners with a wide spectrum from multiple continents, countries and institutions rather than a narrow focus of the stated, confirmed and reaffirmed view of a possible non representative minority.

3. Utilisation of formal literature

3.1 Keyword search

A search of existing literature shows that although the variables in this study are regularly included in works of various nature, the exact combination of staff development, change and technology was not found.

The academic information centre (library) provides services and resources to search for applicable literature. Sabinet and the Nexus database system are examples of these resources. Table 2.4 shows the keyword combinations and the number of works identified by that particular search.

Keywords	Number identified
Staff Development, Change, Higher Education and Technology	0
Staff Development, Change and Higher Education	2
Staff Development, Change and Technology	5
Staff Development and Change	76

Table 2.4: Literature search results

From the table it can be see that although staff development and change is well covered, no works cover the exact field of this research.

3.2 Related studies

The fact that research specifically focused on the area is not readily available, does not preclude the use of literature. A large number of very useful works are available. The following table gives an indication of some related theses. The shaded columns explore the specific relevance in terms of correlation with the focus of this study. The column on the far right represents the quantified relevance in terms of the five areas of comparison, i.e. a correlation with two of the five criteria would yield a 40% correlation etc.

Author	Research Title	Year	Masters or Doctoral level	Higher education	Change	Support	Technology	Correlation
Bean, H.J.	Affirmative action at local government level	'95	M		✓			20%
Bedassi, I.	Motivation as a staff development instrument in Indian secondary schools	'91	M			✓		20%
Boughey, J.D.	In search of a staff development methodology within the context of tertiary education, with special reference to the University of the Western Cape	'95	D	✓		✓		60%
Buitendag, H.P.	The value of staff development in schools, with reference to its potential impact on school improvement	'98	M			✓		20%
Busakwe, T.L..	A needs assessment for staff development in colleges of education, with specific reference to some colleges in the Central and Northern regions of the Eastern Cape Province	'99	M	✓		✓		40%
Campher, E.	Establishing Teacher Support Teams (TST) to facilitate inclusive education for Learners with Special Educational Needs (LSEN)	'97	M			✓		20%
Dannenfeldt, G.	A staff development mode for nurses working in intensive care units in private hospitals	'88	D			✓		40%
Drewett, M.D.	The integration of academic skills/support programmes into university department structures: a case study in the sociology of education	'93	M	✓		✓		40%
Du Toit, H.D.	The changing of teachers' disposition as management task of the school principal	'93	D		✓	✓		60%
Eloff, A.D.	Establishment of relations: a management strategy for personnel development	'92	M			✓		20%
Els, G.	Personnel development at technical colleges: an educational management perspective	'98	D	✓		✓		60%
Govender, D.A.	Effectiveness of staff development programmes in Indian secondary schools	'91	M			✓		20%
Greyling, J.	The design of a didactic model for a teaching development programme for distance education at tertiary level	'81	M	✓		✓		40%
Heyns, R.C.G.	The professional development and in-service training of the field school teacher	'88	M			✓		20%
Hutchison, A.	The development and evaluation of an empathy training programme for academic staff	'88	M	✓		✓		40%
Kerkham, A.S.	The effectiveness of the Cape technikon in meeting the information needs of the technikon lecturers	'86	M	✓			✓	40%
Majiedt, P.W.	The professional development of the teacher in Namibia as management task of the subject advisor	'92	M			✓		20%

Author	Research Title	Year	Masters or Doctoral level	Higher education	Change	Support	Technology	Correlation
Majola, M.C.	An investigation of the impact of transformation on academic staff development at the University of Natal	'99	M	✓	✓	✓		60%
Mataboge, T.J.M.	Personnel development in schools with particular reference to the Krugersdorp area	'93	M			✓		20%
Mathole, M.A.	Staff development as a mechanism for effective school management	'97	M			✓		20%
Munro, D.G.	The potentiality of systematic staff appraisal for the professional development of teachers: a study with particular reference to the Kwazulu-Natal Province	'96	M			✓		20z
Naidoo, K.	A programme for staff and curriculum development for quality assurance: a case study at the M.L Sultan Technikon	'97	D	✓		✓		60%
Naidoo, K.	Self-evaluation programmes in academic staff development	'92	M	✓		✓		40%
Nkosi, J.	Staff development for multicultural education	'96	M		✓	✓		40%
Opperman, F.J.	The development of staff representation of the non-European employees of the South African Railways and Harbours Administration	'63	M			✓		20%
Pittendrigh, A.	The technikons in the RSA - an evaluative analysis of the factors influencing the development of the technikons (1967 - 1985) and an assessment of their role in educational change at tertiary level in the RSA	'87	D	✓	✓			60%
Prior, F.C.	Technikon academic staff development with special reference to newly appointed lecturing staff	'87	M	✓		✓		40%
Sebolai, M.E.	Staff development and training of teachers by means of distance education	'96	M			✓	✓	40%
Sibanda, G.	A case study investigation of attitudes of senior staff and students to the use of video in science teaching in KwaZulu-Natal high schools that received videos from CASME to use as aids in lessons	'97	M			✓	✓	40%
Sibiya, M.L.	Clinical supervision as a strategy in staff development	'99	M	✓		✓		40%
Spies, C.J.	The role of internal and external factors influencing the management task of the headmaster	'95	M			✓		20%
Stanton, R.	Non-formal training of technical staff: a psychology of education perspective	'92	M	✓		✓		40%
Wedekind, V.R.	Teacher development and change: an analysis of a school-based action research staff development programme	'96	M		✓	✓		40%
		Total		14	6	30	3	

Table 2.5: Related studies

This research is relevant as it links up with the thirty titles on support and development and another fourteen on higher education, yet it adds to the understanding of the under-represented topics with six works on change and only

three on technology in this context. It is unique in that none of the mentioned works cover the exact combination of factors. In Chapter 3 relevant findings from the available literature are explored in more detail.

4. Expert and peer group contributions

Since 1991, the Association of Research Libraries (ARL) has reflected the growth of electronic publications (Mogge, 1999). Snapshots of the state of electronic publishing are included in each edition of the ARL directory of Electronic Journals, Newsletters and Academic discussion lists.

The exact detail of their findings and the scope of their contributions are not important here, but what is relevant is their conclusion that important changes are happening on the electronic landscape. Exponential growth is maintained in the number of electronic journals and academic discussion lists.

A number of very relevant and useful contributions are listed where the specific topics are discussed.

Where discussion group contributors have made comments indicating their involvement in the field of academic staff development, their contact details are recorded and they are included in the list of people who were approached to complete the questionnaire.

5. E-mail

As probably one of the most convenient tools available today, e-mail has not only revolutionised personal communications, but it has made direct peer communication possible at very low cost.

367 Individuals were identified. Each received an individualised e-mail informing them of the fact that they had been identified or recommended as knowledgeable people in the field and were hence being approached to complete the questionnaire. While this original sample was even more representative, the demographic

distribution of those who did reply are worth mentioning. They are all currently employed in centres involved with the development of academic staff or they have had extensive prior experience and are now in a more management oriented position. These respondents present views from four continents, six countries and in the United States of America, 21 different states. No two individuals come from the same institution.

Below are two snippets received from two respondents. The first is cited as an example of how sustained communication opportunities with international peers are presented by the low cost and convenience of the medium and the second as an indication of changed perception.

E-mail creates sustained communication possibilities

"… If you have questions about anything else specifically, I'll be happy to answer them. May I please have a copy (e-mail) of your outcomes and maybe a description of what you're doing at your institution? It sounds very interesting.

Best"

American respondent.

E-mail changes perceptions

"… I will be delighted to respond to your questions, and feel honored that my name was suggested to you. Please allow me a couple of days, however, since I am quite busy at this moment. I will be back in touch.

¡Saludos cordiales!"

Mexican respondent.

From the last reply from the Mexican respondent, it is clear that it is possible not only to get reliable replies and answers to questions, but the medium has also changed our perception of reasonable reaction time to such an extent that a person feels obliged to explain a delay. In this instance, the delay eventually proved to be only four days!

Direct e-mails are very powerful and reliable ways of obtaining feedback from specifically identified individuals.

6. Web pages

As a result of the ever-increasing number of institutions where the relevant departments and individuals involved in academic staff development have a web presence, it is possible to obtain information on the activities of practitioners across the world.

Some 254 institutions in eight countries that appeared to have active staff development sections were identified. The key individuals involved were identified and added to the questionnaire circulation list.

Many of the web pages also include details of the staff development activities at that particular institution and provide valuable insights.

Unfortunately, many of the web pages were dated. Scott (2000) warns that as many as 50% of e-mail addresses obtained from the web may be outdated.

The web search started in April 2000 and the identification process was concluded about a year later when the questionnaires were circulated. A disappointing 64 automated replies were received indicating that many of the e-mail addresses were incorrect and as such the e-mail messages were undeliverable. A further 14 replies were received from people indicating that they were no longer involved in the field. Not all of the latter respondents indicated for how long they had been out of the field, but one of those who did, said that she had not been active for some five years. Some of the returned e-mails and retired/promoted individuals may be people who

have made recent changes, but for at least some and probably for many of these, the failed communication is the result of web pages that are not updated regularly.

All of the pages from which dated information were gathered were fixed hypertext files. These are files with a set content. Other types of files, such as .asp files, were also encountered. These files do not have a set content, but retrieve the content to display from a database. When pages are done in this way, information can more easily be updated.

Some of the respondents attached web page links to their feedback. Most of these web pages contain information about the way those departments approach their task. These web pages provide useful information, but when the source codes of many of these files are viewed, it can be seen that the meta tags are not properly specified. In layman's language this means that the keywords that would indicate to search engines what information to expect from a page, are not sufficiently specified, which makes it more difficult for search engines to recognise the potential of the page. This does not mean that the pages are any less useful. These specially referred pages contributed to this research.

7. Questionnaires

As indicated above, 254 institutions of higher education (world-wide) were identified as having relevant experiences. 367 Individuals involved in staff development and change at these institutions were identified and also personally contacted via e-mail.

This research broke with the conventional questionnaire format. Respondents were sent an individualised e-mail addressed by first name and asked four, intentionally vague, open-ended questions in order to 'simulate' a semi-structured interview. The four questions were clarified by sub-questions and comments in brackets. These interviews were augmented with further e-mail correspondence. This served both as a means of obtaining more refined information and as a means of cross validation. This is in keeping with Merriam's (1998) position that calls for verification by using multiple investigators, data sources, or data collection methods to confirm emerging findings and adequate engagement in data collection which she describes as sufficient time spent on data collection so that the data becomes saturated. In this

way each respondent served as a cross check for any other respondent. Any apparent contradictions thus encountered, was cleared up by member check email correspondence.

The questionnaires (Figure 2.1) were specifically designed to be open-ended. This was done in order to give respondents the opportunity to react freely and possibly even emotionally to the questions raised. The fact that more than one respondent requested to remain anonymous possibly indicates that they may have expressed their opinion freely.

It was hoped that the open-ended e-mail correspondence would result in what Merriam (1998:9) calls "maximum variation" by "purposefully seeking variation or diversity in sample selection to allow for a greater range of application of the findings by consumers of the research". This type of research according to Merriam (1998:6) should result in "rich thick description" by "providing enough description to contextualise the study such that readers will be able to determine the extent to which their situation matches the research context, and hence, whether findings can be transferred".

The sample size could be regarded as more than adequate. Fifty-seven completed responses were received. The response rate is the percentage of successfully returned emails. This could influence validity. Authors such as Behr (1988) and Mayer (1989) indicate that even for quantitative studies a number as low as 30 could be adequate. Because the nature of qualitative research deals with more specific issues and not numerical representation, a minimum number of respondents does not need to be specified. Others disagree. In fact, authors differ substantially about the exact rate needed to guard against response bias. From the office of the Australian Auditor General comes the admission that *"There is no absolute answer to the question: 'What is a minimum acceptable response rate?*'(Australia, 1998)", but it immediately goes on to advocate a percentage upward of 50%. Layton (2001) reports a drop in the number of people willing to respond to surveys and claims that it is very difficult to reach 50% response rate with mail surveys.

Good day{first name of respondent}

My name is Dolf Steyn. I am a PhD student at the University of Pretoria, South Africa. During my search of the field, you were identified as a knowledgeable person involved with the development of academic staff at your institution.
I would *really* appreciate minutes of your time to answer questions which will help me with my research.

I do not want to bore you with too much detail, so I'll suffice to say that the focus of my research is to explore the relationship between change, staff support and the possibilities of technology. I will gladly give whatever further information you require.

The 4 questions listed below are specifically designed not to restrict your style or response spectrum. Guidelines are given in brackets, but should not be seen as limiting or prescriptive. ANY inputs would be truly appreciated.

Should you feel that your schedule does not allow to answer all the questions, I dare to beg that you do return as much of your reply as possible.

Thank you in advance for your time and consideration which we would reference in acknowledgement unless you specify differently.

Groetnis (the Afrikaans for "cheers")
Dolf Steyn

Questionnaire

1. History
   1.1. Identify your all time staff developmental highlight
   (Best departmental success story, Best personal success story)
   1.2. Tried but aborted approaches to staff development
   (Formal name if available, Short model description, Why did it fail, In what way was it successful?)
2. Present
   2.1. Current approach to staff development
   (Formal name if available, International "father" of idea, Short model description)
   2.2. Technological involvement?
   (Describe if applicable)
   2.3. Satisfaction level
   (Impact, feedback, own perspective)
   2.4. Constraints
   (List & prioritize)
   2.5. Biggest advantage
   (List & prioritize)
3. Future
   3.1. Ideal envisaged model
   (Please describe)
   3.2. Practical envisaged model
   (Please describe)
   3.3. No! Never, ever! (Absolute avoiders)
   List & prioritize
   3.4. Yes, Yes Yes!! (Vital elements)
   List & prioritize
4. Localization
   4.1. Institutional Factors
   (Where, Size)
   4.2. Departmental factors
   (Name, Staff count, Scope of responsibility)
   4.3. Personal factors
   (Qualification, Experience, Job title, Prime focus)

PS: Thank you once again! I am extremely grateful for your time, and expertise :-)

Figure 2.1: Example of response request and questionnaire

Hsiung *et al*. (1999) regard the response rate for e-mail as lower than that of mail surveys and Rhines (2000) reports: "*I noticed over the course of two years [e-mail] response rates drop quite a bit as the novelty wears off*". Rhines (2000) continues to give the following guideline: *"…assuming you have a decent survey…you can expect response rate approximately as follows:*

- *Employees (or others with $ incentives)* *50%-75%*
- *Members/very interested people* *30%*
- *All others* *5% - 20%*
- *Disinterested or over-surveyed group* *Less than 5%".*

This correlates with the rule of thumb given by Kahaner (1994) who stated:"*..time consuming surveys…with a response above some 15 to 20% are considered successful".*

The 58 completed questionnaires returned in this case ensure a favourable response rate of 23.6%.

8. Integration

Chapter One, Table 1.2 combines the various collection methods into a single table and indicates from which source relevant information for the different research questions were expected.

9. Sources of information

Source of information	Medium through which accessed
Subject experts	Books
Practitioners	Web pages Discussion groups E-mail questionnaires
Academics (Faculty members)	Journal articles Discussion groups
Change agents	Books Web pages Discussion groups E-mail questionnaires

Table 2.6: Source and medium interrelation.

Table 2.6 shows the four main sources of information as well as the medium through which access was obtained. The classification in the left hand column is not exclusive and may in some instances refer to the same individual.

10. Analysis of data

The analysis of this qualitative data guided by heeding the following suggestions from Bogan and Biklen (1992):

- ✓ "*Force yourself to make decisions that narrow the study. 'You must discipline yourself not to pursue everything'.*
- ✓ *Plan and adopt data collection sessions according to what you find in previous observations.*

- ✓ *Write memos to yourself about what you are learning.*
- ✓ *Try out key ideas and themes on others.*
- ✓ *Play with metaphors, analogies, and concepts. "Nearsightedness plagues most research…Ask the question: 'What does this remind me of?'"*
- ✓ *Use visual devices. Trying to visualize what you are learning about the phenomenon can bring clarity to your analysis. Such representations can range from 'primitive doodling' to sophisticated computer generated models."* Bogan and Biklen (1992)

The Analysis proceeded as follows:

The researcher familiarised himself with the environment by reading widely, both from traditional paper based resources and electronically accessed information. This was done to cross analyse existing material, with new contributions and to discover common themes to explore in future communiqué. This corresponds with the suggestion from Polkinghorne (1995) to base analysis on a number of cases to bring out broader themes and general characteristics.

The next step in the analysis was to read and re-read contributions in order to identify and separate the parts which contained the sought after information. Commonalities which appeared were captured as themes. These themes were thus identified inductively, based on the data gathered. The common themes were then extracted and compared to the original contributions to ensure congruence. These themes are used as headings for shorter reference. To improve understanding of the nature of the information represented by these headings, they are linked to at least one quote representative of that kind of comment. The whole analytical process was carried out by the researcher alone.

As a member-check (Merriam, 1992), the original contributor was contacted for clarification where any uncertainty existed. Emerging trends or threads were also discussed and/or sound-boarded against fellow practitioners, both via e-mail and in various physical discussions.

Extracts from the work were included in a conference presentation (WWW2001, Rand Afrikaans University, 5 – 7 September 2001) to test ideas and get feedback from attendees.

Information previously captured from literature, web pages, e-mail contributions and other correspondence were manually analysed, classified, categorised and coded. Some calculations were done after encoding, using a spreadsheet. Because the questions were open-ended and did not hint or refer to any specific detail, answers from respondents were more spontaneous. Hence, similarities in feedback were viewed as more significant than mere recognition-and-selection of pre-listed items. Calculations were limited to totals, averages, frequency of mention and position of mention as numerically represented by mode and median. This was done in order to assist with the classification and categorisation of responses, rather than to arrive at statistical correlations, in keeping with Merriam's claim that:

> *"the researcher is the primary instrument for data collection and analysis. Data are mediated through this human instrument, the researcher, rather than through some inanimate inventory, questionnaire, or computer."* Merriam (1998:7)

It was not deemed necessary to use dedicated statistical analysis software as a holistic, rather than a quantitative picture was sought.

11. Conclusion

This research is a qualitative project that used various data collection methods to obtain information which provided insight and a better understanding of the complexities surrounding the transformation of a Higher Education institution into a learning organisation.

In Chapter Three the contributions from existing literature are discussed.

Chapter 3

1. Introduction

As a foundation from which to approach this study, it is necessary to review relevant literature. The main issues identified as being significant to this study are change, staff development and information technology. A broad outline of this chapter is presented in Table 3.1.

Research questions	Topic	Scope	Related Sections
3.1.1; 3.1.2; 3.1.3; and 3.1.4.	Change	Change as an impacting phenomenon on the lives of higher education practitioners. The origin, nature and scope of changes required.	2; 3
3.2.1 and 3.2.2	Staff support/ development	Various ways in which staff members are supported. A selection of commonalities and characteristics of successful models.	3; 5
3.3.1	Information technology	Possibilities and constraints of information technology as a delivery vehicle.	4
3.2.3	Dynamics between change and staff support	The effect of change on South African higher education practitioners and how this may affect the amount or nature of support needed.	3; 6
3.3.2	Inter-relation between staff development and information technology	Which changes need to be made to staff support and development practice to exploit the possibilities of information technology	7

Table 3.1: The range and relevance of the literature study

2. Change

The concept of change is common knowledge, but the effect of change on individuals can best be understood through the use of a metaphor.

> *"The essence of a riddle is to express true facts under impossible combinations. Now this cannot be done by any arrangement of ordinary words, but by the use of metaphor it can." (Aristotle, 350B)*

The use of metaphors is further encouraged by Rorty (1989) who counteracts any notion that metaphoric discourse is but idle chatter by suggesting that intellectual history is linked to the metaphor,

> *"Old metaphors are constantly dying off into literalness, and then serve as a platform and foil for new metaphors." (Rorty, 1989)*

2.1 Intellectual drift

Picture the process of the creation of earth as we know it; earth plates move over time, and shift as a result of various forces that impact upon them. A situation, often called continental drift, is created. Huge masses shear in some places, stick in others and create chaos when they eventually shift. The reverse is no less eminent as earth masses push against each other. Californians are but too aware of the resulting earthquakes (Bradley, 1998). As nature adjusts through time, the unmatched beauty of mountain ranges, rock formations and valleys should be enough to humble man.

On a much smaller scale, humans have to deal constantly with various impacting forces. The mind needs to evaluate and encode new information in order to determine potential impact. Within these new circumstances lies potential change and individuals find themselves in a position where it is necessary to realign with the new reality. Piaget (1952) calls this need for realignment *disequilibrium.* It arises from the differentiation and integration needs of the individual. On the one hand, there is the need to remain unique and differentiate between different factors but, on the other hand, there is also the need to find common denominators and integrate new information into the existing frame of reference. As the individual now realigns with the new realities, new "mountains" of understanding are generated and often "canyons" of new confusion appear. After each cycle of differentiation and integration

the self is enriched by the new information that has been added. This new order in consciousness adds complexity to the self, producing psychological growth (Van der Stoep and Louw, 1976; Csikszentmihalyi, 1990; Bradley, 1998).

> Within the metaphorical context of continental drift and from the above realities about the constant dynamics of individual perception, a phenomenon evolves which will be called ***intellectual drift***.

The concept of intellectual drift includes the original disequilibrium, the differentiation process as well as the integration with existing knowledge. This surmounts to psychological growth that further links the new reality perception with the resulting adjustment in thought direction (Piaget,1952; van der Stoep and Louw, 1976; Csikszentmihalyi, 1990). While the intellectual part of the word acknowledges the cognitive elements, the word drift is deliberate in as much as it illuminates the reality that this process is not completely voluntary or even always under control. This stresses the dependence on the environmental forces, events and impacts. Intellectual drift is not a destination, but a constant or at least recurring cycle of definition, which leaves room within itself for some inevitable self-contradiction. It holds elements of deconstruction in that intellectual drift is never absolute or final. Constant redefinition and new insights create continuous new realities.

> *"Deconstruction is inventive or it is nothing at all; it does not settle for methodological procedures, it opens up a passageway, it marches ahead and marks a trail."* (Derrida,1984*)*

Lye's 1996 explanation of deconstruction ties in well with the drift metaphor.

> *"This is not to say that [this] experience of the real is not real; it is: we live in a real world. But we live particularly in our codification, our system of signs. If we cannot translate any experience into symbolic form then we cannot 'know' it in a way that is useful to us; if we do know, then our knowledge is only knowledge through our codes and our signifying systems--that is, mediated knowledge. (as when we might experience an earthquake without immediately knowing what it is, and so for a moment experience only something like disoriented panic)*."
> (John Lye, 1996)

Everyone experiences intellectual drift and the occurrence of impacting events, but because of the difference in attitudes and abilities of the people, the end result and tempo for each person will be different. It should however, still be seen as a positive and desired phenomenon in the cycle towards growth. A quote from the British biologist and educator Aldous Huxlex (1825 – 1895) puts it rather well:

> *"Experience is not what happens to a man. It is what a man does with what happens to him."*

While the effect of change may be intellectual drift, the various change factors need further exploration.

2.2 Change factors

The focus of this research is on higher education. This investigation will however, look at those change factors that may appear beyond the specific boundaries of education, but which still impact on the world of higher education. Change will be evaluated both from a global and then a South African perspective.

2.3 Global

Globalisation is a common term in many walks of life. Improvements in technology have opened up the world and provided alternatives to many of the barriers that distance used to create.

The breaking of traditional boundaries, however, has resulted in new problems. In the new "smaller world" people of different cultures need to work together.

> *"Global corporations have significant problems dealing with cross-cultural management issues. Developing meaningful cross-cultural and global relationships was a key concern that managers expressed in the questionnaires and interviews. The time involved in building and developing these relationships was enormous, and with enhanced global operations, joint venture and strategic alliance activity, was increasing."* (McKenna, 1999)

When confronted by challenges beyond the scope for which people view themselves to be equipped, an increase in skills is called for (Csikszentmihalyi, 1990) (See Figure 3.3). A combination of staff development and/or formal study can help to develop such skills. Therefore globalisation has resulted in an increase in formal education while breakthroughs in medicine have improved world health. A full cure

for HIV/AIDS has eluded researchers. While this is a world phenomenon, the impact of HIV/AIDS appears to be highest in developing countries and this is especially true in Africa. The true impact of HIV/AIDS on the labour force of tomorrow is still unknown, but is in the prediction phase with politicians playing who-to-blame games (Taitz, 2000).Due to the AIDS pandemic, in 1990, the shape of the graph for registered deaths in South Africa peaked at around the age 70 for males and females (Figure 3.1). However, the stark reality is that the 1999 statistics show that deaths have more than doubled the 1990 figures with most people dying in the 35 to 75 age group. Also there appears to be a bimedial distribution of deaths occurring in women around 30 and 70 years of age (Figure 3.1).

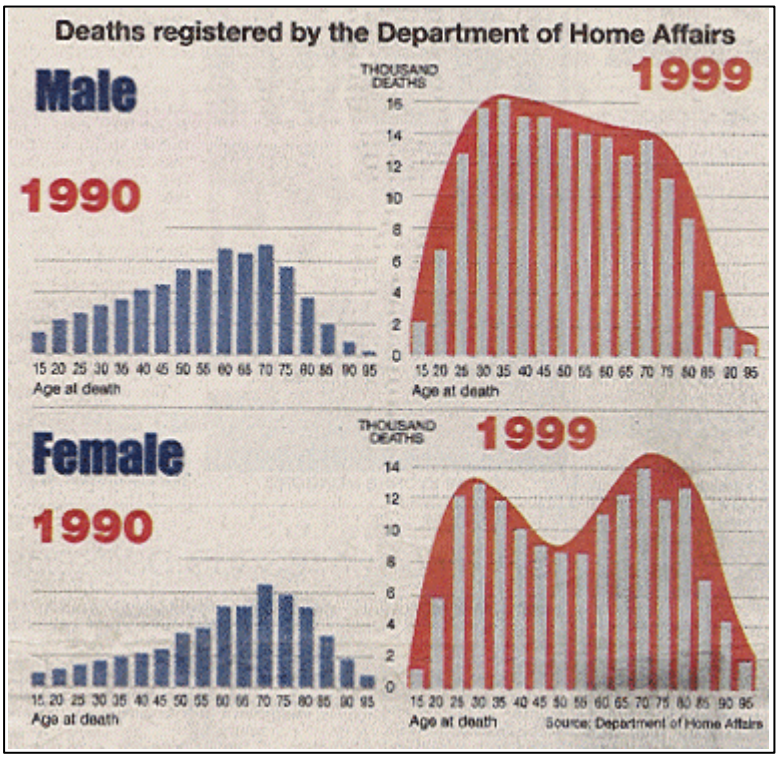


Figure 3 1: Registered deaths (Taitz, 2000)

Taitz (2000) quotes the president of the Medical Research Council, Professor Makgoba as saying:

> *" If we had been involved in a major war, that would be the only thing to explain the high numbers of young men and woman who are dying in our country!"*

One can only speculate on the willingness of students to engage in serious study during their twenties if their life expectancy may be as low as 30. The economic

consequences of the impact on the workforce alone could be devastating to any economy (Grulke, 2001).

At the organisational level environmental turbulence, organisational change and increasing complexity are obvious features of the business and organisational world today (McKenna, 1999). One way of looking at these changes is to encapsulate them all under the phrase of 'environmental uncertainty':

> *"Managers are faced with the problem of putting together and directing organizations while being subjected to constrained resources, limited time schedules, and environmental uncertainty*." (Nicholas,2001)

Another way could be to focus on the implications of these changes. Many authors have identified factors impacting on organisations today. A study of these authors reveals six major implications of recent changes for organisations. These are summarised and listed in Table 3.2.

In questionnaire responses and interviews with managers an important and repeated point mentioned was that "doing things" was becoming increasingly difficult, particularly with constant change, multiple mandates, matrix structures and the constant need for retraining (McKenna, 1999).

The retraining need is not only a continuation of old development practice. Changing organisational cultures lead to different approaches to the preparation of staff for their respective jobs.

> *"The development of approaches to lifelong learning involving learning in the workplace has led to the development of new approaches to the specification, structuring, recording and demonstration of learning. Traditional methods of classroom teaching are inappropriate to situations in which a considerable amount of learning takes place off campus." (Shaw and Green, 1999)*

If all staff members at all levels are constantly subjecting themselves to lifelong learning (See section 3.2) within the organisation, it follows that the whole organisation is learning.

1	Organisational structures may need to be more **flexible and adaptable**. They will change constantly in order to reflect new interrelationships, interactions, patterns, uncertainties and ambiguities that will be created, destroyed and re-created within the rapidly changing environment. (McKenna, 1999).
2	The increasing globalisation of business is bringing together distinct national and organisational cultures through **mergers, strategic alliances and joint ventures**. (Stacey, 1996).
3	Organisations will need to be more **proactive**, creating the "future by design". This requires more creative strategic thinking rather than "planning" in a rigid, traditional sense. (Hamilton and Clarke, 1996, McKenna, 1999).
4	The **importance of people** to organisations in the future will be paramount as the management of knowledge and intellectual capital become the prime sources of an organisation's competitive advantage and performance (Haskell, 1998; Ulrich, 1998).
5	Managers will also need an increasingly sophisticated **awareness of stakeholders** and their needs (McDermott and Chan, 1996; Mitchell *et al*., 1997).
6	No more isolated interventions. A lifelong learning culture must be incorporated in workplace practice. (Shaw and Green, 1999)

Table 3.2: Change implications

2.4 Learning organisation

While definitions vary, each distinct description carries within itself a focus on an important aspect of a learning organisation. The four definitions that follow are good examples:

"A learning organisation is one in which people at all levels, individually and collectively, are continually increasing their capacity to produce results they really care about." (Karash, 1998)

"*The essence of organisational learning is the organization's ability to use the amazing mental capacity of all its members to create the kind of processes that will improve its own* ." (Dixon 1994)

"A Learning Company is an organization that facilitates the learning of all its members and continually transforms itself." (Pedler *et al*., 1991)

"*Organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to learn together*." (Senge, 1990)

A combinational, inclusive concept derived from all of the above is probably the most informative one. From the definitions above, the elements to capture in a definition are:

Who	Does What	To What	How
Individuals	Expand	Capabilities	Collectively
Institution	Grow	Productivity	Continually
People at all levels	Improve	Self	Exponentially
	Recognise	Results	
	Reinvent		
	Utilise		

Table 3.3: Aspects towards a definition for a learning organisation

Understandably complex because of its inclusivity, the definition by Skyrme, may well be the most accurate:

"Learning organizations are those that have in place systems, mechanisms and processes, that are used to continually enhance their capabilities and those who work with it or for it, to achieve sustainable objectives - for themselves and the communities in which they participate." (Skyrme, 2001)

2.5 Higher Education

Factors around education, of which financial constraints are not the least, have forced stakeholders to take note of the changing situation and to adopt new ways of teaching and learning. The learners themselves are much more outspoken about their demands and expectations and the combined result leaves a drastically altered reality for which educators should be prepared (Mulholland, 2000). The change factors impacting on higher education will be discussed under the following sub headings:

- ✓ Academia
- ✓ South African Higher Education

2.5.1 Academia

Table 3.4 points to a few of the more important changes that are taking place at academic institutions in response to global changes. The left column shows the more traditional approach, while the right column gives the current trend.

Traditional approach	**Current trend**
Degrees, credentials	Competencies, certifying
Physical classrooms	Virtual classrooms
Teacher focused	Learner focused
Presentation mode	Discovery mode
Standardised content	Individualised content
Information is transmitted	Learning is facilitated
Autonomous work	Team work
Fixed calendar	Flexible calendar
Central organisation	Decentralised organisation
Local population	Global population

Table 3.4: Recent shifts in Higher Education (Tapscot 1995)

From all the changes listed in Table 3.4, it follows that the traditional educational approach can no longer meet the needs of the learner and that alternative ways should be investigated (Steyn, 1999).

There is a global trend towards improving the quality of teaching and learning.

> *"In recent years the emphasis in both research and government policy has been on improving the quality of teaching with a view to improving learning.*" (Johnston, 2000)

This is not limited to first time students, but also goes with an increased focus on lifelong learning and also hold implications for continuous staff development. Shaw and Green (1999) echo this from a UK perspective

> *"We can identify lifelong learning as extending considerably the concept of continuous professional development in a range of directions."*

Strategically the implications of a shift to lifelong learning can hold benefits in terms of a potential growth in student numbers. There may however, be a call for new or adapted programmes, schedules and modes of delivery in order to suit the lifestyle of working individuals.

There does not seem to be a single universally accepted approach to structuring education. Some years back the Americans embraced outcomes based education;

> *"When the Bush administration first embraced it five years ago, the idea seemed like good conservative education theory and the most promising device around to improve academic standards in American schools. The* ***"it"*** *was "****outcome-based education****," and OBE was going to help make Bush the* ***"education president."****(Schrag, 1995 – my emphasis)*

OBE is not universally accepted in the USA and it still incites strong reaction as indicated below.

> *"Mention outcome-based education now to the religious conservatives at Citizens for Excellence in Education (CEE) or the National Association of Christian Educators, with which CEE is affiliated, or to the conservative members of Focus on the Family or Concerned Women for America or Phyllis Schlafly's Eagle Forum, and they're likely to become apoplectic.*
> *At bottom it reflects genuine social, intellectual, and ideological controversies about how children should be taught, what they*

> *should learn, and what, ultimately, schools should be in a democratic society."* (Schrag, 1995)

While the Americans are becoming more critical of their system of outcomes- based education, the new South African system of qualifications is moving towards an outcomes-based approach. American criticism neither rules out possible successes nor does it indicate acceptance of the system.

The new South African system may open structures to allow for greater transportability in qualifications; something the old system seems to have failed in. Theoretically the outcomes based system addresses the very needs of students:

> *"In structural terms the essential need for students is the creation of a coherent and understandable qualifications system in which curriculum and progression links are clear. The framework needs to be related to credit accumulation with generally accepted tariffs between credit points, levels of attainment and qualifications … Here is a good example of where our existing structures are not compatible with a lifelong learning approach … What we need is an all-through framework and not demarcation disputes*." (Shaw and Green, 1999)

The move into the new educational framework in South Africa has not been without difficulties either. In fact, the Minister of Education, Kader Asmal, has already indicated that change will be forthcoming. A Sunday Times article entitled "Asmal deserves our thanks for dumping disastrous OBE" (Mulholland, 2000) acts as clear example that while the true implications of this new set of changes are yet unknown, the insecurity and misinformation during this period of anticipation is obvious.

While the above clearly shows how some elements of the educational debate has grown beyond the borders or confines of Academia, many other factors still account for heated debate within. The most important of these factors are:

- ✓ academic drift;
- ✓ research drift; and
- ✓ teaching drift.

2.5.2 Academic drift

This is what Americans call "mission creep". A fairly slow process of movement from one relatively humble academic condition or level (Technikon for instance) towards a seemingly elevated status (that of a University of Technology). Examples of academic drift or mission creep abound in nearly all continents. Another example would be where some state universities have gone beyond their original brief of lectured undergraduate and master's programmes towards becoming more like research universities (Clark, 1995 and Bradley, 1998).

> *"The American expression "mission creep" colourfully suggests a more deliberate, even sneaky, attempt to change and move up from one kind of institution to another without anyone really noticing or doing anything about it." (Badley, 1998)*

2.5.3 Teaching drift

Clark's initial definitions of these two phenomena are quite simple: "teaching drift" is where teaching pulls away from research-centred departments and universities into all-teaching institutions (Clark, 1995). Clark maintains that this could be as a result of

- ✓ the movement into mass higher education;
- ✓ increased labour market demand for professional experts;
- ✓ the increasing gap between frontier knowledge and teachable codified knowledge; and
- ✓ increased government patronage and supervision.

The emerging private universities and businesses venturing into teaching in South Africa may also have this focus for economic reasons.

2.5.4 Research drift

Clark argues that the old view that teaching and research are inseparable at the university level has begun to break down and that research and teaching are drifting apart (Clark, 1995). Many South African universities and even Technikons are prioritising research as a growth area. This may prove unwise, as modern higher education demands a concentration of research in a relatively small number of research universities.

> *"If spread among all institutions, the nexus (i.e. between research, teaching and study) will become too costly, under funded in unit support, and weakened by diffusion." (Clark, 1995)*

2.6 South African Higher Education

Change is a common denominator and debates about traditional ways of teaching are no longer limited to the educational practitioners either. Education has received substantial political scrutiny and as a result the whole South African educational system has been revised. Many laws have been passed within the past five years that hold significant implications for South African education; not only in terms of formal education and training, but also for on-the-job training and support expectations of employees.

The implications for higher education as a result of these changes in legislation are multiple and far-reaching. To give full justice to the aims and implications of these acts would go beyond the need to investigate change factors, but Table 3.5 gives a synopsis of direct implications of three of these namely the:

- ✓ South African Qualifications Authority Act (58 of 1995);
- ✓ Employment Equity Act (55 of 1998); and
- ✓ Skills Development Act (97 of 1998).

Act	Intended Outcome	Higer Education Implication
58/95	Establish the South African Qualifications Authority (SAQA), National Standards bodies (NSB), Standards generating bodies (SGB) and Education and Training Quality Assurance bodies (ETQA)	New bodies for standards and quality control. Phasing out and/or adjustment of existing QC bodies. The expertise often lies with staff of HE institutions. Contributions add to workload.
	Development and implementation of a National Qualifications Framework	New esoteric terminology needs to be mastered. Re-evaluation of **all** qualifications. Potential mobility between qualifications. Recognition for training of quality. Increased competition between providers.
	An integrated national framework for learning achievements	A framework is but a shell. Somebody has to do all the work to capture and structure existing qualifications. Quality control measures need to be set up and enforced.
58/95	Facilitate access to, and mobility and progression within education, training and career paths.	Recognition of prior learning principles is fine, but know-how and structures to apply them needs to be expanded.
	A shift towards outcomes based education.	New esoteric terminology needs to be mastered. New techniques need to be acquired. Open learning techniques require well-trained practitioners. As yet, many are not.
	Enhance the quality of education and training	In order to achieve this, outcomes based education is prescribed. Educators consult with other stakeholders. (Statutory bodies, future employers, students, industry etc)
	Drafting and submitting of qualifications	Evaluate, consult, rewrite and finalize. Additional work load. Deadlines create pressure
	Contribute to the full personal development of each learner and the social and economic development of the nation at large.	Lifelong learning could change student profile. Different student needs. Emphasised social responsibility Institutions have a responsibility as providers.
58/95 55/98 97/98	Accelerate the redress of past unfair discrimination in education, training and employment opportunities	Accelerated training programmes. Flexible entry requirements Staff tensions as some may view measures to be to harsh and others feel it they are still not adequate.
55/98	Promoting equal opportunity and fair treatment in employment	Institutions have a responsibility as employers.
	Implementing affirmative action measures to redress the disadvantages in employment experienced by designated groups, in order to ensure their equitable representation in **all** occupational categories and levels in the workforce.	Properly functioning teams may need to be changed. Under-qualified staff with potential can be appointed. This requires on-the-job training or learnerships. Early retirement of competent staff. Threatened behaviour from members of non-designated groups.

	An expedited change in staff culture composition.	Change management strategies paramount. Existing managers may not posses attitudes or skills to facilitate change.
55/98	Assign a senior manager responsible for equity.	Additional cost to provide for. Equity policy to be drawn up. Consult with stakeholders (employees and unions). Implement, plan and monitor progress. Report to Director-General
	Equity plan to be drawn up and submitted.	Analyse policies and practices Analyse staff profile and demographic data. (Per level!) Identify objectives, corrective measure, time frames, targets and allocate resources.
97/98	Improve the quality of life of workers, their prospects of work and labour mobility.	Same employer responsibilities as any other company. Great opportunities as providers.
	Improve productivity in the workplace and the competitiveness of employers.	Staff may elect to work for employers with a developmental approach. Improved productivity could make HE institutions more competitive.
	Promote self-employment	Especially the self-employed need to have competencies. As providers institutions stand to benefit.
	Increase the levels of investment in education and training in the labour market	New partnerships and or research opportunities. New awareness of developmental responsibilities.
	Provide employees with the opportunities to acquire new skills.	As providers institutions stand to benefit.
	Opportunities for new entrants to the labour market to gain work experience.	Joint ventures through learnerships may arise.
	Employment for persons who find it difficult to be employed	Awareness of the difficulties of others e.g. disabled persons Infrastructure needs to be accessible for handicapped people. E.g. lift buttons low enough to reach from a wheelchair.
	Introduction of the National Skills Authority(NSA), Sectoral Education and Training Authorities (SETA)	The expertise often lies with staff of HE institutions. Contributions add to workload. Register with the applicable SETA.
	A National Skills Fund is set up.	Funds available for developmental exercises via a grant system.
	Levies (a percentage of the wage bill) to be paid over through the revenue service	Registration with SARS 0.5% payable for 2000.
	Labour centres and the Skills Development Planning Unit is set up	Sectoral skills plans (SSP) need to be developed. Training interventions to be co-ordinated.
	Appoint a Skills Development Facilitator (SDF)	Register with a SETA (as an employer) Qualify for Grant A (15%) Submit a skills plan to the SETA
	Establish a Training Committee	Draft of workplace skills plan

Table 3.5: Legislative implications for Higher Education

Not everybody who is influenced by these changes in higher education accepts the changes taking place in equal fashion. Human reaction to change needs to be explored.

3. Reaction to change

Different people have different capacities for dealing with change. Human reaction to change will be discussed under the following sub-headings:

- ✓ Flow theory
- ✓ Life-long learning
- ✓ Motivation
- ✓ Change cycle

3.1 Flow theory

Chichentzmihalyi (1990) claims that people react to all situations with either one of three experiences, namely anxiety, enjoyment or boredom (Figure 3.2).

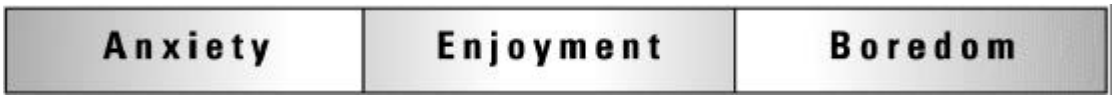


Figure 3.2: The balance between anxiety and boredom (Chichentzmihalyi,1990)

In all Chichentzmihalyi's studies, enjoyment came at a specific moment when the individual's skills matched the challenges of the activities. In any given situation, one person may be bored while another less skilled person may experience anxiety. Therefore the point where enjoyment is experienced is a dynamic one, which is dependent both on the skills level of the individual and on the challenge level of the activity. The diagram should be revised to incorporate these two factors (Figure 3.3).

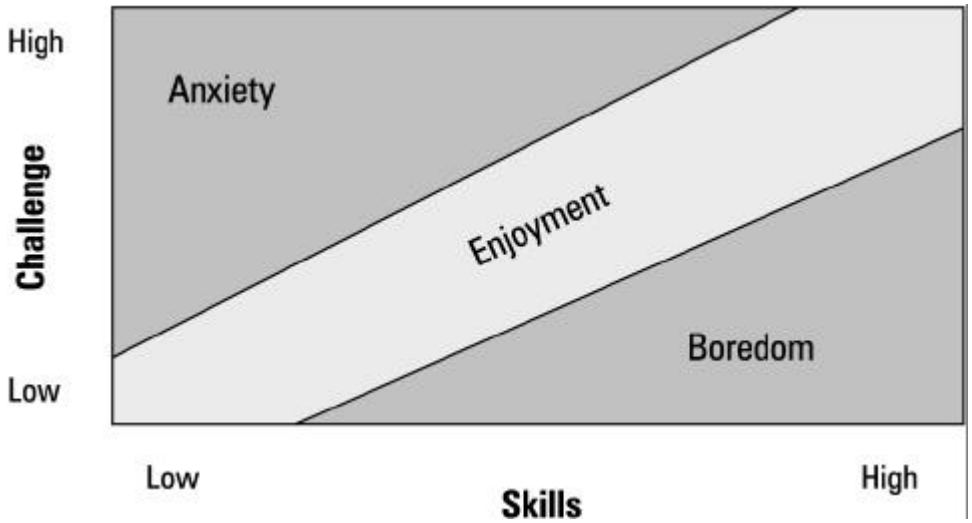


Figure 3.3: The effects of skill and challenge on enjoyment

The individuals' experience in relation to their perception of the size of the challenge as compared to their acquired skills will effect whether or not enjoyment or boredom will be the result.

This enjoyment must not be seen as mere pleasure, for during these enjoyment periods, flow is reached and a cycle of discrimination and assimilation takes place. Positive feedback from each flow experience strengthens the self and more attention is freed to deal with the outer and inner environment. As such, the amount of change that can be effectively dealt with is determined by the individual's ability to deal with change without being forced into anxiety.

> *"In flow we are in control of our psychic energy, and everything we do adds order to consciousness."* (Csikszentmihalyi, 1990)

3.2 Lifelong learning

The continuous spiral of movement between boredom and anxiety clearly sets the stage for an approach where the individual can be assessed on an ongoing basis to constantly readdress needs as new competencies are acquired and each individual's challenge level needs are realigned.

This new approach to education makes room for a more flexible time frame which,

without stating the fact, clearly makes it possible for learners with different abilities to steer their path of intellectual growth in such a way that they stay within the borders of the flow channel.

3.2.1 Prerequisites for optimal experience

From his studies, Csikszentmihalyi (1990) identifies the following eight factors that make flow possible if one or more of them are met:

- ✓ Challenge is optimised.
- ✓ Attention is completely absorbed in the activity.
- ✓ The activity has clear goals.
- ✓ The activity provides clear and consistent feedback as to whether one is reaching the goals.
- ✓ The activity is so absorbing that it frees the individual, at least for the moment, from other worries and frustrations.
- ✓ The individual feels completely in control of the activity.
- ✓ All feelings of self-consciousness disappear.
- ✓ Time is transformed during the activity (e.g. hours pass without being noticed).

Since flow is conducive to quality learning, the change agent has to try to incorporate as many of these factors into any development programme as possible. Involving staff members as part of the design team for the identification of developmental interventions, creates such an atmosphere.

The rate of change can push staff into anxiety. If the balance between perceived challenge and hence the need for skills is not met by equal developmental opportunities, the motivation of staff members may suffer. In this way the flow theory forms the basis of lifelong learning in that the continuous cycle of skills enhancement which happens with lifelong learning is in fact a way of dealing with the increased

challenges of new and/or changing environments. This necessitates a need for skills improvement in order to remain within the enjoyment channel.

3.3 Motivation

Two motivational theories will be described, the one by Malone and the other by Keller. Both will be given, because an inclusive approach is more representative of the motivators and the reaction of staff to changes in their environment.

The three factors originally attributed to Malone (1981) are challenge, curiosity and fantasy. In his later work he added control (Malone, 1987).

3.3.1 Challenge

The most important principle is that the challenge should be adjusted to the individual. Work should not bore or frighten people. While change agents are not in control of the level of perceived difficulty that staff members experience during times of change, it is important to note that extremes in terms of challenge may adversely effect the level of motivation amongst staff members.

3.3.2 Curiosity

> *"Malone distinguishes sensory curiosity and cognitive curiosity. Sensory curiosity is aroused by visual or auditory effects which are surprising or which attract attention. Cognitive curiosity is aroused by information which is surprising in that the information conflicts with the [individual's] existing knowledge or expectation, is contradictory or is in some way incomplete.*" (Alessi and Trollip, 1991)

The visual curiosity may be less important, but since a changing situation most often includes large quantities of information which conflict with existing knowledge, the motivational effect of cognitive curiosity should be considered and utilised.

3.3.3 Fantasy

Increased participation and active learning enhances retention. Role play and situational debate can be used to capitalise on the motivational potential of man's tendency to be motivated by situations of fantasy.

3.3.4 Control

Malone distinguishes three rules for control to enhance motivation:

- ✓ Contingency, whereby learning should be the result of learners' actions and responses;
- ✓ Choice: Options that permit individuals to decide on sequence and possibly difficulty; and
- ✓ Power: individuals prefer to see powerful outcomes to their actions. (Malone, 1987)

Change often removes control. As such it would seem to act as a demotivator. Perceptions of control like the introduction of choice and participation could limit this effect.

3.3.5 Attention

The first of the four motivators attributed to Keller in his ARCS motivational theory is attention. The acronym refers to attention, relevance, control and satisfaction.

He regards the securing of attention as vital to success; not only in terms of capturing attention, but also in terms of attaining attention throughout (Keller and Suzuki, 1988). This can be improved by a communication strategy which will not only keep people informed, but will add to their feeling of involvement.

3.3.6 Relevance

To utilise individualism and contributions of participants, they need to experience the content of the work as relevant to their own situation. Marjanovic (2000) also refers to this "*soft side of BPR*" (Business Process Review).

Using examples can show relevance to individuals. Mager (1991) uses this approach as part of his motivational strategy, by doing a target group analysis prior to a programme.

3.3.7 Confidence

Not unlike Malone's (1981) call for control and challenge, Keller and Suzuki (1988) stress the importance of confidence. Making expectations clear to individuals and giving a reasonable opportunity to be successful can achieve the challenge.

Change agents need to provide opportunities for staff members to experience successful interactions with change factors. This will not only improve their confidence but incorporate them in active learning contexts and utilise their often considerable potential in the addressing of new challenges.

3.3.8 Satisfaction

The last motivating factor is that of satisfaction. Keller, according to Allessi and Trollip (1991), sees satisfaction as a way for participants to use what they have learned in a way that is real and useful. Application should not only follow change interventions within reasonable time, but should also take place within a support framework to ensure that success and relevance will lead to satisfaction and continued involvement.

3.4 Change cycle

Brock and Salerno (1994) wrote a book with the title *The Change Cycle: The secret to getting through life's difficult changes.* In this work they introduce not only the more typical reactions to change, but refine them into six stages within which individuals can find themselves as a result.

These stages are:

- ✓ Loss
- ✓ Doubt
- ✓ Discomfort
- ✓ Discovery
- ✓ Understanding
- ✓ Integration

The first two stages are classed as a danger zone since individuals need to be aware of natural behaviour that could be negative and manifest in feelings of fear and resentment. This in turn could create paralysed and resistant behaviour stemming from cautious and sceptical thoughts, which are common during these situations.

It is normal to have these feelings or think such thoughts, but the danger lies in stagnating in the next two stages namely discomfort and discovery. Should the feelings of anxiety not be fought and replaced by feelings of anticipation, the confused thoughts associated with change reaction, will not be replaced by creative thoughts and the confusion associated with change may loop thoughts back to the cautious pattern associated with stage one.

Once the unproductive behaviour of discomfort has changed into the energised behaviour of discovery, thoughts again provide for reality and become focussed (Brock and Salerno,1994).

Table 3.6 captures the essence of the change cycle by showing the feelings, thoughts and behaviours of people at each stage.

Stage	**Feelings of:**	**Thoughts are:**	**Behaviour is:**
Loss	Fear	Cautious	Paralysed
Doubt	Resentment	Sceptical	Resistant
Discomfort	Anxiety	Confused	Unproductive
Discovery	Anticipation	Creative	Energised
Understanding	Confidence	Pragmatic	Productive
Integration	Satisfaction	Focused	Generous

Table 3.6: The impact of change (Adaptation from Brock and Salerno, 1993).

3.5 Danger zone defined

Brock and Salerno's warning with regard to the danger in not accepting and dealing with change is echoed by work done with higher education staff specifically dealing with re-curriculation and training as a result of changes to the educational system.

Observations made (Naidu and Steyn, 1999 and Steyn and Naidu 2001) correlate with those described by Brock and Salerno's (1993) danger zone and show multiple signs of uncertainty despite these interventions.

McKenna (1995) warns that since life is not linearly structured, interventions solely of the "system drives behaviour" kind, will not necessarily succeed by reacting linearly to changes in environment. Staff members may react in order to avoid embarrassment or threat. Over time these issues have manifested in what is reproduced in Figure 3.4 and what Argyris (1990) calls organizational defence patterns. For instance, Figure 3.4, from left to right, shows an attrition in the possible positions to which employees can revert. Such a work culture becomes less manageable as these defence patterns can be grouped into clusters as indicated.

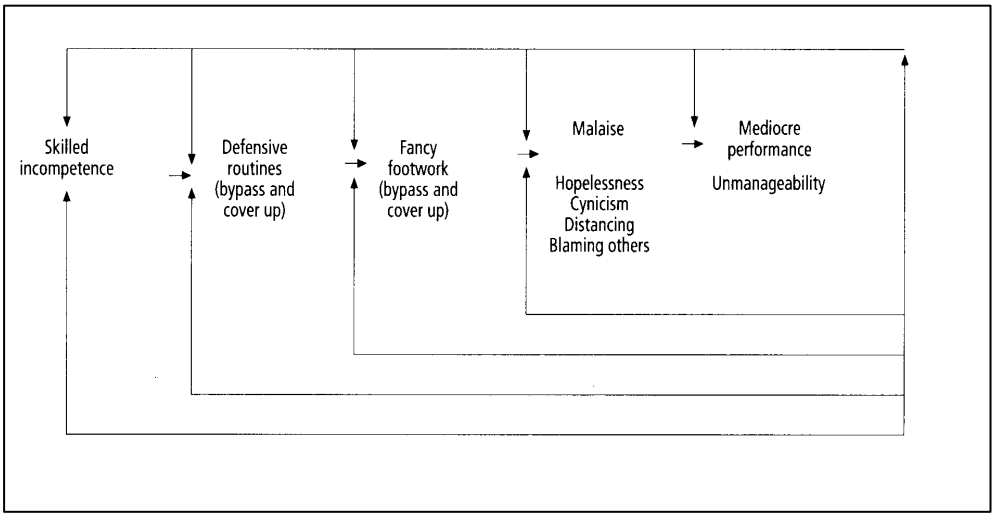


Figure 3.4: Organizational defence patterns (Argyris, 1990)

Argyris's (1990) theory of chaos shows that what starts as avoidance ends up in unmanageable mediocrity. New ways of doing must emerge.

Section three shows possible reactions and influencing factors which will co-dictate how people react to change. This variation in reactions suggests the necessity to have alternative approaches to cater for the spectrum of reactions described.

The next section examines the possibilities offered by Information Technology.

4. Information technology

> "*The web of our life is of a mingled yarn, good and ill together…"* William Shakespeare -All's well that ends well

Information technology has the potential to provide alternative/supplementary possibilities for the facilitation of learning.

> *"It is becoming increasingly unusual to pick up a professional training or education journal without seeing articles concerning alternatives to in-person teaching and learning. Distance education is not new, but the new technologies used for delivery in recent decades have fuelled different perspectives, methods, and debates than had been the case starting a century ago*." (Berge and Muilenberg 2000)

The advantages of technology are suggested by energetic believers and vast amounts of money are channelled into the development and acquisition of new systems. Yet despite technological availability, original estimations of profit from on-line sales did not materialise and the resulting disappointment with what has come to be known as the 'dot com promise' is echoed by the associated drop in stock prices towards the end of 2000 and in 2001.

From a review of the literature, experience in various distance education settings, and discussions with distance educators, Berge and Muilenberg (2000) listed specific factors which affect the way individuals perceive technological possibilities:

- ✓ work place (e.g., community college, government);
- ✓ job function (e.g., support staff; manager, researcher, student);
- ✓ type of delivery system used (e.g., audio-tape, computer conferencing, ITV);

- ✓ expertise of the individual regarding distance education;
- ✓ the stage of the respondent's organization with regard to capabilities in delivering distance education; and
- ✓ the area in which the respondent primarily works (e.g., fine arts, engineering, education).

These perceptions need to be considered when a developmental approach that incorporates the use of technology is constructed.

The use of technology in educational systems has increased over the past few years (Figures 3.5 and 3.6)(Mogge,1999).

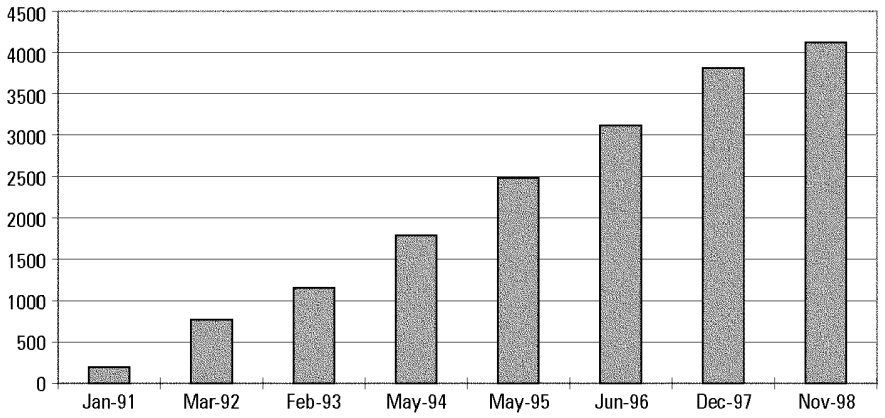


Figure 3.5: Growth of scholarly e-conferences

However Phelps *et al*. (1999) warn that despite US policies which encourage the use of technology, it is not easy to implement and/or maintain suitable standards of quality.

> *"Nationally, policy has placed considerable emphasis on the embedding of new technology into the teaching and learning process (e.g. HEFCE, 1997). However, the process of embedding learning technology is not trivial, and uptake has been patchy. One reason for this is the considerable range of skills that need to be acquired if embedding is to be carried out in a professional way." (Phelps et al., 1999)*

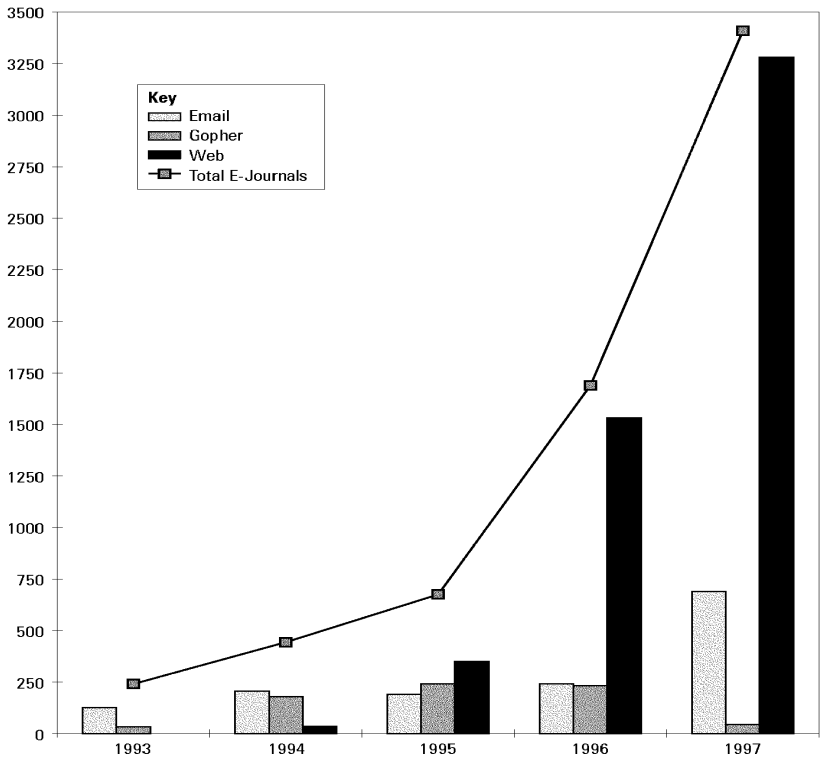


Figure 3.6: Distribution of e-journals

Furthermore, an understanding and experience at flexible learning systems is also required.

> *"Such technologies are tools with multiple capabilities; it is misleading to make assertions like "Microcomputers will empower students" because that is only one way in which computers might be used."* (Chickering. 1994)

Education innovation in South Africa has likewise placed staff members in situations where their skills may be inadequate, leaving lots of work for staff developers (Brown, 1999).

4.1 Barriers to distance delivery

Berge and Muilenberg (2000) conducted a study to identify the perceived barriers to the implementation of distance delivery of learning interventions. A valuable aspect of their study is the large number of respondents from various perspectives:

- ✓ 346 support staff
- ✓ 1150 teaching faculty members/trainers,
- ✓ 648 managers,
- ✓ 167 higher administrators,
- ✓ 102 researchers, and
- ✓ 91 students.

Managers and administrators were grouped as Support staff. Consequently, a total of three focus areas were used for comparison. Respondents were asked to prioritise barriers to distance education. Means for each of the sixty-four barriers were calculated and placed in descending order for each of the five job function categories. The eleven strongest barriers are reported in Table 3.7. These results support the findings of Felder (1994) who found that the major barrier to be related to increased pressures on lecturing staff.

The eleven weakest barriers are reported in Table 3.8. Note that because of the descending order of the rankings, the first listing under the weaker barriers is in fact only number 54 and that the absolute weakest barrier is in the last row as barrier number 64.

Ranking	Strongest Barriers	Support Staff	Faculty/ Trainer	Student
1	Increased time commitment	1	1	1
2	Lack of money to implement distance education programs	4	3	7
3	Lack of shared vision for distance education in organization	2	4	4
4	Faculty compensation, incentives, etc.	9	2	3
5	Organizational resistance to change	3	7	2

6	Lack of support staff to help course development	8	5	18
7	Lack of strategic planning for distance education	5	8	6
8	Lack of technical support	7	6	20
9	Slow pace of implementation	6	12	5
10	Lack of technology-enhanced classrooms, labs or infrastructure	10	9	9
11	Difficulty keeping up with technological changes	12	10	16

Table 3.7: Strongest barriers to DE sorted by combined ranking.

(from Berge and Muilenberg, 2000)

Ranking	Weakest Barriers	Support Staff	Faculty/ Trainers	Student
54	Lack of personal technological expertise	56	47	60
55	Competition with on-campus courses	55	55	57
56	Lack of Acceptable Use Policy (AUP)	60	56	54
57	Lack of transferability of credits	58	57	43
58	Tuition rate	57	60	52
59	Problems with vast distances and time zones	54	59	62
60	Technology fee	59	58	58
61	Ethical issues	61	61	59
62	Local, state or federal regulations	62	62	61
63	Existing union contracts	63	63	63
64	Lack of parental involvement	64	64	64

Table 3.8: Weakest barriers to DE sorted by Job Function (from Berge and Muilenberg, 2000)

Contrary to popular belief, the cost to the student as a result of technological delivery is ranked rather low as a barrier. This, combined with the lowish ranking of the need for personal technological expertise may indicate that students are more likely to make a mental shift to alternative learning strategies.

While the rankings for the different interest groups are remarkably close in most instances, there are two noteworthy exceptions. The transferability of credits was rated higher by the students than the other groups. As institutions focused on client needs it should signal to administrators that this need is of great significance to the students. The second discrepancy lies with the low ranking of personal technical expertise. No concrete deduction can be made, but one of two explanations are possible; either faculty members are indeed more willing to acquire skills as and when needed and hence do not perceive the lack of skills equally important, or, the scope of the shortcoming may be sufficient to blind faculty members to the true impact of their shortfall. However, Support staff rated this more important than did the other two groups suggesting that their perceptions differ from academic staff and students. This difference in perception requires further investigation.

Globally there is also a move towards better utilisation and adoption of information technology. Possible benefits need to be explored and contextualised. Technology changes the way we do things.

> *"Change and Information technology is part of the content and not just part of the context*." (Argeron, 2000)

In an attempt to overcome some of the barriers previously identified, it is necessary to develop a common frame of reference:

> *"There is considerable tension between the centres about the role of teaching and learning ideas in relation to technology. Similar vocabulary is used to describe very different ideas and assumptions, which makes it hard to determine how our ideas are similar and different*." (Smith, 2001)

Rogers (1995) identifies attributes of technological innovation that influence its adoption rate. These factors could be perceived to be mere characteristics of technological adoption, but in fact represents attributes which will negatively impact

on the technological adoption rate. As such they can be considered to be additional barriers to technological adoption.

These attributes are:

- ✓ Relative advantage: To what extent the new product is better than the existing 'old' product.
- ✓ Compatibility: Not only technical compatibility, but the product should also fit in with existing beliefs and needs.
- ✓ Complexity: An indication of how simple (or not) the product would be to use.
- ✓ Trialability: How easy it is to experiment with the new product on a trial basis. This could include issues like settings that may need changing or additional drivers to install or download (Rogers 1995).
- ✓ Observability: What evidence there is that this product has succeeded or, at the very least, has the potential to succeed (Rogers 1995, Lewis, 2000).

In order to reach the stage of adoption (Rogers 1995) it is necessary to cross the adoption chasm (Moore 1991, 1995).

4.2 The technology adoption life-cycle

In this section the technology adoption life cycle as developed by Moore(1991) is discussed. Insights gleaned from the application of these ideas are also investigated.

The lessons learned from Moore's (1991) technology adoption life-cycle is valuable for identifying the role of technology in adoption of innovations (Daniel, 1993).

The number of people adopting new technology, when plotted over time, represents a bell shaped curve. Moore (1991) identifies five groupings which make up the segmented curve (Figure 3.7).

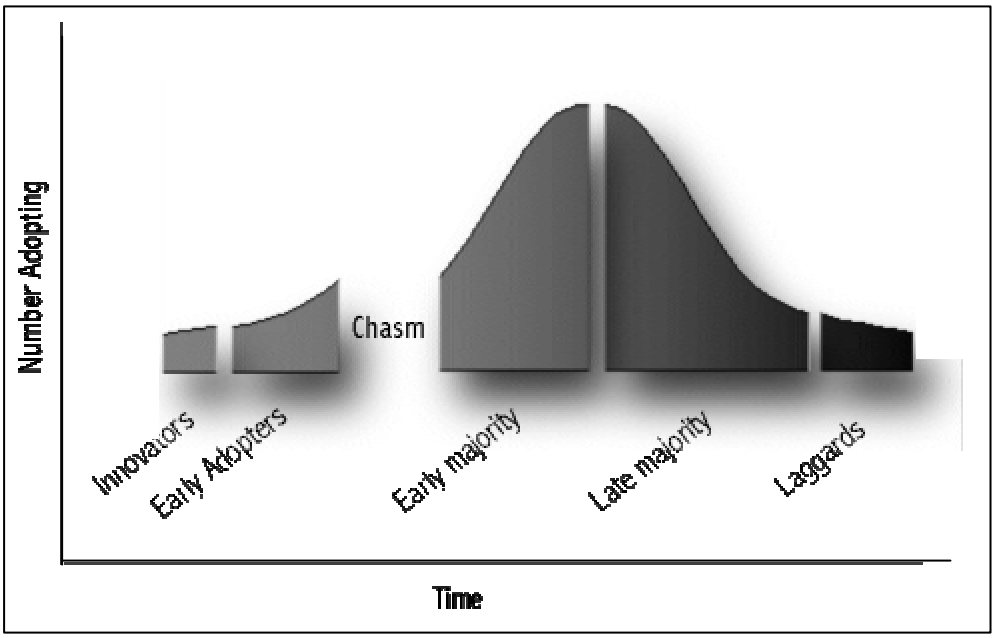


Figure 3.7: The technology adoption life-cycle (Moore, 1991)

- ✓ Innovators: They are interested in and often use technology for its own sake. They can 'walk in the fog', without clear guides in terms of expectation or guidance Obeng (1996).
- ✓ Early adopters: They are quick to see the possibilities and advantages offered by new technologies and may often adopt technologies to better suit their own circumstances.
- ✓ Early majority: They are less likely to take chances, but are quick to see the value of new options and quickly adopt new initiatives. They are the first of the general market.
- ✓ Late majority: This is the biggest individual group and represents people less likely to change for the sake of change, but they will adopt once convinced that the change is not a passing fad. Some individuals may not like technology, but appear to appreciate the advantages offered by new innovations.
- ✓ Laggards: They will not use technology, but will often be able to list discrepancies between original technological claims and existing practice.

4.2.1 The chasm

A distinction can be made between the first two groups (innovators and early adopters) and the rest of the population (lead by the early) majority (Moore, 1991). This separation is called the chasm and represents the longer time period required to convince the latter grouping of the value offered by innovations. While the first groupings are willing to work on perceived benefit and promises, the latter groupings first wait for more clear indications and maturity of the innovations.

4.3 The media impact

Instructional technology is often associated with media (Heinich *et al*., 1986). Also there seems to be not only a link between the common medium of the day and society's view on knowledge, but also between the medium of the day and common cultural activities (Daniel, 1996). Therefore, as media changes over time, our view of knowledge and culture also changes. Table 3.9 below shows an adaptation of Daniel's (1996) representation of the interrelation between media, knowledge and culture. As can be seen in the lower right-hand cell, the modern digitally hyper-linked world we find ourselves in, is creating an information rich world, but because of the loss of linearity, this information still needs to be contextualised (Table 3.9).

Media	Knowledge	Culture
Oral Cultures	"You know only what you can recall"; Knowledge is dramatized, repetitive, concrete, situated, participatory, personal and historically fragile.	Intellectually conservative; prominence of ritual and story telling; wisdom associated with people.
Writing	Not restricted to human memory limitations; abstract; decontextualised; reproducible	Primacy of mind over emotions; competitive tradition.
Printing	Infinitely reproducible; objective and precise; inflexible; referenceable.	Scientific rationalism; development of highly refined linguistic/literary styles.
Radio/TV	Instantaneously accessible; soundbite sized; image based; passively absorbed; increasingly packaged and filtered.	Expects knowledge and opinions on tap; beginning to lose meaning in the data.
Global Hypermedia	Transient (digital); changeable; perspectivised; interlinked; open-ended; dynamic; public not private; breadth at the expense of depth.	Information rich; loss of linear modes of reasoning; loss of linear model of history.

Table 3.9: How media shapes knowledge (Adaptation from Daniel, 1996)

Wolfgang Grulke (2001) colourfully phrases this move away from structure with his rendition around the two deities, Horus (god of structure and predictability) and Seth (god of chaos and disorder) counceling a pharaoh (Fig. 3.8)

Figure 3.8: Horus and Seth (Grulke, 2001)

> *"We are the sons and daughters of Horus, but we live in the world of Seth*." *(*Grulke, 2001)

Yet in this world of Seth, the support staff need to support the academic staff in order for them to be able to deal with these changing environments.

5. Staff support/development

The issue of whether one should refer to the people to receive support as staff or as personnel is not addressed by dictionaries; they give similar descriptions for the two terms. In reaction to an e-mail enquiry to the Oxford English Dictionary and Language Service, the Associate editor replied as follows:

> *"I would say that 'staff' is the usual collective term for people who work full time for an organization. The word 'personnel' is more impersonal, and tends to be used where employees are*

> *treated as a subsection of 'resources'…To caricature the distinction rather broadly: those concerned with the welfare of employees might perhaps tend to talk of 'staff', while those concerned with the management of the business might be more inclined to talk of 'personnel'*." (Marshall, 2000)

Following on advice like this, the term 'staff' will be used in the context of support and development.

5.1 What is staff support ?

There are many definitions of staff development, but also a reasonable convergence of opinion. One generic definition is that of Brew (1995):

> *"Staff support in now recognized as one of the most significant vehicles for change in higher education. It has moved from the periphery to the centre, and is a key factor in strategic planning."*

Components of staff development include:

- ✓ Institutional policies, procedures and programmes;
- ✓ Mentoring;
- ✓ Professional development;
- ✓ Educational development; and
- ✓ Development of teaching and learning.

Most tertiary institutions have practitioners in this field and while titles often vary, they usually include words such as research, educational, academic, professional, faculty members, advisory teaching and learning (Webb, 1996).

Recent innovations call for a move beyond mere teaching and learning support towards a more comprehensive institutional developmental approach (Swain, 1999 and McKenna, 1999).

Piper as quoted by Webb (1996) argues for two models of support. Under an A model he makes a case for the more traditional forms of staff support including support for teaching and learning, 'academic' support and educational development.

The other model (B) becomes more management and policy orientated and supports ‘staff’ rather than the more narrow 'educational development’ role.

Three roles may be identified: Professional service, counselling and collegial interaction. The professional service suggests functions which could be compared to providing specialised services, such as audiovisual advice, technological delivery recommendations and curriculum alteration advice which could well be described as of "specialist technical" orientation.

The other two roles are that of counselling and collegial interaction. The role of counselling makes room for shared research into improved practice and holds the advantages of being non-threatening and closely related to the roles played by mentors and even colleagues in academia.

Collegial interaction advocates a more diverse approach where no specific role dominates.

> *"It is necessary to work flexibly and eclectically in order to respond to the unique demands of each situation. The skills, which need to be developed, are those of each of the practitioners described: both technical and interpersonal skills are necessary, and the practitioner’s presentation to the rest of the educational community needs to be that of a colleague and fellow academic. At particular times and for particular teachers, the practitioner may need to adopt one of these roles exclusively, but if any one of these approaches takes over completely, then the effective development is likely to be hampered."* (Baud and McDonald, 1991)

Fox's (1983) describes the growing theory which has developmental potential in the sense that staff make a significant contribution to their own learning in terms of pace, direction, objectives and process. This correlates with value of reflection as advocated by Shaw and Green (1999).

Within the growing theory the role of the academic developer has changed from being the sole specialist to being a guide that operates alongside the academic and provides assurance, guidance and cognitive scaffolding in terms of the context in which the learning is occurring (Johnston, 2000).

During such times of intellectual drift (see section 2.1), the need for support goes beyond technical expertise to a role of confidante and internal adviser as well as informed critic. These are key elements needed by modern lecturers and managers so quality cannot be merely managed, but needs to be nurtured by informed reflective practice (Barnette, 2000). This relates well to the role of mentor as discussed in section 5.2.

The need for support is not limited to junior staff. Senior faculty members are often involved in management -even management of economically competitive business units- while also having to participate in the guiding of the academic direction of their staff and faculties. Without proper support structures to assist them, it is hardly foreseeable that they would have the time or focused objectivity to identify weaknesses in current practice or identify niche potential within the academic environment.

5.2 Mentoring

Mentoring has been associated with education practice since the time of the ancient Greeks and is still an important element of the teaching and learning environment today.

> *"…and Medon said, "Hear me, men of Ithaca. Ulysses did not do these things against the will of heaven. I myself saw an immortal god take the form of Mentor and stand beside him. This god appeared, now in front of him encouraging him, and now going furiously about the court and attacking the suitors whereon they fell thick on one another*." (Homer, 800BC)

Manyard and Furlong (1993) describe three types of mentoring:

- ✓ **apprenticeship** where the experienced lead and advise the junior;
- ✓ **contributions** that add value to **competency and effectiveness**; and
- ✓ **reflective practitioner** where no specific distinction in terms of seniority is made, but where one might see a joint exploration of practice.

Without linking these functions to specific roles or models, there are some common functions to mentoring.

With the advent of new technologies, new questions must be asked and Woodd (1999) has raised the issue of whether the 'telementor' could still function within the same roles as the traditional mentor. In order to explore this issue Table 3.10 lists the more common functions as well as the researchers who have mentioned the function. The middle column contains an indication of the authors' opinions with regard to the suitability of the successful pursuit of the function via technology. While arguably the oldest form of staff guidance, mentoring is not the only option.

Key	Meaning
	Best approached via traditional methods
	Uncertain – Needs further investigation
	Could function well via electronic alternatives

Function	Approach	Mentioned by
Acceptance		Gibb and Megginson (1993)
Advice		Manyard and Furlong (1993)
Challenges		Woodd (1999)
Coaching		Manyard and Furlong (1993)
Confirmation		Gibb and Megginson (1993)
Counselling		Hamilton (1993)
Create opportunities		Woodd (1999)
Encouragement		Homer (800BC)
Friendship		Gibb and Megginson (1993)
Guidance		Manyard and Furlong (1993)
Motivation		Clutterbuck (1991)
Networking		Clutterbuck (1991)
Protection		Homer (800BC)

Table 3.10: Mentor functions and approaches

5.3 Further methodologies and approaches

The Australian government spent some $20million over 1997 –1999 on staff development programmes. These funds were mainly utilised via grants awarded for research (DETYA report, 2000).

Another very comprehensive effort is described by Brent *et al*. (2001). This time the size is not dependent on funds, but on the scope of the collaboration. SUCCEED (South-eastern University and College Coalition for Engineering Education) is a National Science Foundation-sponsored coalition between the following institutions:

- ✓ Clemson University;
- ✓ University of Florida;
- ✓ Florida A and M University;
- ✓ Florida State University;
- ✓ Georgia Institute of Technology;
- ✓ North Carolina A and T University;
- ✓ North Carolina State University;
- ✓ University of North Carolina; and
- ✓ Virginia Polytechnic Institute and State University.

The aim of the coalition is to scale up and institutionalise educational reforms by

- ✓ promoting proven instructional methods and materials;
- ✓ improving institutional support for teaching; and
- ✓ having a sustainable programme in place on each campus by the end of Year 10 (Brent *et al*., 2001).

The preliminary report warns against a simplistic approach to development.

> *"Rather than trying to define a "one-size-fits-all" faculty development model, we have attempted to identify key FD program elements that should be in place at each institution and offer examples of forms the elements might take." (Bent et al., 2001)*

A graphic representation of the model followed by SUCCEED is given in Figure 3.9.

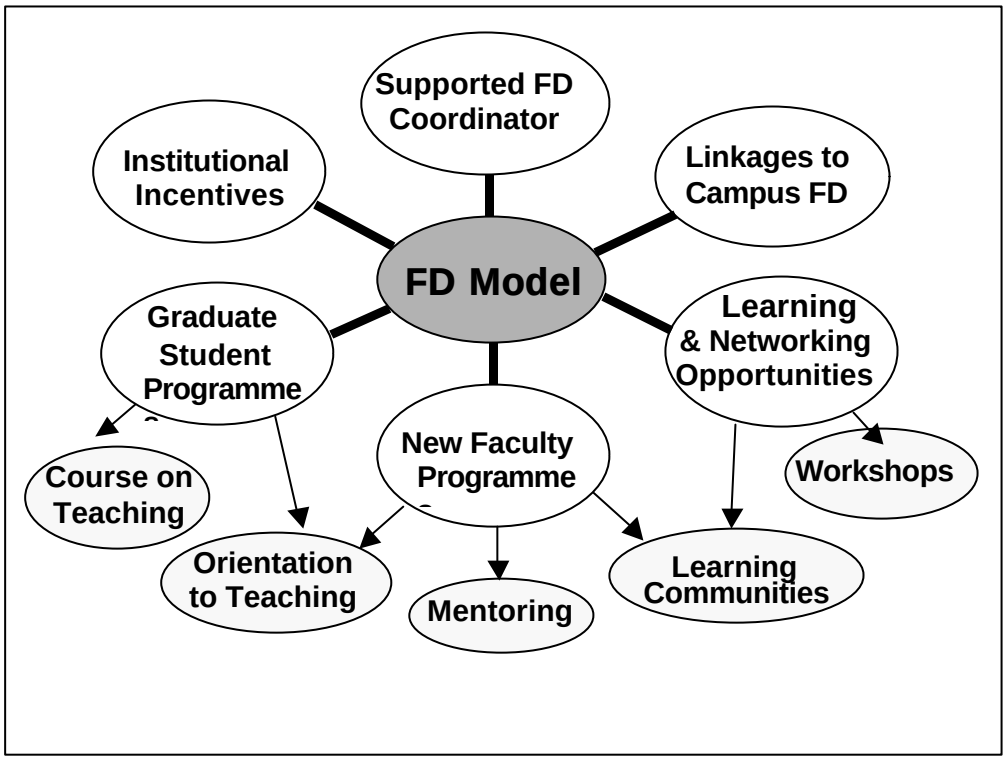


Figure 3.9: SUCCEED Faculty development (FD) model (Brent *et al*., 2001)

As can be seen in Figure 3.9 the various faculty development (FD) approaches do not on their own constitute a single generic system, but collectively make up the faculty development programme. While impressive and comprehensive, the value does not lie in the size of the roll out, but in the scope of the efforts. Size and co-ordination do not hold the key, but rather provide support when and where needed over a wide front.

> "*Cultures do not change when everyone is forced to do something at the same time. Cultures change when pockets of people find success and the word spreads*." (Werner, 2001)

At the same time the key to success could be with colleagues who are enthused rather than with those who are forced by line management (Zuber-Skerritt, 1992).

> "…*we believe that the main aim … should be to sustain a learning society*." (Shaw and Green, 1999)

Also;

> "*Don't look upward to senior management. Look sideways for the oddballs,, the experimenters, and the discontented. Think insurgency, syndicate, and community! Break down silos and build bridges to other groups. Be an ambassador, dealmaker, and networker*." (Werner, 2001)

Unless a unique context specific solution is proposed, staff members will not buy into the process. Really successful and popular changes did not come through big launches or institution wide adoption. Devices like fax machines and cell phones became popular because they solved real problems in the lives of real people. Similarly context specific solutions will prove popular in academia (Cannon, 1983; Werner, 2001).

> *"Just start telling people what's available. Show people a demo. Tell people what successes others have had, including competitors*." (Werner, 2001)

While no clear method for development seem evident, the eclectic approaches proposed call for context specific evaluation and selection of approaches to be pursued. The areas of development seem to focus on mainly three different aspects of Higher Education development. These are:

- ✓ Personal development – skills, attitudes, views and insight;
- ✓ Educational development – approach and process focus changes to learning facilitation; and
- ✓ Institutional development – structure and strategic guidance to maximise impact to maintain service levels.

(Berquist and Phillips, 1975; Cannon, 1983; McKenna, 1999; Werner, 2001)

6. Dynamics between change and staff support

While Berquist and Phillips (1975) contend that there are perhaps as many approaches to staff development as there are individual programmes, they do quote Goodwin Watson (1967) as saying that change is the central facet of staff development. Not only is development needed to support staff to cope with changes in their environment (Naidu and Steyn, 1999), but development also has change at heart as it strives to achieve modification in behaviour (Watson in Berquist and Phillips, 1975).

The rate of change will just increase. Speculation about the growth of the private education initiatives paint pictures of doom and some fear the tidal wave of continual change. Grulke gives his solution:

> *"Build surfboards, an ark won't do!* (Grulke, 2001)"

Grulke's slogan warns that fortification will not be sufficient, and that one can deal with more when armed with applicable skills. The acquisition of necessary skills is not something all individuals can do for themselves.

Not all people prefer to live with the same amount of uncertainty in their daily tasks. Obeng (1996) identified four types of people based on their abilities to deal with open processes in terms of knowing what to do and how to do it (Table 3.11)

Type	**Know what to do**	**Know how to do it**	**Metaphorical comparison**
Adaptor	Yes	Yes	Colour by numbers
Pioneer	Yes	No	Going on a quest (Killing the dragon!)
Craftsman	No	Yes	Making a movie
Innovator	No	No	Walking in the fog

Table 3.11: Change preference (Adaptation from Obeng, 1996)

This idea could also be depicted graphically (Figure 3.10). Each quadrant holds a corresponding people type.

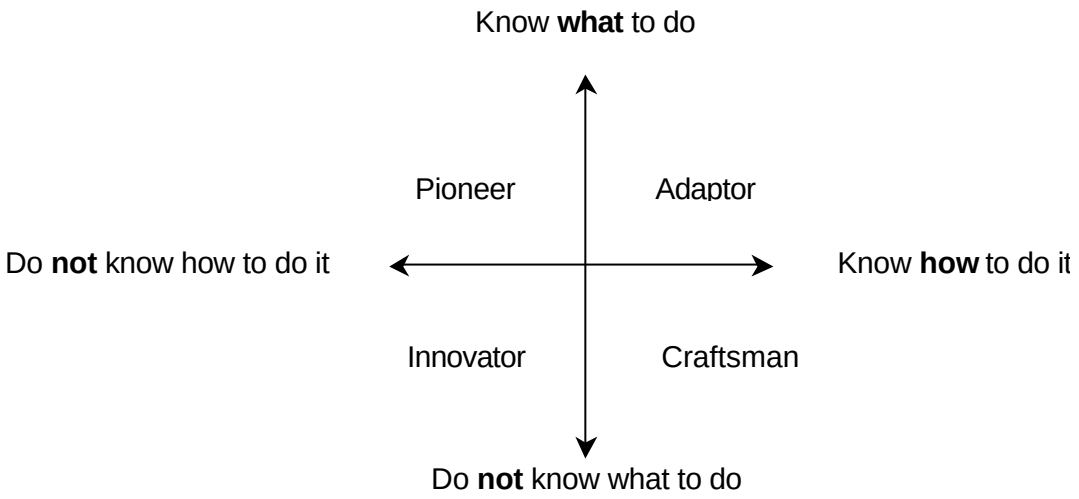


Figure 3.10: Types of people according to change preference

While it can be argued that the innovators have the ability to build surfboards on their own, the same cannot be said of Adaptors. The point being that just as different approaches are called for to address staff development in various circumstances, so the existence and rate of change will also contribute to a scenario where different individuals may need different types of support as a result of their unique reactions to the changes around them.

Managers are often not equipped to deal with support issues themselves.

> *"There was a clear desire to inspire and motivate staff through creating an environment of development, if not learning. However, the managers surveyed were confused as to how they could do this in the context of the complexity within which they operated*." (McKenna, 1999)

The rate of change will continue to excel and this complexity will create an exceedingly impossible task. In his book *Ten Lessons from the future* Wolfgang Grulke expresses this opinion:

> "*Machines too complex to understand, networks too complex to manage, organizations too demanding to lead, customers too demanding to satisfy*." (Grulke, 2001)

Staff development practitioners should be proactive. Not only in order to prepare for change, but also in order to be responsive and to promote change (Bryant *et al*., 1999).

7. Staff development and Information technology

Technology can be used as:

> *"…a 'learning tool' to deal with the 'new' world of work developing in the 'communications industry'*." (McKenna, 1999)

However, promising the possibilities seem, this is not a mere instance of role-out and watch as satisfied users learn on-line.

> *"Research … showed that there was clear need for support in the process of designing or redesigning courses in order to take advantage of the opportunities provided by learning technology*." (Oliver and Conole, 2000)

While their warning is meant to indicate student learners, such instructional design needs are still relevant. Some may look at availability of technology to provide solutions (Shih and Sorcinelli, 2000), but increased time commitment and lack of money were the top *barriers* to electronic delivery of education as identified by Berge and Muilenberg (2000). Simplistic solutions consisting of throwing technology at problems do not have a realistic chance of succeeding:

> *"…But where most politicians see the problem as one of access to computers and the Internet, a growing number of leaders in higher education see it more as an issue of literacy — information literacy*." *(*Breivik, 2000)

This issue is more fully reviewed in Chapter Five.

In the traditional trade-off between a fully flexible conceptual framework that gives little (if any) support to users on the one hand and a rigid, fixed structure of a fully automatic system on the other hand, there is an inversely proportional relation. Any type of automation built into staff development will limit its applicability:

> *"The potential for using open learning and distance education for staff development is considerable*." (Brew, 1995)

While the advantages of technological intervention are echoed by Norman (1993), he qualifies his optimism:

> *"The technology for creating things has far outstripped our understanding of them."* (Norman, 1993)

Accordingly it is not advisable to opt for stand-alone, automated, self-guided staff development interventions. This study explores the reasons for this statement in Chapters Four and Five.

In the flexible and varied world of academia, the use of 'toolkits' provides an alternative which could well add value.

> *"Toolkits are a specialist type of resource that fall between conceptual frameworks and automated software tools. Because of this position, they are ideally suited to supporting decision-making processes*." (Oliver and Conole 2000)

Research has proved toolkits to be valuable and useful, but they are not yet used as core approaches.

> *"[These] tools currently remain outside mainstream procedures*." (Oliver and Conole, 2000)

This links up with reports from a study by the Masie group, where over 2000 participants indicated that they preferred human involvement (Masie, 2000).

8. Conclusion

The separate issues involved in this study have been explored and discussed by various authors. The exact combination of change, higher education staff development and technology has however not been addressed.

Existing literature indicates a variety of possibilities, but does not indicate consensus in terms of either specific staff development approaches, the applicability of technological solutions or indeed the priority of intervention.

In the next chapter this study turns to staff development practitioners active in the field. Their views are considered and incorporated to inform on this specific context and combination of interests in order to explore the potential and possible applicability of suggestions from this study.

Chapter 4

1. Introduction

This chapter gives the essence of the 598 pages of information gathered from the 58 respondents from 36 institutions via questionnaires as mentioned in Chapter 2.

The questions dealt with four main issues:

- ✓ Localization
- ✓ History
- ✓ Present
- ✓ Future

The feedback is given under the same headings.

2. Localization

The aim of these questions was to obtain information to indicate context and possible factors that may indicate special circumstances. Respondents were asked to comment on institutional factors, departmental factors and personal factors. (Figure 2.1)

2.1 Departmental names

Departments carry a variety of names, but the names have little value as indicators of exactly what happens in the department. Departments with similar names operate in less similar ways than other departments which carry different names.

The five most common departmental names are in descending order of similarity:

- ✓ Centre For Teaching And Learning Services
- ✓ Centre For Academic Excellence
- ✓ Centre For Teaching Excellence
- ✓ Centre For Excellence In Learning And Teaching
- ✓ Teaching and Learning Development Unit

Departmental names may be useful when doing searches within the field. All names of identified departments were compared and analysed. A compilation of similarities between names revealed the information compiled in Table 4.1. It has three columns which contain words in alphabetical order. The first column holds the collective nouns, the middle column has the aspects and the right hand column indicates intent. This table makes it possible to generate any of the departmental names represented by the respondents.

To identify a possible departmental name, select any one word each from the columns. By combining these selected words appropriately, applicable names are generated. As an example the top three words can be used. This would suggest the name *Centre* (for) *Academic Development.* A second word from the centre column could be used selectively. An example of such a title could be *Unit for teaching and learning support.*

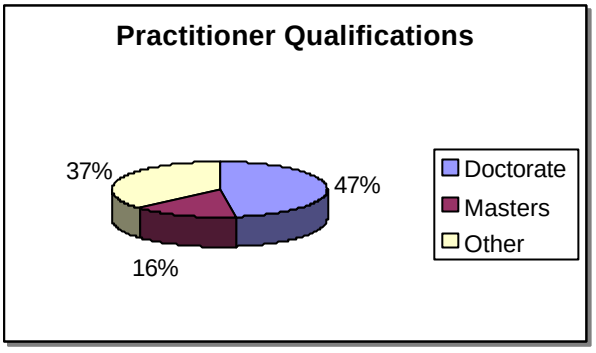
Collective noun	Aspect	Intent
Centre	Academic	Development
Department	Faculty	Excellence
Division	Instructional	Services
Office	Learning	Support
Unit	Organizational	
	Research	
	Staff	
	Teaching	
	Technology	

Table 4.1: Department name generator

2.2. Personal factors

The qualifications of the respondents are indicated not to refer to or imply competence or lack thereof. Within academia however, qualifications do impact on peer acceptance.

The respondents vary in terms of qualification. Table 4.2 contains a summary of these qualifications as well as percentage figures indicating the distribution of those qualifications.



Doctorate	47%
Masters	16%
Other	37%

Table 4.2: Qualifications of practitioners

The graphical representation of this distribution can be seen in Table 4.2. Fifty-three percent of these respondents hold academic appointments.

3. History

This section is included in the questionnaire to probe both positive and negative experiences related to staff development. Both extremes are catered for in the following two questions:

- ✓ Identify your all time staff developmental highlight; and
- ✓ Tried but aborted approaches to staff development.

3.1. All time staff developmental highlight

Analysis of the data showed that respondents reported highlights from four perspectives: institutional, departmental , individual benefit and personal value. Each perspective is analysed separately.

3.1.1 Institutional focus

The comments made to indicate a highlight from an institutional perspective could be sorted according to the nature of the impact of the successful intervention. Table 4.3 shows key phrases in the left hand column. The right hand column holds a corresponding anecdote as further clarification. The entries are in alphabetical order.

Highlight	Anecdote
Action research	"…the [action research] initiative is having a major impact on teaching and learning here, and what we've learned is influencing all our faculty instructional programmes. So, look what can happen if you support a small vanguard of faculty pursuing something they're passionate about." (Driscoll, 2001)
Awareness efforts	"…1,500 students responded and identified over 400 faculty (who had been significant in their academic development). We wrote each and every faculty identified a personal letter congratulating them and specifying some of the reasons their students gave in identifying them. The response to these letters has been overwhelmingly positive." (Sandin, 2001)
Expanded efforts	"We were pretty much a "grass roots" department, with a very small budget. We rarely took on big projects. One that has probably made the most impact is having faculty trained to do SGIDs (Small Group Instructional Diagnostics) as a way to self-reflect, with a coach, on teaching. It seems to have impacted lots of folks on campus." (Lewis, 2001)
Large scale involvement	"The highlight is that we have had 71% of our 450 faculty participate in the training activities we conduct." (Marcinkiewicz, 2001)

Table 4.3: Institutional focused successes

One comment in particular, reported an intervention which started as an individual consultation, but eventually impacted on the whole department.

> " *When I look back at all of the people with whom I have worked, perhaps the best is one who came to my office the first day he started on this campus. He has evolved as a teacher, gained tenure, been appointed dept. head, and has never lost touch. Now he brings his new faculty members to me right from their first days on campus*." (Rutherford , 2001)

3.1.2 Unit focus

A second sub-set of highlights are those which deal with specific units and their particular successes. This compilation is given in Table 4.4.

Highlight	Anecdote
Birth of unit	"… a committee to study faculty development and rewards, recommended that a separate full time entity be established on our campus to concentrate the faculty development efforts." (Scudder, 2001)
Conference held	"a campus-wide conference held in 1999 related to outcomes assessment. It was a hot topic on campus, with an accreditation visit soon on hand, but we were lucky to identify it early, get grant money, and have it in full swing a month before the accreditation team arrived." (Welk, 2001)
Curriculum development	"The largest success has been the development and implementation of an innovative, case-based professional curriculum. This required extensive cooperation and collaboration of many faculty, with ongoing conversations." (Edmondson,2001)
Own model extend to whole university	"I was charged with leading an Investigation 10 years hence, CTE is a Major success and a fully integrated part of the infrastructure of the University. I feel it is a personal legacy I will leave to the university, as Founding director." (Greenberg, 2001)
Production of a publication	"it allowed me to reach many people who did not have the time or inclination to attend workshops or ask for individual consultations." (Nathanson, 2001)

Table 4.4: Unit-focused successes

3.1.3 Individual benefit

Another form of success reported is where faculty members drew individual value from interventions. These were not during one-on-one sessions, but the result was

nevertheless personal enrichment and development for the participants. Table 4.5 indicates highlights of this kind.

Highlight	Anecdote
Future faculty	"(Regular)… graduate-level courses for … postdoctoral fellows that explore teaching and learning in higher education and introduce the diversity of faculty roles as well as logistics of the academic job search. In a culture that believes all you need is to know the content in order to teach it, this is phenomenal." (Smith, 2001)
Master teachers workshops	"we take approximately 40 faculty (full- and part-time) to a retreat setting for three days and two nights." (Burnstad, 2001)
Mid-career programme	"… faculty ages 40-something to about 70 from 10 different disciplines : We met for 2 hours every other week - bonding took place on the first day. People loved talking. We did a pre and post survey that showed an absolutely astounding change in confidence." (Tzenis, 2001)
New faculty orientation	"…we get together first-time lecturers…, they write out questions and concerns, and we solve all their problems (well, almost). My favourite quote on an evaluation: 'I never knew I needed so much help!'" (Cheatwood, 2001)
Observation and reflection	" A semester long program in which 8 faculty observed one of our professors who teaches using a cooperative learning model, technology, and problem-based curriculum." (Driscoll, 2001)
Reflective retreats	"...the 30-hour retreat I take 15 faculty on at the end of each year. We read a book ahead of time and have time for silence, writing, and talking." (Frerichs, 2001)
Several especially successful seminars and workshops	"Eight faculty would attend for three days and would practice giving short parts of their lectures, being videotaped, learning about presentation skills, and critiquing each other. About 150 faculty participated in this program over a four year period." (Tollefson, 2001)
Follow up	"...I observed a faculty member in Fall 1999 and again almost exactly one year later…---same course. Many … suggestions …had been adopted and were in use in 2000. A key observation went from only about 25% of the students having eye contact on the screen while an explanation was made to about 75% making such eye contact in 2000." (Uphoff, 2001)
Grant received	"We supported a faculty member with a seed research grant and he ended up receiving federal funding for almost $5m." (Ogunyemi, 2001)

Table 4.5: Individual successes

3.1.4 Personal value

Lastly, some respondents reported all time highlights that rated themselves as beneficiaries. Two such examples appear in Table 4.6.

Highlight	Anecdote
Eventually observing process results	"not only a slow process but often a 'hidden' process in which results are not evident for some time." (Gandolfo, 2001)
Personal recognition	"Have you seen the movie Dead Poet's Society? There is a scene where the class stands on their Chairs and says 'Captain My Captain' to the teacher. After a two-week leadership program, this group of 25 accountants closed the class that way for me. It was a career highlight!" (Jones, 2001)

Table 4.6: Personal value

This section asked for interventions identified as all time career highlights. While context, budget and various other factors will co-determine success, it does indicate possibility and could be considered for inclusion in programmes.

3.2. Tried but aborted approaches

Similarly, the fact that respondents decided no longer to pursue certain developmental avenues does not guarantee failure for those who do try. However, caution is advised when these identified approaches are considered.

The next five sub-sections each holds elements clustered under the following headings which hint to reasons for failure:

- ✓ Not best practice approaches
- ✓ Management related problems
- ✓ Lack of interest/commitment
- ✓ Lack of understanding
- ✓ Time constraints

3.2.1 Not best practice approaches

Table 4.7 indicates some of these aborted practices. The left hand column (in bold) is an indication of the type of activity /no longer pursued. As in the sections dealing with highlights, the next column has examples in the form of anecdotes from respondents. The additional third column on the right, comments on the particular shortcoming.

Aborted practice	**Anecdote**	**Shortcoming**
Electronic journaling on the web.	"Group activities violated by outsiders who hacked the site and disrupted process." (Chaika, 2001)	Privacy and access are always a concern when using technology.
In depth tenure preparation.	"Our 'New Faculty Seminar' was originally aimed at helping new tenure-track faculty get their teaching started. Over the three years we've run the program, we've learned that, among other things, new faculty generally don't have the experience base or the time to think deeply about their teaching." (Wellman, 2001)	Pitching too high (Wellman, 2001) Lack of commitment (Uphoff, 2001)
Mandatory appraisal/development	"I was forced to run 30 mandatory 1-day sessions for 500 academic staff who were being forced to participate in a staff development and appraisal interview that included grading them a - d on their performance (without criteria for determining the grade). They were absolutely furious." (Carroll, 2001)	Bad practice/ insensitive procedure
Purely product focus	"A purely product approach to change does not work. It forgets the individual learning, cultural, value styles of the learners as well as the teachers." (Willey, 2001)	Oversimplification – neglecting people and process.

Table 4.7: Approaches aborted because they were not considered best practice

3.2.2 Management related

The second set of tried, but aborted approaches to staff development relates to decisions made by- or support received from- management. Table 4.8 is structured like Table 4.7 above.

Aborted practice	Anecdote	Shortcoming
Blindly copy success of others	"I learned about designing and leading faculty development efforts at a research institution and now serve comprehensive universities. Faculty in comprehensive universities expect …(different)… interventions. I have had to adjust my thinking and expectations to accommodate that." (Miller, 2001)	Understanding of local expectations.
Funding initiatives	"I've tried to secure internal funding for development initiatives and particularly at my present institution have not been supported." (Anon, 2001)	Lip service by management
Downsizing	"I can't recall any that have failed because of their nature. We have, however, discontinued programs when our funding has been reduced." (Tollefson, 2001)	Budget constraints
Join national discussion	"Many faculties around the US are ready to discuss the scholarship of teaching and learning, but our faculty are not yet able to consider it. We are a research university that puts great emphasis on research and only some on teaching. For our faculty to consider themselves scholars of teaching and learning mean that they must become top-flight researchers in a new area. Our efforts to join in the national discussion are at a standstill." (Smith, 2001)	Great emphasis on research
Staff Development Review	"Academic Staff Development Review as a mechanism for gathering and aggregating institutional training needs did not produce the amount of information that we could use effectively to plan a strategic approach to the provision of staff development. A lack of appreciation of its potential value and of local diligence saw (this) as somewhat bland data gathered." (Hicks, 2001)	Quantitative judgement on qualitative interventions

Table 4.8: Approaches aborted because of management issues.

3.2.3 Lack of interest/commitment

This is the largest contributor with nine entries. Table 4.9 again follows the convention of activity in bold on the left hand side, comment lower left and anecdote in the right hand column.

Aborted practice	Anecdote	Shortcoming
One off workshops	"Staff have attended developmental workshops and it has made no impact on their thinking and their teaching. This may in part (be) due to the limitations of one off generic workshops." (Spiller, 2001)	Lack of impact
Peer Support Programme	"Peer Support Program for faculty to give mutual, reciprocal feedback. Did fine for first few times, but did not attract enough interest to be repeatable every year ." (Allen,2001)	Not enough interest
Top-down approach	"Any top-down approach will have difficulty succeeding if it isn't perceived to be a valuable solution to a problem the staff is facing." (Edmondson, 2001)	There must be a perceived need." (Tomczyk, 2001)
Working via Chair persons	"I put out signals and met with Chairs. That was not the way to go on our campus.... "targeting" individual departments that didn't see the need and initiate the contact. We have now realized this about our culture." (Desrochers, 2001)	No perceived need

.../

Aborted practice	Anecdote	Shortcoming
Session on teaching with technology	'I invited [staff] to discuss the influence and role of technology in teaching. It failed because the group was not interested in listening to, engaging, or learning." (Huffaker,2001)	Group not ready for topic
A journal club	"I tried to start a journal club, with an article on reserve in the library which faculty could duplicate and read in preparation. A general article that would cut across disciplines. It was well advertised but only 2-3 people came to each, so I didn't continue it the second year. Faculty tend to come to more practical things like grading programs." (Welk , 2001)	Low uptake
List Serve discussion	"I tried a to encourage discussion, but few people signed up, and no one ever sent in anything." (Nathanson,2001)	Lack of participation
Self-sustaining interest groups.	"We have not been successful in setting up self-sustaining interest groups. If our staff do not schedule the meetings, remind everyone, and even set agendas and arrange programs, groups fizzle out in less than a year." (MacRae,2001)	Lacking ownership
Voluntary discussions	We tried to implement a "*Let's Talk Teaching*" program which was to be an open, drop in time for faculty to gather to discuss teaching and learning issues. It simply never caught on. Our faculty perceive themselves to be too busy to take the time to do something like that. The culture just never developed." (Burnstad,2001)	Perceptions and priorities

Table 4.9: Approaches aborted because of lack of interest.

3.2.4 Lack of understanding

The lack of interest and commitment mentioned in table 4.9 above may well be strongly linked to Tables 4.10 and 4.11 below. Table 4.10 shows approaches aborted because recipients did not share the perspectives and insights of the change agents.

Aborted practice	Anecdote	Shortcoming
General failure	"When I failed, it was when faculty had arcane perspectives of teaching and learning but didn't see that they had any problems at all with teaching. Even with bad evaluations, those faculty often would not see their own contributions to students' problems." (Reed, 2001)	Lack of insight
Independent projects	"We offer small grants (up to $750) but proposals remain pretty pedestrian (for supplies or travel) and don't do much pedagogical." (O'Connor, 2001)	Lack of vision
Online learning design	"Inviting faculty to join us in the design of an adaptive learning environment—online. They fail to do it because it is too hard—not technologically, but conceptually. Most faculty don't really know where students stumble. When they do, they don't know how to address it. The evidence we encounter suggests the first step is to get faculty to listen for and to respect student's unique purposes for learning." (Brown, 2001)	Conceptual complexity

Table 4.10: Approaches aborted because of lack of insight.

3.2.5 Time constraints

Table 4.11 holds the approaches aborted because recipients did not have sufficient time. As suggested earlier, It may well be a contributory factor to the lack of commitment mentioned in Table 4.9.

Aborted practice	Anecdote	Shortcoming
Critical reflection groups for faculty	"…which meet about once a month have been well received, but tend to go nowhere without strong leadership…. I think it failed because so many of our faculty are simply too busy to spend time unless they perceive in advance a really practical use of their time." (Cheatwood, 2001)	Full schedules
Shared faculty members	"It doesn't work for us to hire faculty away from their departments to work for us quarter time. Their time is too fragmented that way, and their department gets first crack at whatever time they have." (Svinicki,2001)	Not enough time
State-wide conference	"A state-wide faculty development conference. It was aborted because it became too difficult to get a date that was agreeable to all institutions." (Grubler, 2001)	Full schedules
Teaching circles	"We asked people to identify certain interests. We would then put them into groups that would meet throughout the semester to discuss that interest. E.g. Problem-based Learning, Classroom Action Research. Problem--never could find common meeting times for groups." (Mettetal, 2001)	Full schedules

Table 4.11: Approaches aborted because of lack of time.

The limitation of time is repeated often. Combine this with the fact that the greater majority of activities are voluntary and Uphoff's comment seems fair.

> *"Generally, we are successful, but involvement rarely goes beyond about 20-30% of the total faculty numbers*." *(Uphoff, 2001)*

The tables above show methods currently aborted by some respondents for the reasons as indicated. Section 4 shows the approaches which are still actively pursued.

4. Present

This section deals with the responses regarding the present staff development activities of the respondents.

> *"…that is the purpose of education, to liberate the mind and soul to explore possibilities*." *(Willey, 2001)*

Respondents were asked to comment under the following headings (Figure 2.1):

- ✓ Current approach to staff development.
- ✓ Technological involvement
- ✓ Satisfaction level
- ✓ Constraints
- ✓ Biggest advantage

4.1 Current approach to staff development

A fair amount of similarity exists between core activities at different institutions.

> *"We pretty much use the standard model that is present in most US universities, workshops, conferences, consulting, newsletters, etc.*" *(Svinicki,2001)*

A central office to co-ordinate developmental activities is also common.

"Almost all universities in Australia have a central unit with responsibility for the development of academic staff." ***(Hicks, 2001)***

Workshops and seminars are the most popular. Both these are used by 98% of the feedback institutions. Participation is largely voluntary with a 93% indication for a need to obtain buy-in from potential participants. Client focus is predominant as 87% indicate that the content of the interventions is focused on the needs of participants. Self-evaluation and reflection on practice is practised by 82%.

Feedback received was analysed and the cumulative activity list is shown in Table 4.12 that holds a prioritised list of current staff development activities. The activities are listed in descending order.

Developmental activity	**Frequency**
Seminars/Speakers	98%
Workshops	98%
Extensive/ Eclectic approach	87%
Professional development	85%
Continuous evaluation	82%
Mentoring	76%
Involved during induction	74%
Discussion groups	70%
Consultation	64%
Involved during career (continuous)	64%
Use of champions	58%
Publication	52%
Peer involvement	52%
Career development (ad hoc)	47%
Focus on learner experience	45%
Book clubs	35%
Awards and recognition	29%
Talk breakfast/lunch	12%
Grant programmes	12%
Incentives/Mugs/Certificates/Cash	12%
Performance appraisal	10%
Involved during hiring	10%
Preparation for retirement	6%
Organizational development	6%
Succession planning	4%

Table 4.12: Prioritised list of current staff development activities.

As can be seen above, 87% of the respondents follow a comprehensive approach to development. Nobody indicated that they exclusively follow a particular model in their activities.

> *"My current approaches to faculty development is one of diverse approaches - intentionally diverse to meet the needs of diverse faculty with different learning styles, needs, interests just like students*." *(Driscoll, 2001*)

This is echoed by Edmondson:

> *"We use a variety of approaches that build upon educational principles and theory rather than developmental theory. We see staff more as students than as cogs in an organization*."
> *(Edmondson, 2001)*

A number of elements and fundamental educational approaches were identified which are encouraged and combined into the eclectic approaches. These common recommendations and the people credited as intellectual property right holders are listed in Table 4.13 below.

In some instances such as the cooperative learning techniques, different people were suggested. This should not be viewed as contradictory accreditations, but rather as different approaches to what in essence deals with the same concepts. Again, the table lists suggestions in descending order of popularity. No percentages are given, because of insufficient responses in this regard.

Recommendations	**Authors**
Learning styles	David Kolb, Bernice McCarthy and Caine and Caine
Personality type inventory	Myers Briggs
Educational approach	Paolo Freire
Theory of Multiple Intelligences	Gardner
Cooperative learning techniques	Johnson, Smith, Kagan and Prescott
Facilitation techniques	Satire and Yalom
Learner development	Piaget, Erickson, Freud, Bandura, Skinner
Staff Development	Everett Rogers

Table 4.13: Popular development activities.

"Faculty members have to come to believe that there actually is knowledge about how to teach and thus that teaching can be improved."
(Nathanson, 2001)

The following people were identified as prominent contributors, but the specific field of their influence was not given. They are listed in alphabetical order. The URL's behind their names should inform on further investigation.

- ✓ Chuck Bonwell *http://www.active-learning-site.com/*
- ✓ James O. Hammons (University of Arkansas)
- ✓ John Biggs *http://www.styluspub.com/books/book4172.html*
- ✓ Mel Silberman *http://www.temple.edu/education/faculty/Silberman.htm*
- ✓ Parker Palmer *http://www.miracosta.cc.ca.us/home/gfloren/palmer.htm*
- ✓ Patricia Cross *http://www.occe.ou.edu/halloffame/cross.html*
- ✓ Robert Kegan *http://hugse7.harvard.edu/gsedata/resource_pkg.profile?vperson_id=318*
- ✓ Stephen Brookfield *http://nlu.nl.edu/ace/Resources/Brookfield.html*
- ✓ Tom Angelo *http://www.usyd.edu.au/su/ctl/Synergy/Synergy8/tangelo.htm*

4.2 Technological involvement

Change agents generally seem to have a very sober outlook on the use of technology.

"I have been involved all my career with the use of technology for teaching and learning. I have seen all the fads and heard all the hyperbole. My basic premise is that the choice of technologies for learning must be based on the needs of the situation and that the greatest mistake is to choose a Technology first and then try to make everything (learners included) fit Into that technological box." (Anon, 2001)

"I use it as it applies to the situation. There are times when I use a good old chalkboard or newsprint and scented markers. Technology is not a god to me - it is a tool." (Macario, 2001)

Similarly, technological innovations and applications in themselves are not seen as crucial elements in higher education development today.

> *"These things, since they involve communication, can be done or enhanced by technology, but none of them* ***requires*** *technology*." (Nathanson, 2001)

> *"Technology is just another tool for a teacher to use. I do not see it as superior to any other technique. There are techniques and approaches that "fit" the content, the learners and the situation. The skill of an exceptional teacher is to know her/his students and content so well they can choose the techniques/strategies that will communicate, demonstrate and elucidate the material for the students/learners." (Macario, 2001)*

Many respondents are not primarily focused on changing the situation.

> *"We have access to computers, etc. Of course but this is not our primary area of development*." *(*Welk, 2001*)*

This does not imply that the value of current systems, techniques and affordances are not appreciated or that no effort is invested in creating opportunities for faculty members to become familiar with new approaches. A great deal of enthusiasm was evident.

> *"It can reach so many people at once*." *(Reed, 2001)*

> *Our goal is to ensure that all staff members have an opportunity to remain current with the Technology in their field*." *(*Burnstad*,* 2001*)*

Some centres are involved in making technological possibilities accessible to faculty members.

> *"We constantly have training available to staff and faculty for workshops on new software applications*." (Tomczyk, 2001)
>
> …and
>
> *"If it is technology, then we learn it and use it. Many of our efforts in the last 5 years have been about technological enhancement*." *(*Ogunyemi, 2001*)*

Some of these departments run huge sections devoted to electronic teaching. WebCT and Blackboard are the only two commercial platforms suggested.

> *"We have a large section of our office devoted to technology for teaching we are also the largest users of WebCT*." (Smith, 2001)

Other respondents treat this as the responsibility of a separate unit, but see their own duty as that of enabling faculty members to use technology for educational purposes.

> "*Computer services gives basic training, then we help faculty apply to teaching*." (Mettetal, 2001)

> *"The university has a lab for faculty and staff and a professional staff of about 4 whose main job is to provide training in technology. They hold workshops and provide one-on-one and cohort training programs. Also, our Distance ed office trains people to use our on-line course management system*." (MacRae, 2001)

A few departments are involved in the whole spectrum of training and address the educational and technological aspects as part of their development activities.

> *"The goal of linking technology and pedagogy. We've developed a great receptivity to pedagogy among those faculty excited by technology, and our staff capacity is beginning to catch up to the emerging demand. This is a major area of development for us*." *(*Wellman, 2001)

Those who do venture into the realm of technology as a tool, do not all share the same perspective.

> *"There is considerable tension between the centers about the role of teaching and learning ideas in relation to technology. Similar vocabulary is used to describe very different ideas and assumptions*." *(Smith, 2001)*

Some practitioners use the enthusiasm for technology and changes in delivery to provide opportunities to raise educational awareness.

> *"They (faculty) are encouraged to work with colleagues and work to develop a coherent Curriculum. Faculty who persist prevail and are quite pleased. Usually they opt for the delivery options--technology--that we provide. But even that, by design, pushes faculty toward more progressive pedagogies, or pedagogies that encourage faculty/student interaction*." *(*Brown, 2001*)*

At this stage people tend to use technology for developmental purposes only from the perspective of generating access,

> *"Our CTL web site includes a section on faculty development with some resources available. (www.wright.edu/ctl/) this is an element I plan to expand. We now have our own digital camera and we will be putting more news of faculty development onto our web*." (Uphoff, 2001)

Those few who use technology for other aspects of their own developmental activities, besides training are by far in the minority and they seem to prefer an eclectic approach.

> *"I believe e-learning is going to become more of a viable force in all kinds of education. Blended solutions are the most efficacious for learning, in my opinion* ." *(*Reed, 2001*)*
> *"It is *not* a specific event or approach that leads to the effective use, but a continuing, comprehensive program that focuses on teaching/learning, takes into account the campus culture, reward system, and the technological sophistication of faculty*." (Frayer, 2001)
>
> …and
>
> *"Technology is currently playing a big role, not only in the content of our training but also in the format. We are increasingly using our website as a portal rather than a static page. I would like to have streaming video orientations up and running soon, but this would require more bandwidth than we currently have available*." (Miller, 2001)

Unfortunately there are those who have attempted to utilise technology, but who have been discouraged through bad experiences.

> *"Originally we tried to offer workshops on using technology in teaching, but they never went very well. The audience would vary from 'never touched a computer' to people who 'design their own everything' no matter what we said in the advertising*." (Tzenis, 2001)

The main use of technology for staff development purposes is to disseminate information or to provide access to information and resources available on line.

> *"We use a web page as our cornerstone*." (Lewis, 2001)
>
> "*We create and disseminate resource materials*." (Greenberg, 2001)

Figures 4.2 and 4.3 below show screen captures of some of these information portals. Notice that Figure 4.2 provides access to external links only, while Figure 4.3 holds an example with some value added resources.

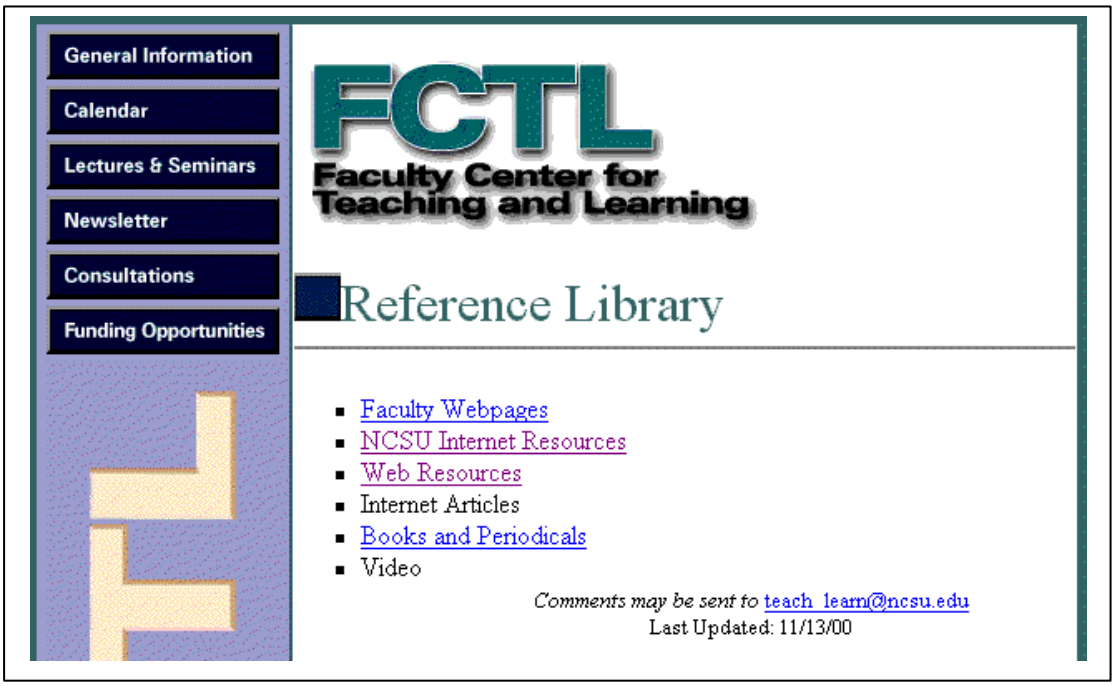


Figure 4.1: Example of a link page with mostly external information.

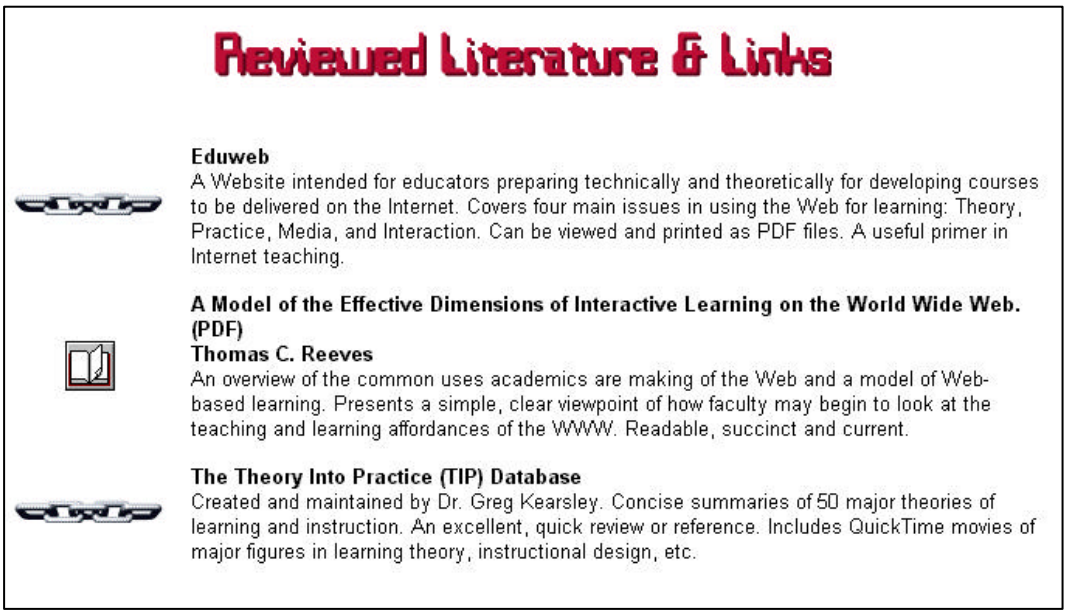


Figure 4.2: Example of a link page with value added resources.

Figure 4.3 shows only one screen with information to act as example. By scrolling down, many similar links are also available.

The alphabetical list below holds a dozen web resources pages which were readily available during July 2001.The information provided in these pages could be good examples of useful resources.

http://cybercentral.berkeley.edu/index.html
http://www.csd.uwa.edu.au/TEACHLEARN.HTML
http://www.csubak.edu/~tlc/
http://www.dean.usma.edu/cte/ctews4.htm
http://www.inform.umd.edu/EdRes/FacRes/CTE/library/res/index.html
http://www.isd.uga.edu
http://www.ncsu.edu/fctl/introd.html
http://www.ualberta.ca/~uts/
http://www.unl.edu/teaching/Teachtips.html
http://www.utc.arizona.edu/
http://www.utexas.edu/academic/cte/
http://www.wright.edu/ctl/faculty/resources/index.html

Table 4.14 shows the main stages in adoption. The left hand column gives Von Hippel *et al*.'s (1988) classification, Moore's (1995) continuum in the middle and quotes from respondents indicating that they may currently belong to that particular grouping on the right. From the table it becomes evident that normal distribution of technology adoption is also evident amongst change agents.

Lead user method Von Hippel *et al*.	**Technology adoption life cycle** Moore	**Respondent indicators**
Lead users	Innovators	*" We have a resident professor in technology who organizes workshops and panel discussions, and who serves as consultant for faculty interested in developing the technological aspect of their teaching-learning practice*." (Sandin, 2001)
	Early adopters	*"We make considerable use of the web in publicity of workshops and also to present a range of on-line material*." (Hicks, 2001)
Chasm		
Routine users	Early majority	*"We have achieved 45% of faculty using an online course manager for complementing their courses*." *(*Marcinkiewicz, 2001*)*
	Late majority	*"We don't have it yet, but we're about to merge with the office on campus that does have it*." (Svinicki, 2001)
	Laggards	"*I have resisted teaching online because I believe so strongly in classroom interaction*." (Cheatwood, 2001)

Table 4.14: Various levels of technological adoption exist.

4.3 Satisfaction level

Respondents were asked to comment on impact, feedback and their own perspective. While ten percent of respondents did not supply information regarding their level of satisfaction, all those who did, measured the satisfaction level of their activities in one-way or another. Figure 4.4 shows this distribution in terms of the method primarily used.

> *"We are ranked as one of the most important campus offices in assisting the university with its educational mission, despite our small size. Outside review rated us highly. Faculty satisfaction with our programs is high as well*." (O'Connor, 2001)

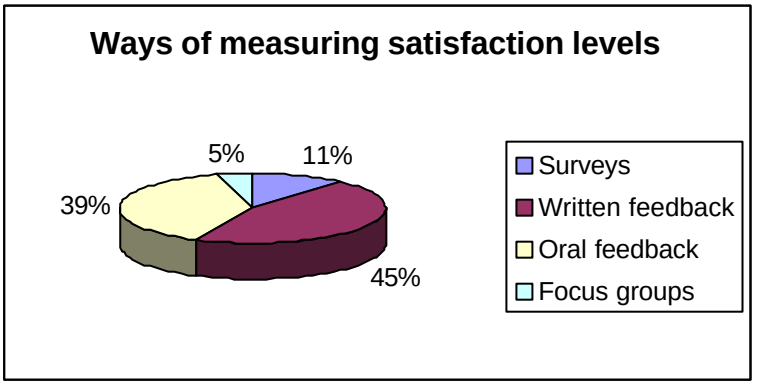


Figure 4.3: Main sources of feedback in order to measure satisfaction levels.

Feedback obtained from the questionnaire suggests that employees are satisfied with current development practice (79%), while 11% of the centres conceded that not everybody was satisfied.

> *"Many faculty members are not convinced that this is a product that they need. If they were convinced, the task would be very different*." (Smith, 2001)

Of the respondents, 16% reported high levels of satisfaction but also indicated that they themselves were not yet satisfied with the practice and would still need to make improvements.

> *"I see myself both as a teacher and a learner. I see my "learners" the same way. My most powerful teachers have been my students*." (Macario, 2001)

Some 39% reported that they feel completely accepted and appreciated. It also emerged that the development process and the building of a credible department were not achieved quickly.

> *"I am starting to see my centre's name everywhere. It's the place to be… Took 5 years!*" (Desrochers, 2001)

On a personal level there were many who abstained from comments, but two of the extreme answers received are cited below:

> *"Frankly, I am disenchanted with the development field because my experience has been that a position in a "teaching center" often puts one in the position of being a service provider and thus being treated as a servant. I am tired of being told by people with absolutely no training in teaching and learning that because they are disciplinary specialists, only they have anything of value to say about teaching in their discipline*." (Anon, 2001)

> *"My own satisfaction is quite high - I love my work - it is so stimulating and satisfying*." (Driscoll, 2001)

When the comments of the respondents were analysed, certain commonalities were identified. These classifications and their frequency are reflected in Table 4.15.

Frustration	13%
Over worked	11%
Highly motivated	34%

Table 4.15: Personal experiences of change agents

4.4 Constraints

The nature of feedback received from the respondents lends itself to more quantitative analysis, as respondents were asked to identify and prioritise those factors which they perceived as constraints on their activities. Answers received could then be classed under generic headings and compared in terms of three mathematical methods namely frequency, average and median.

Firstly the frequency of mention was measured by calculating the average of the number of times that a particular item was mentioned in comparison to the total number of responses received. However, averages cannot be used as sole determinator of importance as this does not take the ranking of that particular factor into consideration. The problem can be overcome by using median and mode in conjunction this.

Median will indicate the middle of a data set. Mode is an indication of the most frequent or repetitive value returned for a particular item. For instance in Table 4.6, an item with a mode one would indicate that that particular option was primarily identified as prime constraint, but a mode three would show a tendency to mention this factor only as a third level priority.

No single one of these three factors alone gives a true picture, but when used in conjunction tendencies may show up. For example: if information should imply the selection of about half of the respondents preferring a low value and the other half of the respondents divided between two other higher values, then both AVERAGE and MEDIAN may show a value close to the middle, but MODE may show the dominant lower preference.

In Table 4.16 below the top ten constraints as identified are listed in descending order. For ranking purposes frequency, mode and median were all considered.

Identified Constraint	Mention frequency	Mode	Median	Ranking
Understaffing/Time constraints	52.9%	1	1	1
Money/Budgetary limitations	55.9%	1	2	2
Faculty members too busy or disinterested	35.3%	2	2	3
Perceived credibility/Non-academic status /Importance of teaching	29.4%	2	2	4
Availability of quality of developers or development opportunities for them	22.6%	2	2	5
Infrastructure	20.6%	2	2	6
Lack of understanding on the part of management	17.6%	3	2	7
Admin support lacking	14.7%	2	2	8
Lack of leadership/Internal politics	12.7%	2	2	9
Other	17.6%	3	3	

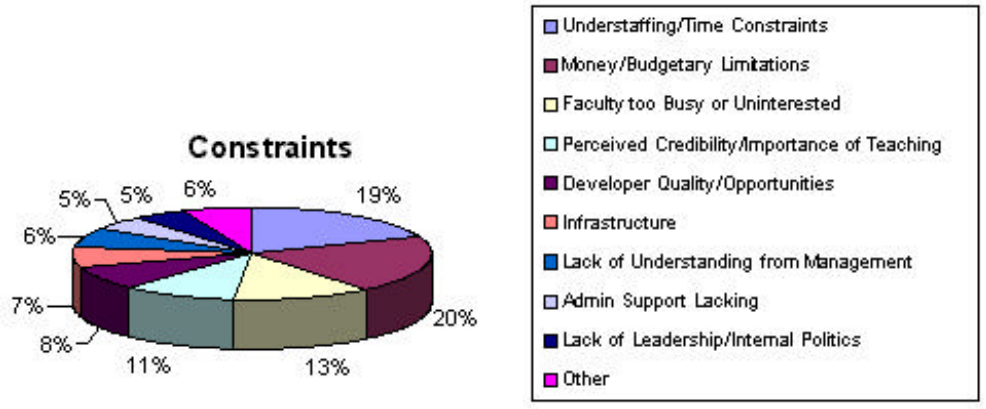


Table 4.16: Identified constraints in descending order of importance

Some of the constraints above may in fact be interdependent and, for instance, understaffing may be the result of budget constraints which may in turn be imposed because of a difference of priorities in terms of the importance of teaching development.

Such a conflation of issues, however, would be counterproductive, so Welman's (2001) comment applies

> *"We work hard to support changes in the faculty reward system that will give greater weight to teaching in this research-extensive university."*

4.5. Biggest advantage

Respondents have different perspectives in terms of what constitutes advantages. One respondent identified technology as a factor that raises awareness and as the catalyst that enhances sound educational practice.

> *"Technology-enhanced learning may be the catalyst we need to get faculty interested in understanding learning. When bells and whistles fail to improve performance, perhaps they will want to know why*." (Smith, 2001)

The responses in terms of factors identified as the primary advantages were again obtained from respondents with the request to identify and prioritise. The results, in descending order, are given in Table 4.17.

Identified Advantage	Mention Frequency	Mode	Median	Ranking
Own staff	42%	1	1	1
Variety/Programmes/Processes	32%	1	1.5	2
Respect/Academic status	26%	1	1	3
Budget	16%	1	1	4
Management backup	29%	2	2	5
Networks	13%	1	1.5	6
Previous success	19%	2	2	7
Well set up	16%	2	2	8
Other	13%	1	1	9

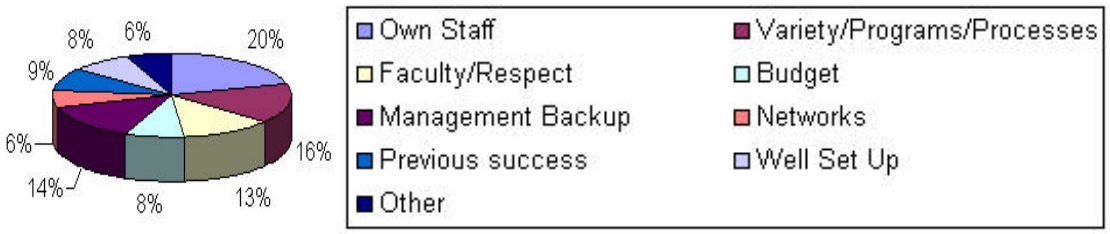


Table 4.17: Identified advantages in descending order of importance

5. Future

> *"A nation's competitiveness depends on the capacity of its industries to innovate*." (Porter, 1990)

The industries mentioned by Porter are looking at higher education to provide skilled people to drive these innovations. Staff members at universities will need to be equipped in order to meet these expectations.

> *"Change agents generally are interested in results. My background in both education and mental health has afforded me the opportunity to look at change differently and also to try this out in the educational sphere both with practicing educators and teachers in training. I see change as defined by growth and development as the primary goal of education. That being the case I see change as a process - journey - in which the educator partners with the learner to help the learner meet his/her goals*." (Willey,2001)

Change agents are not necessarily equipped to deal with this new environment. Respondents express both a vision for the reality of change and also admit to preferences that are more traditional.

> *"I can see that more demands will be placed on us to support staff who are teaching on line. Also, we will probably eventually offer our entire certificate programme on line as well as face to face. I imagine that we will eventually offer some developmental workshops on line. I would never like to see it replace face-to-face. Personally, face-to face work is my strength*." (Spiller, 2001)

In order to cast some light on possibilities for future staff development, the questionnaires probed respondents with regard to the following four aspects (Figure 2.1):

- ✓ Ideal envisaged staff development model
- ✓ Practical envisaged staff development model
- ✓ Absolute avoiders in staff development (No! Never, ever!)
- ✓ Vital elements in staff development (Yes, Yes Yes!!)

The results will be dealt with under subsections with the same headings.

5.1 Ideal envisaged model

Some respondents were quick to point out that no absolute and generic master model can ever exist.

> *"No such thing. Each campus needs a model that fits its own local culture*." *(*Ward, 2001*)*

Other respondents saw the benefit of identifying goals to strive towards and shared their views of an 'ideal model' for staff development.

In an attempt to ensure original and uninfluenced opinions from respondents, the questionnaires were not prescriptive in any way and no additional guidelines were supplied. However, the elements identified to include in an ideal model were not dissimilar. In the feedback, the ten most frequently mentioned factors central to an ideal model are given later in Table 4.19.

The identified factors were not predefined and respondents described their vision in their own words. However, for reasons of practical reporting, concepts are conflated under generic labels. To enhance common understanding these labels for top factors are now illustrated in Table 4.18 by means of representative anecdotes. Entries are in alphabetical order.

Generic label	**Anecdote**
Appropriate technology	*"Training and information fully accessible (even) on the Internet (synchronous AND asynchronous)*." *(*Miller,2001*)*
Buy in/Involvement	*"It would be nice if people would use the resources we have collected*." *(*Welk,2001*)* *"Greater use of our services and facility by part-time faculty*." *(*Price,2001)
Centralised/Integrated service	*"…which comprises both faculty development and academic support to students. We feel that the teaching-learning continuum should not be artificially separated. What we learn in our student support activities is very pertinent to our faculty development activities*." *(*Sandin,2001*)*

.../

Generic Label	Anecdote
Common focus	*"The accepted research on effective professional development reports direct relevance and embedded efforts with curriculum reform and institutional change. So planning, outcomes definition, professional development, and assessment are all aligned parts of the same system." (Greenberg, 2001)* *"…common vision of personal and professional development across campus; everyone on the "same page" regarding priorities." (Burnstad, 2001)*
Focus on learning	*"A community of scholars who take teaching and learning seriously as part of a great wheel of scholarship - discovery, integration, engagement, teaching/learning." (Smith, 2001)*
Professional development	*Faculty will be able to find here a wide variety of programs that meet their needs or directions to other sources of assistance. We will support non-tenure track faculty as well …, and we will provide stimulating offerings for faculty at all stages of their careers."* (Wellman, 2001)
Reward teaching excellence	*"We would be able to offer incentives for faculty to improve their teaching or to try something new." (Svinicki, 2001)* *"We will continually work with the faculty and administration to refine the faculty reward system so that teaching excellence is promoted.*" (Wellman, 2001)
Sufficient budget	*"Available resources ($, people, space, etc.) to place Faculty Development on the CentreStage of focus. It would find $ available for repair and resupply. It would find released time/load options available for use by faculty for intensive improvement/planning efforts*." (Uphoff, 2001)

Table 4.18: Clarification of factors in descending order of importance.

The ranking in Table 4.19 was determined by the frequency of mention of the factors to include in developmental interventions (See Section 9 in Chapter 2).

Ranking	Factor
1	Buy in/Involvement
2	Common focus
3	Centralised/Integrated service
4	Learning community
5	Focus on learning
6	Professional development
7	Sufficient budget
8	Reward teaching excellence
9	Importance of reflection/Continuous evaluation
10	Appropriate technology

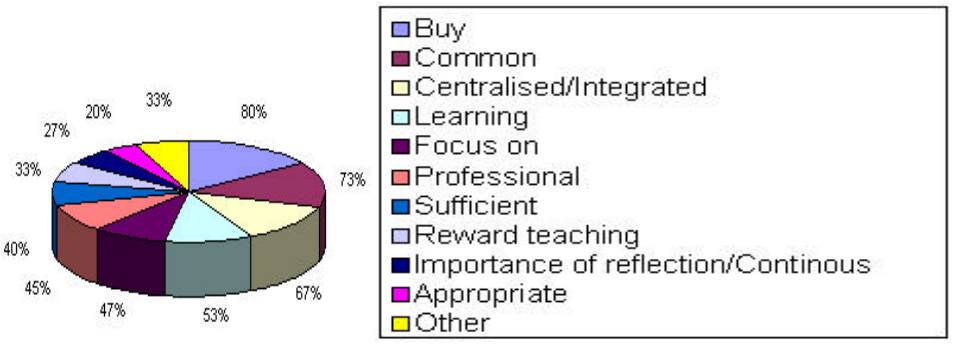


Table 4.19: Top ten factors central to development (descending order)

From this analysis it can be seen that technology, although important enough to be mentioned, came in last in the top 10.

5.2 Practical envisaged model

The realities of each institution impact strongly on what can or cannot be done. Respondents elude to this reality with logic:

> *"Whatever we have is always the most pragmatic blend of our goals and ideals within the constraints of our setting*."
> (Edmondson, 2001)

> …and

> *"(*We are*) unable to make the necessary changes because of the culture the college has*." (Burnstad, 2001)

The magnitude of changes also impacts on the practicality of interventions. As Smith advises, this need not all happen at once.

> *"Try small steps toward any of the above* (ideals) *rather than repetition of the status quo*." (Smith, 2001)

In defining an own approach that may work, certain guidelines need to be taken into account. These are elements to include, but equally important to keep in mind are factors that should be avoided.

Both these categories; the vital elements and the absolute avoiders were put to the respondents for their views.

5.3 No! Never, ever! (Absolute avoiders)

The seven elements below were mentioned as factors that could have disastrous consequences and should be avoided where at all possible. The column of frequencies adds up to more than 100% because participants could indicate more than one factor. The mode and median values help to facilitate a judgement in terms of ranking. The list is in descending order.

Things to avoid	Frequency	Mode	Median	Ranking
Getting involved in summative evaluation for promotion or tenure	28%	1	1	1
Forcing people	28%	1	2	2
Chasing technology	17%	1	1	3
Getting branded as only for those who are experiencing difficulties	21%	2	2	4
Never saying never	14%	1	1	5
Being seen as arm of admin	17%	2	2	6
Burning bridges	10%	1	1	7

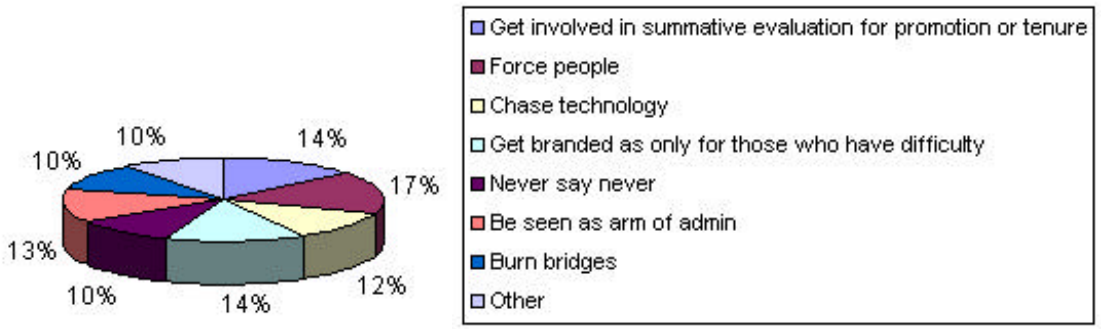


Table 4.20: Prioritised list of things to avoid

The factors listed above were identified by the respondents as absolute avoiders, but may well add value in specific circumstances. They are not categorically ruled out as never possibly being of any value. As a general practice however, or when in doubt, they should best be avoided.

5.4 Yes,Yes Yes!! (Vital elements)

Respondents also identified factors considered to be vital for inclusion into staff development programmes.

> *"To be blunt, to get faculty to participate, financial or other incentives are necessary and the upper administration has to be supportive. My current approach is to seek such internal support. If it is not provided, there is little chance for success* ."
> (Anon, 2001)

The list of vital elements is by no means complete. The elements are an extract of the recommendations of the specialist respondents as indicated in Table 4.22 later.

Table 4.21 reflects anecdotes to inform and from which to elaborate. Table 4.21 is in alphabetical order.

Generic Label	Anecdote
Action research and peer involvement	*"Faculty engagement in the design of our programs--it's the FACULTY Centrefor Teaching and Learning." (Wellman, 2001)* *"Good mixes of deeper reflection and practical action." (*O'Connor, 200*1)* *"Use faculty from all over campus in your activities. Make sure to convey the message that good teaching does not necessarily imply being in Education." (Sandin*, 2001)
Adapting to prime teaching needs	*"Focusing on retention rates and graduation rates as indicators of excellence in teaching/learning." (*Uphoff*,* 2001*)* *"Recognize the scholarship of what you are doing." (*Hicks, 2001*)*
Budget	*"Adequate staffing and budget." (*Frerichs, 2001*)* *"I've also learned that good advertisement and food accompanying the workshops, etc. is essential." (*Schuddder*,* 2001*)*
Networks and partnerships	*"Be active in local, national and international professional associations and other related activities." (*Hicks, 2001*)*
Obtaining, investing in and developing own staff	*"It is hard to fail with two levels of competence above you." (*Jones, 2001*)* "U*se facilitators or leaders that are good as facilitators--not just good and esteemed teachers/scholars." (*Huffaker, 2001*)*
Relationships	*"Recognize, reward, support, encourage. Find ways to use critics to your advantage. Say thank you over and over again." (*Edmondson, 2001*)* *"I also feel very strongly that confidentiality is a must for those individuals who seek help." (*Schuddder, 2001*)*
Support from top	*"An ethos that says teaching is important and rewarded." (*Frerichs, 2001*)* *Get tacit legitimization from university administration." (*O'Connor, 2001*)*

Table 4.21: Clarification of terms

Elements that should be included are ranked according to a combination of frequency, mode and median. The column of frequencies adds up to more than 100% because respondents could indicate more than one element. The mode and median values help to facilitate a judgement in terms of ranking. The list is in descending order.

	Frequency	Mode	Median	Ranking
Relationships	62%	1	1	1
Action research and peer involvement	34%	1	1	2
Adapting to prime teaching needs	28%	1	1.5	3
Obtaining, investing in and developing own staff	31%	2	2	4
Budget	24%	2	2	5
Support from top	14%	1	1	6
Networks and partnerships	7%	3	3	7

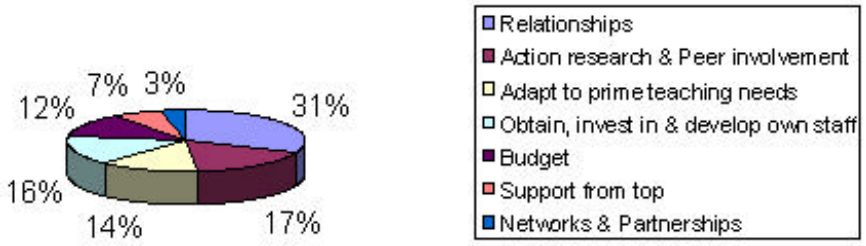


Table 4.22: Prioritised list of vital elements

Respondents mentioned networks and participation in related activities as one of the most important factors. While local relevance may make additional organisations vital within specific contexts, the following organisations were generally recommended.

- ✓ National Council for Staff, Programme and Organizational Development (NCSPOD)
- ✓ Professional and Organizational Development Network in Higher Education (POD)

- ✓ The Staff and Educational Development Association (SEDA)

6. Conclusion

The data given above is the essence of the 598 pages of information gathered via questionnaires. It is not presented or intended as absolute values or universally applicable recipes, but it does represent the opinion and views of the specialist respondents.

The top ten activities, which are all pursued by more than 60% of the centres, are listed below in Table 4.22. They are arranged in terms of descending commonality.

Ranking	Developmental activity	Frequency
1	Seminars/Speakers	98%
2	Workshops	98%
3	Comprehensive approach	87%
4	Professional development	85%
5	Continuous evaluation	82%
6	Mentoring	76%
7	Involved during induction	74%
8	Discussion groups	70%
9	Consultation	64%
10	Involved during career	64%

Table 4.22: Ten most popular developmental foci

As discussed earlier the questionnaires were purposely open-ended. As a result, some of the above can be classified as approaches while others could be isolated as activities. When this distinction is made, the list can be reduced to six most popular developmental interventions.

Ranking	Developmental activity	Frequency
1	Seminars/Speakers	98%
2	Workshops	98%
3	Mentoring	76%
4	Induction courses	74%
5	Discussion Groups	70%
6	Consultation	64%

Table 4.23: Six most popular developmental activities

Chapter 5 presents a synthesis of the literature and feedback.

Chapter 5

1. Introduction

Consider the argument by George Marsh:

> *A number of years ago a movie, Stand and Deliver, enjoyed box office success and has since been used as an inspirational tool for inducting new teachers and revitalizing veterans. The central character portrayed in the movie is the real-life Jaime Escalante, who taught poor Hispanic students in Los Angeles and succeeded in getting 87 of them to pass the Advanced Placement examination in calculus, a result so startling that the AP examiners required a second testing because they suspected cheating. Taking a new teaching position in Sacramento, Mr. Escalante had difficulty transferring his methods to the new school--only 11 students enrolled for AP calculus. This underscores the problems in finding methods that are universally successful. It also shows how complex and difficult are educational problems (Marsh, 2001).*

There are no quick fixes in education. Neither are there simple solution to problems in education regardless of context. Likewise, the practice of supporting higher education staff cannot be addressed in a uniform way either. Arguments given here are not intended to be universal recipes for success, nor are they aimed at defining a

single model to explain the phenomena as encountered during the research. Rather the chapter presents a metaphorical, visual reflection of the findings, in keeping with two of the suggestions of the analysis of this qualitative data guided by heeding the following suggestions from Bogan and Biklen (1992) already mentioned in Chapter 2:

- ✓ Play with metaphors, analogies, and concepts. "Nearsightedness plagues most research…Ask the question: "What does this remind me of?""
- ✓ Use visual devices. Trying to visualize what you are learning about the phenomenon can bring clarity to your analysis. Such representations can range from "primitive doodling" to sophisticated computer generated models.

When a visual model is created, that consist of geometrical it is inevitable that the underlying mathematic formulae will be called to mind.

It must be borne in mind that this is a qualitative study and that the diagrams that follow fall in the category of pseudo mathematics rather than scientific calculation.

Presidents of this procedure can be found in the Brookes equation *(*Brookes, 1975 and 1977) and Dale's "Cone of experience" (1946).

Even Maslow's hierarchy of human needs(1970) is given in the form of a triangle though nothing is said between the numerical value of the base or the perpendicular height.

1.1 Purpose of the discussion

Chapter 5 compares literature (Chapter 3) and practice as represented by the feedback received from the e-mail questionnaires (Chapter 4). This is supplemented by focused discussion of factors impacting on the staff development arena. This Chapter aims to:

- ✓ highlight primary factors;
- ✓ identify methods by which behaviour can be understood; and

- ✓ elude to key concepts to be aware of when approaching staff development.

When the findings presented in Chapter four are considered holistically, four issues seem to stand out. They include the willingness of staff to be involved in developmental interventions (receptivity), the availability, clarity and accessibility of information (lucidity), the need for networking (dependency) and the use of technology.

The discussion will therefore be structured under the following sub-headings:

- ✓ Receptivity
- ✓ Lucidity
- ✓ Dependency
- ✓ Utilising technology

2. Receptivity

Receptivity is a term used to indicate the degree to which staff would be willing to participate in developmental interventions out of free will. Section 2.1 describes these interventions while section 2.2 addresses factors influencing receptivity.

2.1 Developmental Interventions

Respondents indicated that while there are numerous names under which development centres can function, they essentially address comparable aims through largely similar activities. The majority of these activities do not function as individual interventions, but rather as co-operative, peer-informed instances of cognitive scaffolding. This correlates with the research done by Ference and Vockell (1994), indicating the need of adult learners for learning which is:

- ✓ active;
- ✓ experience based;

- ✓ life-centred;
- ✓ solution driven; and
- ✓ problem based.

As underlined by the quote below, faculty members are not always a captive audience;

> *"Many faculty are not convinced that this is a product that they need. If they were convinced, the task would be very different."* (Smith, 2001)

This cannot be used as excuse not to provide opportunities. There is a burden on faculty members to acquaint themselves with educational and didactic principles. As a rather strongly phrased opinion expresses it within the context of engineering:

> "*Teaching when you don't know how may be considered unethical!"* (Wankat, 1993)

Wankat bases his statement on the fact that the American ethical code for engineers includes the following:

> *"Engineers shall perform services only in the areas of their competence."* (ABET code according to Wankat, 1993)

But awareness and a desire to make a difference may not be enough. Time constraints were ranked as the most limiting factor by respondents.

> *"The trick is to find the best times for faculty attendance. This is always a problem related to classes and office hours." (*Welk, 2001)

The time constraint problem is augmented by the number two and three constraints, namely budgetary limitations and faculty members that are either too busy or uninterested. As these three are not unrelated, it would seem that a solution which addresses cost and temporal issues would be beneficial.

Some authors may see this as another opportunity for technology to prove itself indispensable (Shih and Sorcinelli, 2000), but exactly the two constraints, namely, increased time commitment and lack of money, were the main barriers to electronic delivery of education. (Berge and Muilenberg 2000). Simplistic solutions of throwing technology at problems do not have a realistic chance of succeeding (Norman, 1993).

To explore factors impacting on the likelihood of succeeding, one needs first to determine to what extent your audience would be susceptible to change interventions.

Through the following sections a comprehensive model is gradually constructed to visually amalgamate the aspects of receptivity, lucidity, dependence and technology. The visual representations of receptivity and lucidity (the receptivity cone and the lucidity pyramid), discussed later, incorporate the sub-elements of receptivity and lucidity, namely, perceived need, change exposure, availability, clarity and context.

2.2 Factors influencing receptivity

The first dimension to receptivity is the locus of apparent need. Should change agents offer workshops on issues that staff perceive as valuable in order to address an immediate need, staff would be more likely to attend. For example, workshops on issues like basic word processing are regularly attended. Conversely, if change agents attempt interventions that staff members view as a lower priority for them personally, the demands on their time may indicate activities of higher priority (Felder, 1994). Staff are less likely to attend training sessions on topics that are of organisational, rather than individual concern, such as legislative changes that require sensitising and retraining of staff; new approaches like outcome based curriculum design, learner-centred education etc.

The apparent relationship between perceived need and voluntary participation can be viewed as the diameter and the surface area of a circle. As the one increases, so does the other.

There is no data to indicate the mathematical precision of this relationship. The circle merely serves to show that as the perceived need increases, so does the likelihood of voluntary participation.

Figure 5.1 shows instances of low, medium and high perceived need (diameter) and voluntary participation (surface area).

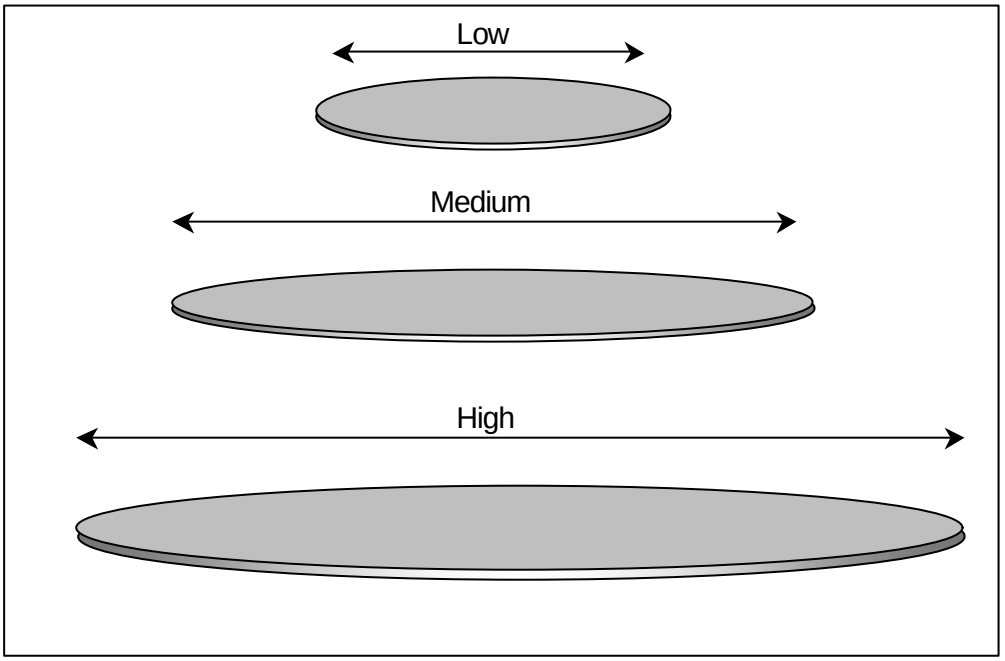


Figure 5.1: Apparent relationship: perceived need and voluntary participation.

This metaphorical circle of need and participation will form the basis of what will be called the receptivity cone.

Another factor impacting on the receptivity of staff with regards to participation in developmental interventions, involves the effect of change on staff and their ability to deal with change constructively.

As Chapter 3 explains Brock and Salerno's 1993 change cycle in more detail, only the main stages are repeated in the Table 5.3 adaptation below.

Stage	Feelings of:	Thoughts are:	Behaviour is:
Loss	Fear	Cautious	Paralysed
Doubt	Resentment	Sceptical	Resistant
Discomfort	Anxiety	Confused	Unproductive
Discovery	Anticipation	Creative	Energised
Understanding	Confidence	Pragmatic	Productive
Integration	Satisfaction	Focused	Generous

Table 5.1: The impact of change (Adaptation from Brock and Salerno, 1993).

It is not the intention to prove their theorem by comparing comments made by respondents to indicate that the various stages are represented by the respondent group, because the respondent group is not the prime target of the developmental process, but rather represents the reactions to change that agents can expect from the people who do find themselves at various stages of the change cycle.

As seen in Table 5.1, people who find themselves in the early stages of the change cycle, might experience feelings that will prohibit them from utilising the opportunities to work through those changes. The feelings of people who are experiencing the first three stages of change namely loss, doubt or discomfort, are not the type of feelings that foster thoughts conducive to the types of actions that will persuade people to volunteer for developmental activities identified as popular by the respondents, such as seminars or workshops. Instead, Brock and Salerno (1993) perceive these thought patterns to be cautious, sceptical and confused.

In fact, as Brock and Salerno (1993) also indicate, the natural actions of these people are paralysed, resistant and unproductive; not the type of person likely to volunteer for any developmental activity.

Intellectual drift as explained in Chapter Three (see Section 2.1), further adds to these perceptions of insecurity. This may partially explain why Chapter 4 (3.2.3) identifies no less than nine types of activities as interventions aborted because of reasons approximating staff members not voluntarily participating.

By implication people who have progressed through to the stages of discovery, understanding and integration, may show energised, productive and generous behaviour that can be interpreted as indicators comparable to those of the attitudinal domain of receptivity.

Receptive attitudes are fertile ground for developmental interventions and add value to co-operative learning environments. This correlates with the high value rating respondents gave to networks and collegial support.

Change per se can therefore not be identified as the sole determinant of whether a member of staff will utilise the opportunities for development or not. The key factor is the staff member's reaction to the change and the resulting attitudinal position within the change cycle.

Unless staff members are made aware of this impact of change on their attitudes, their natural reactions to change therefore would indicate an inverse proportionality between the likelihood of staff volunteering participation and their exposure to change. Those still in an early stage of the change cycle (loss, doubt, discomfort), may be less likely to volunteer than those in the later stages of change (discovery, understanding, integration)

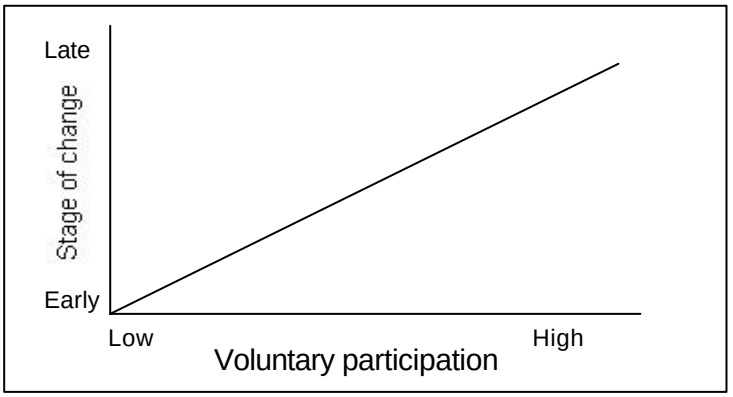


Figure 5.2: Inverse relation between change exposure and voluntary participation

It can be seen, therefore, that the perceived need and the level of comfort with change both influences voluntary participation. If these two influencing factors are combined the likelihood of voluntary participation can take the shape of a cone. Again, this is a metaphorical, rather than a mathematical representation. For the sake of this dissertation the resultant shape will be called the receptivity cone (Figure 5.3). The cone forms one of the shapes that contribute to the eventual model.

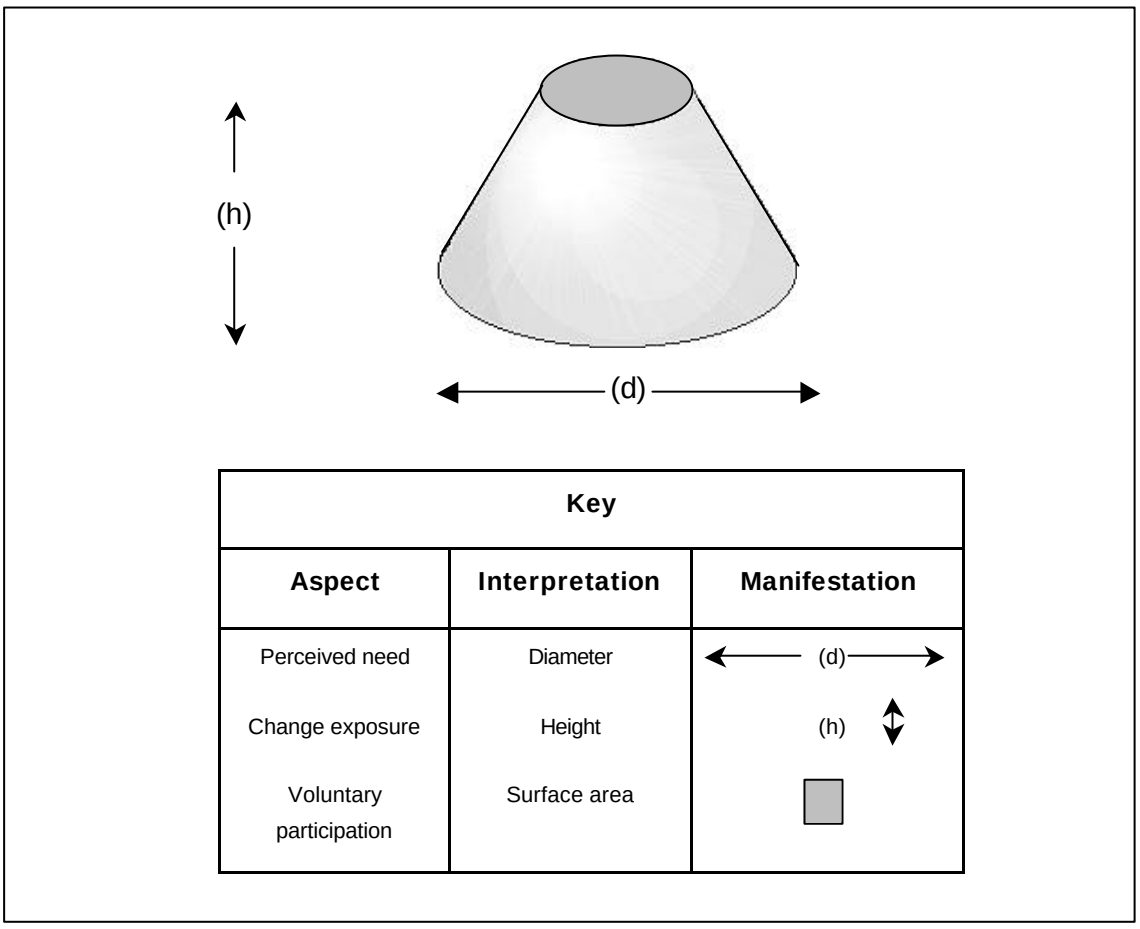


Figure 5.3: The Receptivity Cone

This section discussed the concept of receptivity and the design of the receptivity cone. Receptivity is representative of personal attitudinal dimensions. It accommodates the factors which change agents need to be aware of when debating voluntary participation, buy in and utilizing of opportunities. Staff development practitioners are more likely to reach people who want to be reached. Feedback received indicate that participants displaying characteristics in correlation with low

levels of receptivity may not appreciate interventions at all. Where people are enthused and show signs of higher receptivity, they utilise more complex opportunities. As an example it could be mentioned that some respondents to this research went to a great deal of trouble to ensure compatibility of systems in order for the researcher to access some of their materials. Like-minded individuals may seize opportunities regardless of initial hurdles or perceived obstacles.

Irrespective of context, there would not be a singular approach to development that would suit all clients.

Receptivity is a personal dimension. However, is not the only one. Context and content also need to be considered. Lucidity addresses these.

3. Lucidity

When the data presented in chapter four is analysed, three closely related aspects emerge:

3.1: Availability;

3.2: Clarity; and

3.3: Contextualisation.

The combination of these three aspects will be called *lucidity*. Section 3.4 deals with lucidity as a role player in this study.

3.1 Availability

Some pieces of information are just not available, even in the age of the Internet, multibillion research and global awareness. An extreme example would probably be the absolute cure for HIV/AIDS. There just are no clear answers available at the moment.

Non-existence is one form of not being available, but there is a huge body of information that is available because it exists although possibly not available through lack of access. These are factors such as privacy and language. The best

information possible would be useless if in some incomprehensible or strange language, encrypted or hidden behind a firewall. This also includes instances where information was not properly recorded in the first place. For example, consider the techniques used to create many of the Seven Wonders of the World. The artefacts remain as proof that the information, now lost, was once available.

Mostly, though, information is available if you know where to look, although quality of information is not guaranteed. For the moment, the focus is purely on availability. As a simple test for availability, an Internet search using the Google search engine for information on Nelson Mandela revealed a suggested 173 000 sites promising more information - this in a claimed search time of just 0.09 seconds. In practical time (including dial-up and log-on) this exercise took under four minutes via a relatively slow home modem system.

However, is media just a matter of representation or does its influence go beyond making information accessible? Table 3.9 summarises the impact of media on knowledge in an adaptation of the work of Daniel (1996). It also implies that modern media may be information rich, but this information needs to be contextualised in order to provide meaning to the information. Multiple perspectives need to be accommodated.

The ideas in Table 3.9 are echoed by Breivik who moves beyond the issue of media as prime determinant of access.

> *"…But where most politicians see the problem as one of access to computers and the Internet, a growing number of leaders in higher education see it more as an issue of literacy — information literacy." (*Breivik, 2000)

Breivik (2000) quotes The American Library Association's Presidential Committee's definition for Information literacy as:

> *"…the ability to know when information is needed, [and] to be able to identify, locate, and effectively use that information for lifelong learning and problem solving."* (ALAPC in Breivik, 2000)

This inability to convert opportunity into lasting improvement is echoed by one respondent, Spiller (2001) who expresses disappointment with "*Staff who have attended developmental workshops and it's made no impact on their thinking and their teaching*".

For the purpose of this research, availability is representative of the combination of three interdependent elements of availability, forming the acronym APE, namely:

- ✓ **A**bility of the individual to utilise opportunities;
- ✓ **P**ractical accessibility of the information; and
- ✓ **E**xistence of applicable information.

3.2 Clarity

Clarity is an important aspect when dealing with situations where individuals do not have the opportunity or inclination to obtain assistance. Unless instructions and or guidelines are understood properly, their impact could be limited proportionally to the lack of clarity. This shortcoming can be on the side of the facilitator as well as on the side of the receiver of change communication. The following respondents describes a scenario where clarity of focus was a limitation to both parties.

> *"My biggest success was to listen carefully to those faculty and TAs to determine their most immediate teaching issues and problems. I would then help them solve those problems. Eventually more problems would become relevant and we would work on those. After a lot of time spent dealing with small problems, faculty and TAs would adopt a learning perspective. Even if they wouldn't admit that learning/teaching was as important as research, they WOULD change perspective. When I failed, it was when faculty had arcane perspectives of teaching and learning but didn't see that they had any problems at all with teaching. Even with bad evaluations, those faculty often would not see their own contributions to students' problems.*. (Reed, 2001)

A more user-friendly way of making information available could improve clarity, while the original format may well be quite fathomable to other individuals.

The cultural richness of the South African population has created a situation where a majority of learners need to communicate in languages other than their mother tongue. Internationally there are also a number of institutions of higher education that experience language problems with students from non-English backgrounds. A respondent from a Spanish speaking community from Southern America provides one such example.

> *"We put together a Fall Institute on the development of linguistic competencies across the curriculum. Our hope was to give professors of various disciplines sufficient know-how in order to work on their students' writing competencies regardless of the discipline they taught. We soon discovered that many faculty feel very insecure about their own linguistic competencies and very hesitant to let others know about this." (*Sandin-Fremaint, 2001)

The problem of clarity is not limited to everyday language issues. Subject specific terms and layout can also reduce clarity. While information in subject specific language may be clear to experts, learners may find it difficult to understand or relate to practice. The fact that information is available does not guarantee that the true meaning will be clear to all. It is evident that where immediate assistance is not readily available, clarity of instruction is essential in staff support.

3.3 Contextualisation

Nine respondents mentioned context as an important factor. This is even more significant when considering that the questionnaire did not even include the word 'context'. Two examples with general reference follow:

> *"I might mention to you that after 25 years of think about and working in this arena, I am convinced that effective faculty development practices are ALWAYS context sensitive and campus specific."* (James, 2001)

and

> *"…teaching must be considered within the context of all the challenges they face."* (Wellman, 2001)

Smith mentions context with relation to technology selection:

> *"I think there is lots to be done on understanding how best to use technology to enhance learning. When there is understanding of which media are most effective for which contexts, there can be great success, but technology is not a panacea to be used in all situations. It requires judicious combination with other innovative teaching strategies."* (Smith, 2001)

An American respondent warned against experienced change agents working in new environments:

> *"Context is critical no matter who leads the effort."* (Anon, 2001)

Respondents agree that there is a need for adoption of theorems for local conditions and contexts.

3.4 Lucidity as role player

As section 3 explains, lucidity has three contributory factors:

- ✓ Availability;
- ✓ Clarity; and
- ✓ Context.

Often, these factors could be addressed by technological means. An example could be work in strange languages. While not perfect, on-line translation is already possible, making work in different languages accessible.

Context could also be enriched if additional information is made available quickly and affordably. The fact that this research could be underpinned by the opportunity to do member-checks within reasonable time frames making use of e-mail attests to this.

Practitioners, especially those in remote areas, seem to realise that availability would also have to be addressed by technological means.

> *"I can see that more demands will be placed on us to support staff who are teaching on line. Also, we will eventually offer our entire certificate programme on line as well as face to face." (*Sandin-Fremaint, 2001)

While the technological possibilities lighten the practical burden of accessing or making data available, the objections of Socrates (See Chapter Three), still apply. These objections are founded mainly on issues dealing with clarity, lack of context and the inability of the arguments to defend itself (Norman, 1993).

Unless the aspects which constitute lucidity are considered and catered for, technology may place us back in the year 360BC with *"...people who will:*

- ✓ *be hearers of many things and will have learned nothing*
- ✓ *appear to be omniscient and will generally know nothing*
- ✓ *be tiresome company, having the show of wisdom without the reality." (*Plato, 360 BC)

By viewing the three elements; availability, clarity and context as the three sides of a pyramid, lucidity can be graphically represented.

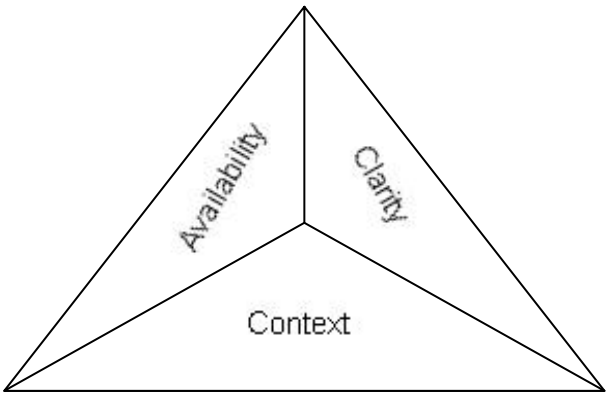


Figure 5.4: Lucidity pyramid

As in the example of the cone, the pyramid is a metaphorical representation only and no claim of a mathematical underpinning is made.

4. Dependency

Professor Robert Kraut (Kraut, 1999) from Carnegie Melon University caused a stir some three years ago when he reported his findings that social networks of heavy internet users had declined and such users reported feelings of loneliness. However, his recent work seems to contradict his earlier findings (Guernsey, 2001).

People like Moore (1991) and Daniel (1995) also acknowledge possible initial negative experience of such users. Rogers (1995) identifies the four main elements of the diffusion of innovation as:

- ✓ Innovation,
- ✓ uncertainty,
- ✓ diffusion; and
- ✓ adoption/rejection.

So when it comes to group dependence and the possible utilization of technological options, the outcome of Rogers' final element namely adoption or rejection can partially depend on individual characteristics like learning style preferences.

4.1 Social learning style preference

Table 3.10 shows a number of approaches as identified from literature, such as coaching, encouragement and friendship. Table 4.12 shows approaches currently practiced by the respondents to the questionnaire (seminars, workshops, mentoring, etc.) Table 4.13 holds recommendations to more possible approaches. The large spectrum of approaches could be a result of the fact that not all individuals learn in the same way, neither do all facilitators of staff development operate in the same way.

Table 4.16 indicates multiple reported limitations. Many of these limitations seem to put pressure on staff development practitioners to approach developmental interventions through group interventions. This possibility is supported by the fact that the majority of current developmental activities (Table 4,12) are not primarily focussed on individuals. However, social learning style preferences differ and not all individuals work in groups as a result of choice. In terms of group work the following distinction holds a useful summary:

> ***"INDIVIDUAL LEARNER*** *- people who demonstrate this preference learn best and get more work done when they learn and work by themselves. They think best, and remember more when they learn alone. They care more for their own opinions than for the ideas of others. Thinking, learning, remembering are considered solitary experiences.*
>
> ***GROUP LEARNER*** *- people who demonstrate this preference, learn best with at least one other person present. They do not get much done studying alone. They value others' opinions and preferences. Group interaction increases their learning and later recognition of facts. Socializing is important to them."*(Anonymous adaptation from Kneak, 2001)

The intention is not to say that individual learners can not function well in a group, but that their natural choice would not be to be dependant on others.

4.2 Benefits of group work

Should people work in groups, there are multiple benefits. Bandura is famous for his work on social learning through modelling (Batt, 1999). Named vicarious learning, it is value gained from own thought process and experience, but also from the observation of others (Bandura, 1986). Citing multiple quality-benefits because of group interdependence Batt (1999) advocates self-managed groups as a way of approaching total quality management.

The benefits of verbalising ideas, sharing thoughts, sound boarding and collaboration in a community of practice underpins the goal of at least one staff development centre

> *The goal of our Center for Teaching, Learning, & Faculty Development has been for faculty to become more reflective about and to communicate more about their practice.* (Marcinkiewicz, 2001)

In the South African context the ability to communicate both orally and in writing as well as the competence to function in teams is no longer considered optional, but viewed as a critical area of competence stretching across the boundaries of subject specificity (South Africa, 1995).

4.3 Dependency impact

Even in traditional approaches to staff development, respondents catered for different foci.

> *"We work with faculty one on one or in groups to pursue any teaching interests or problems they have." (Reagan, 2001)*

The possible use of technology should not change this. The preference of the target audience for either individually or group-centred approaches is not crucial to the success of technology as a factor in supporting staff. This is because there are various technical options available that can accommodate either preference. What is important though is that change agents take note of these factors, provide alternatives and accommodate the individual differences. Where individuals do opt for more singular approaches, provision needs to be made to incorporate the inputs of these individuals in non-threatening ways.

Dependency is not sufficiently crucial to singularly determine success. It is important though, to keep possible implications of dependency in mind. A metaphorical way of thinking about dependence could be to compare it to a flat surface. Nowhere higher or 'better' than anywhere else, yet representative of a completely open area of positions and possibilities. The receptivity cone, the lucidity pyramid and the surface

representation of dependence will be combined into a single model later in this section.

5. Relationships

The first part of this chapter considers three main categories of influencing factors, namely:

- ✓ receptivity;
- ✓ lucidity; and
- ✓ dependency.

This section deals with the implications these factors hold for staff development when interacting with each other.

5.1 Receptivity and lucidity

Plotting receptivity and lucidity against each other creates four quadrants.

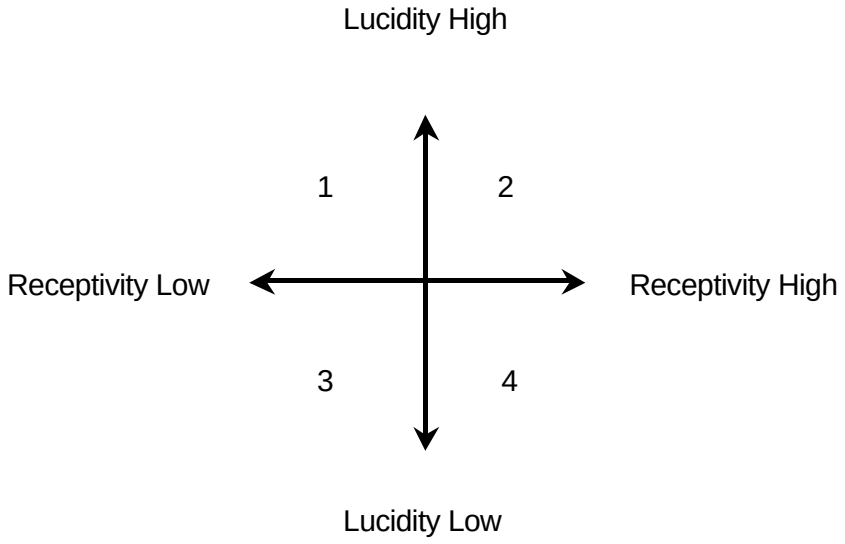


Figure 5.5: Interrelation between Receptivity and lucidity.

Quadrant number one is where information is typically available but staff members are not receptive. This is adequately explained by a situation where the need was not experienced by faculty members.

> *"Convincing faculty that teaching is important was a very difficult thing to do in many disciplines at the University of Texas at Austin."* (Reed, 2001)

Another example, this time from South America, is where the need was experienced, but the change exposure was too high and staff acted defensively

> *"We put together a Fall Institute on the development of linguistic competencies across the curriculum. Our hope was to give professors of various disciplines sufficient know-how in order to work on their students' writing competencies regardless of the discipline they taught. We soon discovered that many faculty feel very insecure about their own linguistic competencies and very hesitant to let others know about this*."(Sandin, 2001)

This first quadrant is the one where barriers need to be broken. Just to make information available would not be likely to add major value as staff members low on receptivity would not be likely to take on-line courses conscientiously or participate in discussion groups.

Moving to quadrant number 2 breaks the barrier of low receptivity. In this instance the information is still readily available, but this time the receptivity of the audience stems from their perception of need. As one respondent puts it:

> *"My biggest success was to listen carefully to …faculty... to determine their most immediate teaching issues and problems. I would then help them solve those problems. Eventually more problems would become relevant and we would work on those. After a lot of time spent dealing with small problems, faculty … would adopt a learning perspective."* (Reed, 2001)

Where quadrant 2 conditions apply, people may be receptive enough to browse through web page content, since they could obtain access to information in their own time and according to their own priority. Clearly this is a position of choice.

The lower quadrants are where lucidity is on the lower side. Quadrant number 3 has the dual low. As this is not a priority for staff members, this would be the type of situation where change agents will be likely to be inactive. However, when special circumstances dictate a need, but a solution to the need is not forthcomming, and staff are not readily available to co-operate in the identification of such a solution, the complexity may force change agents to look outside their own institution to network contacts in order to help them generate a solution.

> *"If you are not aware of the organization now, you need to look into the POD Network, Professional and Organizational Development Network in Higher Education. If there is a "mother" network, that is it."* (Rutherford, 2001)

The final quadrant where there is a common receptivity, but lacking lucidity. The reason for the lack of clarity needs to be explored in order to address the problem. If the problem resides in lacking skills to access the relevant information, interventions to provide the necessary skills may be received positively as indicated by the South American respondent.

> *"Technology is one of our areas of interest in our efforts to improve teaching-learning on our campus. We have a Resident Professor in Technology who organizes workshops and panel discussions, and who serves as consultant for faculty interested in developing the technological aspect of their teaching-learning practice."* (Sandin, 2001)

Another respondent shows that a different approach would be apparent when the information is not available or consensus not reached. Where competence and access allows for electronic discussion, there are various virtual communities that will be able to assist in identifying solutions or options.

> *"There is considerable tension between the centers about the role of teaching and learning ideas in relation to technology. Similar vocabulary is used to describe very different ideas and assumptions, which makes it hard to determine how our ideas are similar and different."* (Smith, 2001)

In summary, consider Figure 5.5 for the possibility of technological solutions. In quadrant 1 where people are not receptive, but information could be accessed and has the potential to be clear and contextualised, technology could be used to make information available. High lucidity may induce people to use technology to access information on their own initiative, particularly when supported by additional change management methods. The high lucidity may lure people to utilise technology. Since this needs to be part of a comprehensive approach, this may not be the ideal position from which to start change initiatives.

A more favourable place to start could be quadrant 2 where lucidity is still high, but where staff now show attitudes corresponding to high levels of receptivity. Here people will welcome the benefits of high lucidity and seize the opportunity to access information in faster, possibly cheaper and easier ways.

The quadrant 3 scenario is the least favourable for technological benefit. Not only are the respondents not ready to pursue opportunities, but the unfavourable lucidity context, makes for poor experiences.

The area providing second best opportunities for technological interventions is in quadrant four where people may be willing to work through some of the shortcomings which result from the low lucidity index. Capturing information regarding these instances may provide useful indicators to identify situations where faculty members who are already positive, may get better use from information by addressing the reasons for the existing low lucidity.

5.2 Receptivity and dependency

Plotting receptivity and dependency against each other again creates four quadrants.

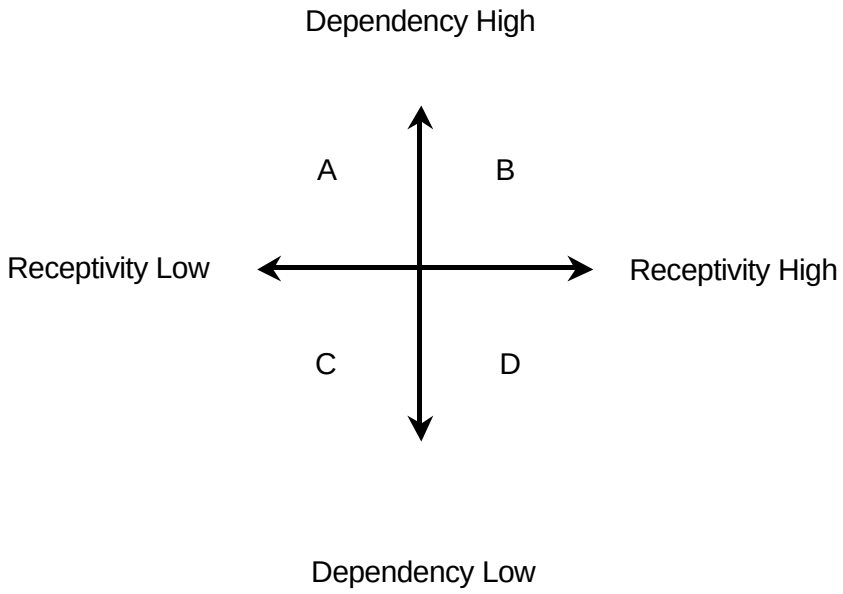


Figure 5.6: Interrelation between receptivity and dependency

Quadrant A is where a staff member typically is not receptive, but highly dependent. These people like to work in groups, prefer synchronous communication and supportive contact. Technological options are not likely to prove the ideal tools for this situation. The following respondent provides an example where incentives to overcome the receptivity problem are more likely to succeed.

> *"I joined about 10 other faculty in a trip to a workshop on critical thinking in Charlotte, NC. That experience—not just the workshop itself but the chance to travel together and get to know each other--spawned the university's "Inquiry-Guided Learning" (IGL) initiative.*" (Wellman, 2001)

The double high is in Quadrant B where respondents have indicated that the high receptivity provides the opportunity for peer interaction and reflection activities. While this traditionally is the domain of physical contact, some technological innovations like chat rooms or video conferencing could also play a part.

> *"…a weekly teaching co-operative in which 15 - 20 faculty meet each week to talk about teaching. This past semester all of them were conducting action research projects to study the effect of their pedagogy on their students' capacity to become responsible, ethical, engaged citizens. Powerful conversations!"* (Driscoll, 2001)

Or

> "*The most rewarding experience for me is the 30-hour retreat I take 15 faculty on at the end of each year. We read a book ahead of time and have time for silence, writing, and talking--also long walks on the beach."* (Frerichs, 2001)

Individual learners with low receptivity typify quadrant C people. Again something needs to be done to break the non-receptivity. Another respondent recorded such a case.

> *"A new faculty member ignored our services. Word soon came around that he was a horrible teacher, but he still avoided us. (Our services are only voluntary.)…One of his friends … suggested that he talk to me about it. …He came over and we talked for several hours. I gave him "new perspectives" on what was happening between him and his students, suggestions on dealing with students, etc. (Basically, I talked to him about to be a nice person.) The next semester went much better. I was shocked that such a short intervention helped, but he has thanked me several times since."* (Mettetal, 2001)

The last quadrant (D) in this interrelation deals with highly receptive individuals. Technology has much to offer these people. The search capabilities of computers make information available to work with at leisure. Some individual interventions may be necessary in order to equip the individual with the skills to utilise the technological options.

> *"A colleague that would not touch the computer for his life now uses computers in his instruction."* (Ogunyemi, 2001)

For the interaction between receptivity and dependency, the difference may lie not as much in whether technology will enhance the experience of learners, but in the selection of the tools and applications that may be useful. Highly dependant users, may prefer video conferencing which includes the visual 'presence' of others while less dependant users may be indifferent to such social preferences. More receptive users may be willing to sort out technological glitches on their own, while less receptive users may want an assistant to guide their passage into the realm of technology.

5.3 Receptivity, lucidity and dependency

All three these factors can be combined to depict quarters 1 through 4 as well as A through D in one three-dimensional interrelation.

The front octants contain the low dependency quadrants and the shaded back octants contain the high dependency quadrants. The octants above may assist change agents to sufficiently analyse each particular situation in order to class it accordingly.

Attempting to assign particular technological solutions to specific combinations would limit the use of the classification to the items specifically measured and mentioned. A more inclusive and flexible understanding comes from evaluating the factors in terms of their impact on technology use.

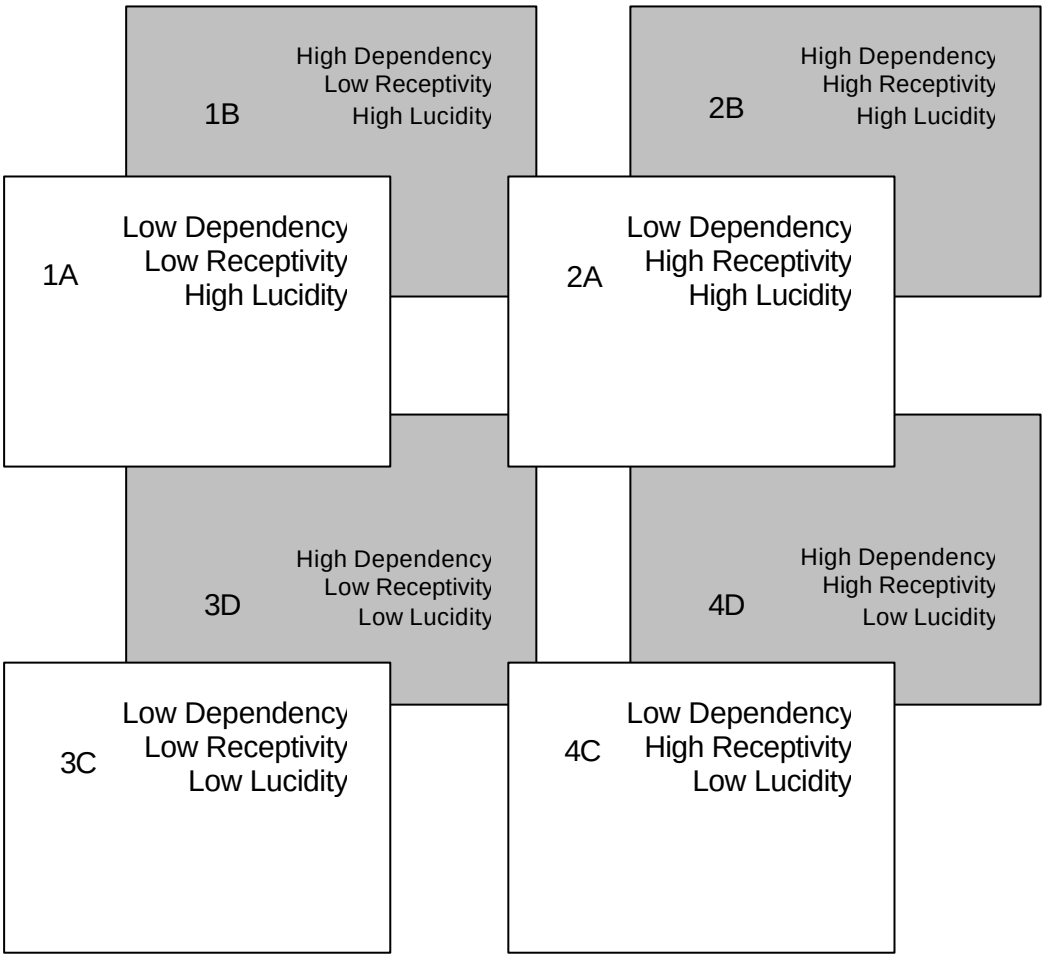


Figure 5.7: Interrelation between receptivity, lucidity and dependency

As indicated in section 4.3 the impact of the dependency dimension is not so important to determine whether technological solutions could be applied, but rather to inform on different options which need to be considered.

6. Technology

Availability of technology does not guarantee acceptance and usage (Rogers, 1995). Three aspects influence the likelihood of acceptance of technological solution acceptance:

- ✓ the extent to which it matches user needs,
- ✓ its ease of use, and
- ✓ its capacity to make work easier. (Collis and Verwijs, 1995)

Section 5 argues and Figure 5.5 (receptivity and lucidity) demonstrates that staff development is multifaceted. However, the groupings depicted in Figure 5.7 do not interact to represent any particular model or three-dimensional representation of the individuals concerned, but rather encompass the various situational profiles of the individuals who can benefit from the developmental interventions.

This multitude of possibilities (groupings in Figure 5.7) leaves the change agent with the challenge to find tools to serve as many of the clientele as possible in a way that is close to their own particular situational profile preference. In the words of another respondent when commenting on e-learning implementation:

> *"We should approach e-learning ... from a stronger position. Instead of being staff people looking for vision and hoping for support, and working to please, we need to be business people – forming own visions, initiating new conversations and focussing on results." (Werner, 2001)*

To inform on ways to create this 'own vision' and to create these 'new conversations', we could have an array of options that would each resemble and address the particular circumstance of the particular target audience. Technology can prove helpful in this regard.

Another group of people, those with low dependency and a high receptivity, but pursuing information with a high lucidity index (Octant 2A Figure 5.7) are people who can work on their own, want specific information and possess the ability to access and interpret information. This is the type of person who will see the relative advantage of, for instance, a web page with information and hyperlinks leading to additional and alternative opinions. As a result of the perceived benefit, it would require little effort to persuade such persons. The possibility of experimenting in private could assist in a non-threatening opportunity to implement. This correlates favourably with Rogers's (1995) list of innovation attributes.

Should people from octant 3D (Figure 5.7) be the target audience, this scenario for adaptation of development interventions through technological means would be less favourably accepted. Not only are they not likely to be inclined to individual, active, solution generation, but the nature of the information, and/or their ability to exploit what is available, is not sufficient to allow unassisted utilisation. Highly dependant people with low indexes for receptivity and lucidity would indeed not fare well when measured against Rogers's (1995) attributes of innovation to determine adoption rate. To briefly revisit, these attributes are:

- ✓ *"Relative advantage*
- ✓ *Compatibility*
- ✓ *Complexity*
- ✓ *Trialability, and*
- ✓ *Observability"*

Attributes one, two and five relate to aspects such as receptivity, change management and motivation, but with regard to technological options for development, attributes three and four (complexity and trialability) need to be examined further.

7. Intricacy

Intricacy will be used to describe the degree to which users experience staff development opportunities. The first dimension of intricacy is what Rogers calls complexity. He describes this as:

> "… *the degree to which an innovation is perceived as difficult to understand and use*." (Rogers, 1995)

Other factors that would increase the perceived intricacy would include instructional design aspects like ease of operation, user-friendly interface, intuitivity of navigational design and the subsequent correspondence to expected visual literacy conventions.

This should not be confused with simplicity of design. While a visual interface like MS Windows may be easier from the perspective of the user, the programming complexity of this product is far more involved than its predecessor, commonly known as DOS. When the term intricacy is used, it is with reference to the experience of the end user.

Intricacy also includes Rogers's (1995) aspect of *trialability*, which he defines as:

> *"…the degree to which an innovation may be experimented with on a limited basis."* (Rogers, 1995)

This may include technological aspects such as additional software that the user needs to download, install or change settings for, as well as security aspects like passwords, fire walls and proxy settings. The complexity associated with software may scare users away and reduce the acceptance of the product.

Intricacy indicates the experience of the end user and as such can never be a fixed quantity, but rather a continuum of possibilities which links closely with Csikszentmihalyi's theory related to the balance between boredom, enjoyment and anxiety. Only when a balance between perceived challenge is matched by appropriate skills, will individuals find themselves in the state of enjoyment known as "flow".

> *"… the state in which people are so involved in an activity that nothing else seems to matter; the experience is so enjoyable that people will do it even at great cost, for the sheer sake of doing it."* (Csikszentmihalyi, 1990)

Different individuals will respond differently to various degrees of intricacy depending on their situation in respect to receptivity and lucidity.

8. Synthesis

In accordance with the suggestion to create visual devices and to "*play with metaphors, analogies, and concepts*" from Bogan and Biklen (1992) already mentioned, a combination of the thus far constructed elements can be made.

A metaphorical representation of the staff development playing field can be created by placing the receptivity cone and the lucidity pyramid on the flat surface of dependency. Both the cone and the pyramid may vary in size depending on the particular circumstances. Their position in relation to one another can also differ as various factors impact on them.

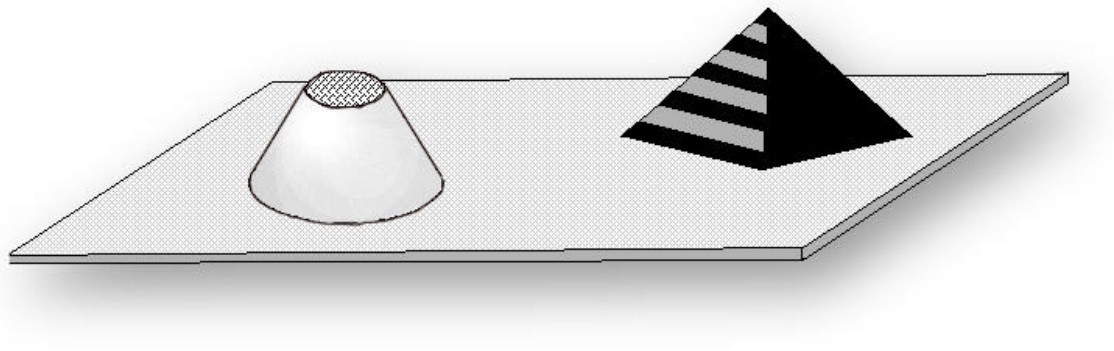


Figure 5.8: Interdependency surface

The position of the cone (receptivity) and pyramid (lucidity) will determine the angle at which the surface (dependency) will balance. In this way, the angle of the surface can be regarded as a 'pointer' to indicate the acceptable intricacy level of the type of interventions which may still be successful. In the Figures 5.9 through 5.11 some of these possibilities are described. In these figures, when the left hand side of the

surface points towards the lower side, the probability of an intervention with a lower technological intricacy would be a better solution. If the receptivity and lucidity are higher and hence move more to the right, the surface angle will point more towards the 'high' side on the Intricacy scale to show that the possibility of a more intricate solution could accordingly be greater.

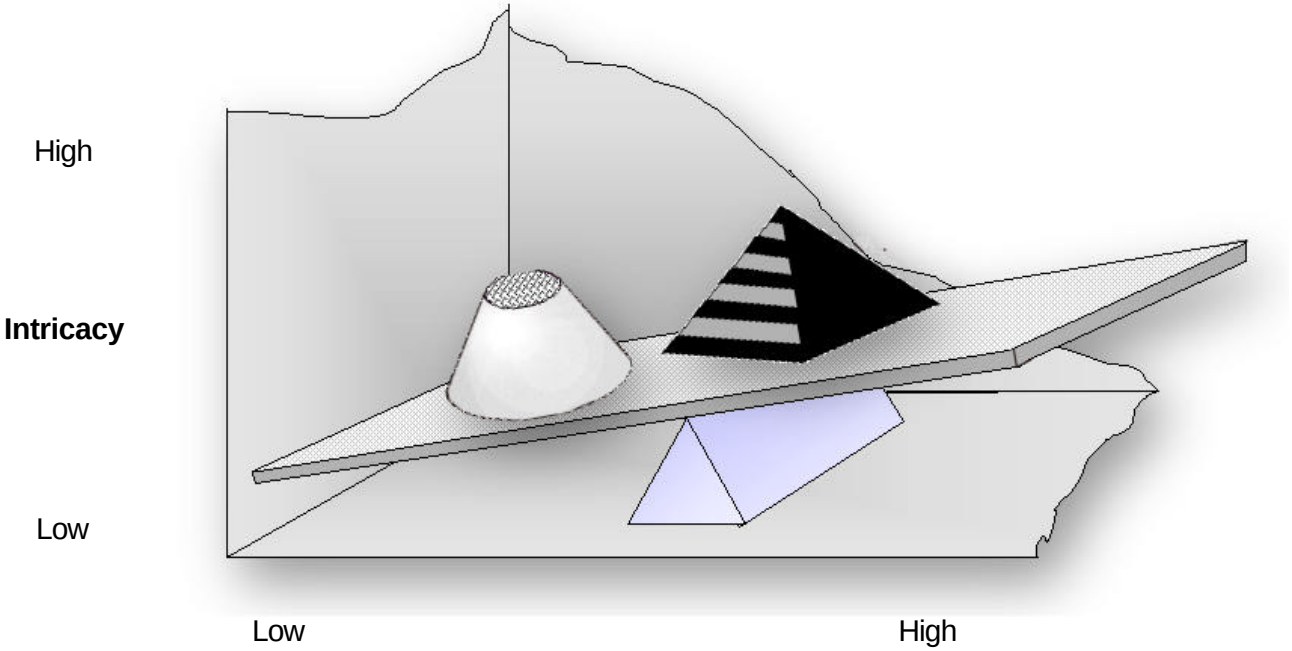


Figure 5.9: Technological susceptivity guide with a low intricacy indication

In Figure 5.9 the appearance of the receptivity cone closer to the left hand side, is indicative of low levels of receptivity. In other words, the people in this example seem not to experience direct relevance or need for the specific interaction and may well find themselves in the early stages of dealing with change. At the same time the lucidity index, as portrayed by the pyramid in a fairly neutral position, is not such that it would assist by making contextualised, clear information easily available. The result is a situation where developmental interventions or artefacts should best be sought in solutions with a lower level of perceived intricacy if users are expected to benefit from the options.

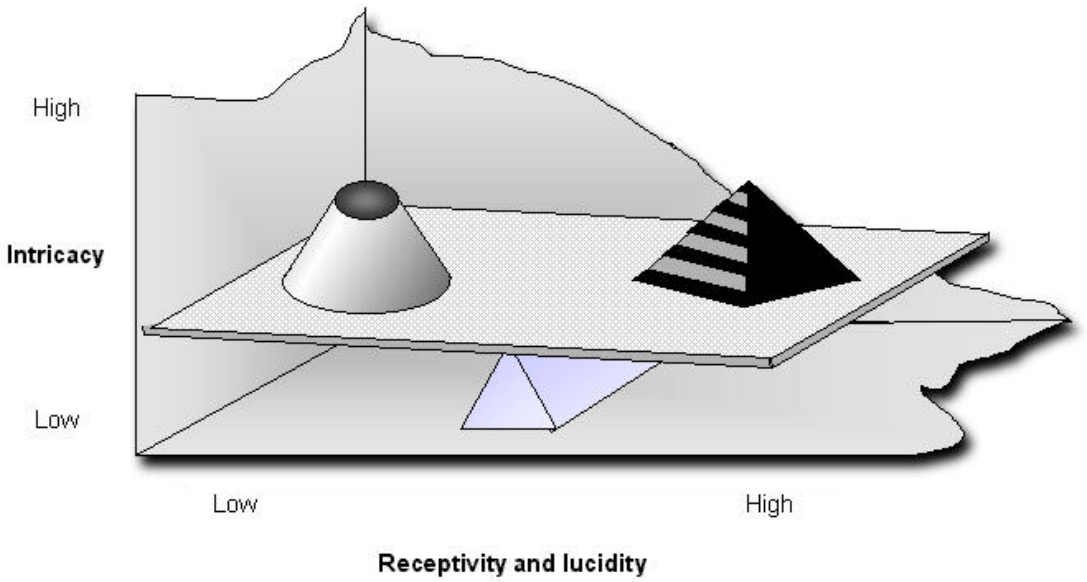


Figure 5.10: Technological susceptivity guide (intermediate intricacy indication)

The scenario depicted in Figure 5.10 is different in that the lucidity pyramid is found closer to the right hand side. Such a situation would occur when the three availability factors (APE) are favourable, the content and presentation is contextualised and offered in a clear fashion. This would not eliminate the unfavourable attitude of the target individual, but because of the preferable lucidity factors, the individual may be able to benefit from interventions to such an extent that the attitudinal shortcomings may not preclude use.

In a situation like this, the toleration of higher technological intricacy is based largely on the technical competence of the individual as displayed by the individual's ability which is incorporated in lucidity.

In Figure 5.11 the receptivity cone is also closer to the right hand side, indicating higher levels of receptivity within the target audience. This is clearly a more favourable position from which to operate since the aspects of competence, content and attitude are all sympathetically positioned. A situation tolerant of cognitive challenges may exist and hence more complicated approaches or devices may well succeed.

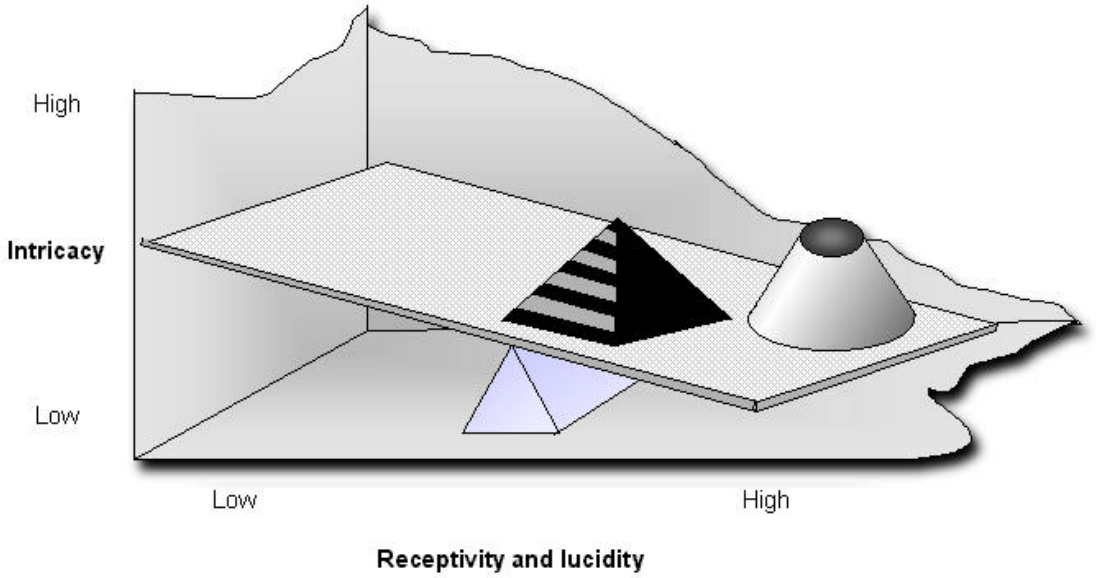


Figure 5.11: Technological susceptivity guide (higher intricacy indication)

Chapter Three provides the spectrum of interventions together with the particular benefits of the type of application. The selection can now be reconsidered according to factors representative of the human elements and not just for the sake of technology. Figure 5.9 through 5.11 indicate how the relevant receptivity and lucidity values can suggest the level of technological intricacy.

This chapter discusses the terms receptivity, lucidity, dependency and intricacy as factors influencing the selection of appropriate technology for staff development. The role of technology should not be considered to be a dominant or deciding factor in selecting staff development approaches. Instead a holistic view should be taken balancing lucidity, receptivity and dependency in a particular context. Only now can appropriate technological solution be selected.

Chapter Six provides tentative answers to the research questions posed in Chapter One, further alludes to the limitations of this study and indicates areas in need of further investigation.

Chapter 6

1. Introduction

This research set out to explore issues surrounding the following question:

> Which factors need to be considered in order to exploit the possibilities of information technology to optimise support to higher education staff during times of change in order to create a functional learning organisation?

No intervention can happen in isolation and therefore the conditions that surround the current higher education scene are elaborated on in order to provide context. This study proposed eVelopment as the utilisation of electronic options in order to develop staff.

2. Research Summary

2.1 Description of the research

This dissertation specifies contributing factors as well as the possibilities and constraints of alternative approaches to staff development. It also suggests crucial

factors for staff development that will co-determine the success of technological utilisation in staff development initiatives.

Each chapter is preceded by a visual organiser indicating the focus of that particular section with relation to the rest of the work and Table 1.3 in Chapter one gives a tabular indication of the structure of the research. A conceptual framework for the positioning of the study is given in Figure 1.

Earlier chapters indicate that change is a constant and accelerating factor in the lives of staff members. Change may not impact equally across the board, but factors influencing the institution, the lecturers or the learners themselves, in whatever way, should at least be considered as potentially important. Bryant (1999) advocates a "focus on stakeholders" as well as "a shift towards a shared vision". While this study focuses on higher education, education cannot be isolated from the influence of change in wider contexts.

Change factors influence not only the environment in which we work, but also the mindsets and attitudes of people. A learning organisation is not only an organisation that is developing, but also one that has developed the ability to learn from itself and from ‘within’ via peer involvement and continuous self evaluation and reflective practices.

At the same time we find the emergence of a technologically linked society with an increase in the number of users with access to e-mail and Internet facilities.

Information technologies need to be used in the right way in order to balance technological advances and competencies (Norman, 1993). What works elsewhere may not work within a South African context. This study explores local situations, investigates successes elsewhere and recommends a frame of reference from which to approach the issue of the use of technology in supporting and developing staff under these circumstances.

2.2 Methodology overview

The research is informed by contributions from various sources. Different approaches were used with different aims in mind. Each approach also provides information which draws attention to specific aspects.

2.2.1 Description of Instruments

- ✓ Literature review: This covered relevant legislation, journal articles, books and electronic documents available.
- ✓ Internet mailing lists: A number of mailing lists were identified and approached in order to obtain nominations for institutions or individuals with relevant experience. Resources suggestions were followed up
- ✓ E-mail postings: Identified individuals were contacted electronically. Correspondence with respondents were mostly also via e-mail.
- ✓ Web pages: Pages were consulted to give detail on the activities of interested parties.
- ✓ Questionnaires: Structured, yet open-ended questions were used.

Table 1.2 in Chapter one visually informs on the purposes of the various data collection methods.

3. Tentative answers to research questions

The context within which staff development occurs is not fixed. Neither are the answers provided below intended to be simplistic or absolute. The multitude of contributing factors imply that the main research question cannot be answered in isolation. Rather the answer is informed by a series of sub-questions and answers. The tentative answers provided below are derived from and informed by the context of this research.

3.1 Change

> *"Change is inevitable in a progressive country. Change is constant."* (Benjamin Disraeli, 1867)

3.1.1 What is change?

Change is a constant factor in the lives of academics. Changes do not only involve people but the process of change also affects the way information is perceived and reacted upon. The mind needs to evaluate and encode new information in order to determine potential impact. Within new circumstances individuals may find themselves in a position where it is necessary to realign with the new reality. New insights and understanding are generated and often produce new questions. Individuals are enriched by these changing cycles producing, for example, psychological growth.

Change should therefore not be viewed as merely peripheral and circumstantial alterations, but as a valuable tool to foster growth. Changes and the resulting intellectual drift are vital in terms of adaption, but often uncontrolled and involuntary. Intellectual drift is not a destination, but a constant or at least recurring cycle of definition, which leaves room within itself for some inevitable self-contradiction, redefinition and growth.

3.1.2 How do people react to change?

Different people have different capacities for dealing with change, but because people are most productive when they enjoy the activity they are busy with, it is beneficial to equip people to deal with change in a way that will still enable them to enjoy their task. The point where enjoyment is experienced is a dynamic one, and is dependent both on the skills level of the individual and on the challenge level of the activity at hand (Csikszentmihalyi, 1992). By implication change may leave staff members with a situation where the challenge is greater than the ability level. As a

result, many may be left with feelings of anxiety and loss of control, which in turn leads to greater demotivation (Malone, 1981).

The effect of experience, the consequential feelings, thought patterns and modified behaviour patters are best described in the table adaptation of Brock and Salerno's change cycle (Figure 3.6).

Unless processes and procedures are in place to equip staff to deal with change, they may react in order to avoid embarrassment or threat. Over time these issues become manifested in what Argyris (1990) calls organizational defence patterns.

3.1.3 What is the extent of change required from South Africans?

As part of the global world structure, all the changes common to the world at large, also apply to South Africans. Factors like HIV/AIDS, economic instability, declining resources, overpopulation and poverty all contribute to a tidal wave of changes.

South African became an international icon of political hope when peaceful change in government took place. The election was but the formalising of a series of changes that reached into the homes and hearts of South Africans.

The new government has passed legislation that is aimed at future benefit as well as the redress of past imbalances. A number of implications directly stemming from legislative directives are listed in Chapter Three. The very fact that there is no consensus on the rate of change or even the very changes themselves, indicates that change did not stop with the '94 elections and is not likely to stop in the future.

3.1.4 What are the effects of change on staff in higher education?

Factors around education, of which financial constraints are not the least, have forced stakeholders to take note of the changing situation. The learners themselves are much more outspoken about their demands on educational structures, and the combined result leaves a drastically altered reality where educators should function and therefore appropriate staff development is required to support the intellectual growth of knowledge workers.

Barnette, R. (2000). *Helpful Tips for Planning and Readiness for Online Instruction*: http://as1.ipfw. Edu/99tohe/presentations/barnette.htm.

Batt, R. (1999). *And the Winner is: Self-managing Teams*. [S.l] http://www.hrzone.com/articles/teams_tqm_or_taylorism.html

Baud, D. and McDonald, R. (1991). *Educational Development through Consultancy*. Guildford: SRHE.

Becker, H.S. (1993). *Theory:The Necessary Evil.* In Flinders, D.J. *Theory and Concepts in Qualitative Research*. New York: Teacher's College Press.

Bednarz, D. (1985). *Quantity and Quality in Evaluation Research: A Divergent View.* Evaluation and Programme Planning: Vol. 8, p289 – 306.

Behr, A.L. (1988). *Empirical research methods for the human sciences*. Durban: Butterworths.

Berge, Z.L. and Muilenburg, L.Y. (2000). B*arriers to Distance Education as Perceived by Managers and Administrators: Results of a survey*: In Melanie Clay (Ed.), Distance Learning Administration Annual 2000: http://www.gl.umbc.edu/~berge/man_admin.html.

While this study focuses on staff development, the changes also impact on academia at large and on students.

3.2 Staff support/development

> "Μμνεσο, τι καэ τэ μετατэτεσται καэ эπεσται τэ διορτοэντιэμοэο э эλεэτερэν эστιν."
>
> *(To change your mind and to follow him who sets you right is to be nonetheless the free agent that you were before)*
>
> Marcus Aurelius

3.2.1 What are the characteristics of successful staff development elsewhere?

Staff development is approached in various ways. Although departments responsible for staff development are called by a variety of names, these names have little value as indicators of exactly what happens with such departments.

Centres prefer a comprehensive approach to development in preference to exclusively following any specific model in their activities. Central offices that co-ordinate developmental activities are also common. A fair amount of similarity exists between core activities at different institutions. Voluntary participation in workshops and seminars appear to be the most popular developmental interventions (Table 4.12).

A number of elements and fundamental educational approaches are encouraged and combined into the eclectic approaches followed. These common recommendations and the people credited as intellectual property right holders are listed in Table 4.13.

3.2.2 What is the extent to which staff members need support?

Academic staff members are mostly appointed for their subject expertise and are not expected to have any teaching qualification. With the change to a more client oriented higher education system, the call for learning facilitation and lecturing competence in staff members is growing.

Realities such as lack of funding for full time study may force some learners to prefer distance education. Technology and especially the internet, make it possible for learners to study through lower contact options, but the need for instructional design and curriculation which fosters learning, still places a burden on lecturers to provide services for which they more often than not do not have formal qualifications.

While some staff support centres do provide assistance in activities which are more closely related to change management strategies or managerial skills than to education, the need for support is primarily educationally related.

All the staff members are not equally receptive to interventions from change agents. The detail description for receptivity is given in Chapter 5, section 2.

3.2.3 What are the dynamics between change and staff support?

Change is at the heart of staff development. The increased tempo of change seems to call for an increase in developmental activity and lifelong learning.

Different approaches to managing change exist. These should not be seen as contradictory or exclusive. They should rather be viewed as complementary, since people differ in their reactions to change.

3.3 Information technology

> *"Where is the Life we have lost in living?*
> *Where is the wisdom we have lost in knowledge?*
> *Where is the knowledge we have lost in information?"*
> (TS Elliot, 1934)

3.3.1 What are the possibilities and constraints of information technology as a vehicle for development and support?

Change agents generally seem to have a very sober outlook on the use of technology. While various options such as video and audio recordings have been

available, very few lasting changes have taken place in educational practice. Innovations and technology applications in themselves are not seen as crucial elements in higher education development today.

This does not imply that the value of technological systems, techniques and affordances are not appreciated or that no effort is invested in creating opportunities for faculty members to become familiar with new approaches. Normal distribution of the adoption of technological tools is evident amongst change agents.

Amongst the pioneers and early adaptors, a great deal of enthusiasm is evident and some departments run huge sections devoted to electronic teaching, but those who do venture into the realm of technology as a tool, do not all share the same perspective or priority allocation.

For the majority at the moment, technological opportunities are treated as options for student learning and are not pursued as staff development options.

Some practitioners use the enthusiasm for technology and changes in delivery to provide opportunities for raising educational awareness. At this stage, those who tend to use technology for developmental purposes only do so from the perspective of generating access and to disseminate information and resources available on line. *WebCT* and *Blackboard* are the only two commercial platforms suggested, but many institutions prefer to develop their own approaches. Further research is required into why such institutions elect to *re-invent the wheel*.

3.3.2 Which changes need to be made to staff support and development practice in order to exploit the possibilities of information technology?

Current staff development practice does not provide an ideal mechanism for creating a functional learning organisation. Where non-physical contact facilitation of learning is concerned the effects of personality types and learning preferences plays a bigger than normal role. In order to accommodate these differences the answer is unlikely to ever imply a technology only solution, but rather a compendium of methodologies through which those who do posses the necessary competence and self-motivation can benefit, while those with different profiles are not discriminated against. Merely

switching to technological delivery as a vehicle for staff development will not solve such problems.

This study does however indicate a number of factors that need to be taken into consideration when considering successful technological staff development. These factors are:

- ✓ Receptivity;
- ✓ Dependency;
- ✓ Lucidity; and
- ✓ Perceived intricacy.

They are briefly described in Table 6.1.

Factor	Contributing Element	Issues
Receptivity	Origin	✓ Locus of apparent need
	Reaction to change	✓ Impact of change ✓ Intellectual drift ✓ Perceptions of insecurity
Lucidity	Availability	✓ **A**bility of the individual to utilise opportunities ✓ **P**ractical accessibility of the information ✓ **E**xistence of applicable information
	Clarity	✓ Linguistic complexity ✓ Esoteric terminology ✓ Layout ✓ Presentation ✓ Visual literacy
	Context	✓ Accommodation of local issues ✓ Adaption of theorems
Dependency	Approach preference	✓ Social learning style ✓ Delivery mechanism ✓ Mode of interaction ✓ Temporal dependence
Perceived intricacy	Compatibility	✓ Technical issues ✓ Intuitivity
	Complexity	✓ Ease of operation ✓ Instructional design
	Trialability	✓ Drivers to download ✓ Change in settings ✓ Security issues

Table 6.1: Factors to contend with in order for eVelopment to succeed

The fact that information is available does not guarantee that the intended meaning will be transferred. Change agents need to take note of these factors, provide alternatives and accommodate individual differences. The challenge is to find a way to serve as many of the clientele as possible in a way as close to their own particular situational profile as possible. Technological possibilities can prove helpful in this regard.

4. Conclusion

This research argues that there has been an increase in both the scope and the rate of change in the higher education arena in which the need for staff development/support should be in constant demand. Learning organisations need to be grown since current approaches will not suffice and existing attitudes and learning cultures do not allow for self-development. In a majority of cases the reasons cited for failure of current methodologies can be related to time (and hence budget) constraints.

Technological solutions can help with just-in-time performance support options, but also in terms of more comprehensive staff development interventions. However, the unique nature of individuals means that different people have different reactions to both their changing environments and their particular preference in terms of developmental approach.

Not completely unlike traditional developmental approaches, corporate and social norms in terms of mutual accommodation and acceptable behaviour will not suffice to persuade staff members to participate and utilise developmental opportunities. A number of factors need to be specifically catered for in order to create an environment in which individuals will feel sufficiently secure to both utilise the opportunity and implement the new strategies and methods acquired.

No single solution will satisfy everybody, nor do simplistic answers or options exist. Change agents need to account for individual preferences and context specific implications in terms of lucidity, receptivity and dependence. Based on facts thus gathered, alternatives can be selected from the technological spectrum to coincide with the appropriate levels of technological intricacy.

In designing developmental opportunities, a variation of approaches will have to be provided for. While this may seem like unnecessary duplication, the availability of alternatives will accommodate staff members in methods better suited to their needs and possibly during times more appropriate to both their schedules and the instance of their experiencing the need. In this way developmental opportunities will not only enjoy better utilisation, but positive experiences will add to a growing learning organisation culture.

5. Recommendations

The following issues emerge from this research as recommendations. They are not given in any particular order or preference.

5.1 Understand your clients.

The needs of clients relate closely to their expectations. A better understanding of factors directly impacting on the lives of staff will enable change agents to cater for those needs. Not only will this provide better service to staff members, but it will also enable change agents to pro-actively identify and contextualise possible solutions to current problem areas.

5.2 Augment existing resources

In the ever widening spectrum of global participation, staff members attempt to obtain solutions to their problems across institutional and international boundaries. They are however stressed for time and as a result do not always take the time to contextualise options that emerge. The consequential misaligned selection of methodologies or inappropriate use of technological possibilities may in turn lead them to unverified conclusions regarding the actual applicational value of certain approaches. Change agents should identify hindrances and/or possible work-arounds in order to sensitise staff to preferred local variations or necessary adaptations.

5.3 Identify similar institutions

Where at all possible, resources should be shared. Technology has made specific progress which makes communication, co-operation and sharing of documentation

and other material not only possible, but also effortless. This is not only to lighten the materials development load, but will address issues of lucidity as it would initiate exploration in terms of specific meaning and relevance.

5.4 Lead by example

Unless change agents actively explore, experiment and utilise technological options, the late majority may interpret their actions as lip service and continue in trusted old ways. On the other hand, staff who experience positive learning facilitation during developmental interventions, may consider following suit.

5.5 Accommodate change by addressing change

Not all members of staff reflect on their own reactions to change. They need to be made aware of the possible instinctive reactions to changing environments and consciously and pro-actively select change approaches. Staff members still need to learn that it is acceptable to experience particular emotions and reactions to changes in their lives, but they also need to acquire the necessary skills to deal with them positively.

5.6 Explore technological spectrum – not only forefront

The heightened awareness and media coverage of the latest developments in technology sometimes create the impression that technological innovations are but passing fads. A crucial balance must be kept between exploration and experimentation with latest technology and the adoption and propagation of proven advances and new approaches.

5.7 Optimise

Utilise the strengths of technology to enhance existing offerings and developmental interventions. In doing so, the strengths of both methodologies can be optimised on. By for instance creating e-mail distribution lists for people who have registered for developmental workshops, participants can be supplied with preparatory reading and later be supported during implementation of newly acquired skills to experience the co-operative structure of the network of fellow explorers as a safety net from which to operate. Sharing expectations, ideas and challenges can both motivate the stronger

parties with increased self-confidence, and sooth more tentative staff members with the knowledge that they are not left alone to generate answers.

6. Value of the research

On a personal level, this research resulted in a large amount of tacit knowledge which impacts on multiple aspects of prior learning and knowledge construction. While not possible to capture into an all-embracing document and while it holds little value to parties not directly involved with the researcher, this aspect should be mentioned in the interest of honesty and comprehensiveness.

To readers, this research may hold the following value:

- ✓ Awareness and analysis of factors surrounding higher education and the resulting impact of those changes on the lives of academics.
- ✓ Sensitivity for the need to support staff during times of change.
- ✓ Exposition of elements crucial to current best practice ways of supporting and developing academic staff.
- ✓ Appreciation for the factors affecting staff development.
- ✓ Recognition for the need to contextualise staff development solutions.

7. Limitations of the research

The research could have been more valuable and more representative of the field were it not for the following factors:

- ✓ Many of the individuals that were identified as knowledgeable, did not respond to the request for information.
- ✓ One individual did the research and as a result, a long time has elapsed since the beginning of the research. In the meantime, new valuable papers may have been produced which have not been considered in the scope of this study.

- ✓ No instance could be found where a comprehensive eVelopment implementation is in operation. As a result the expected reaction of staff members are well founded hypothesis, but not tested as yet.

- ✓ The South African context is unique in many ways. In an attempt to obtain state of the art impressions and options, the focus of the study may be too international and not sufficiently localised.

8. Recommendations for further research

The lyrics of the song claims "…there are more questions than answers". This research has exposed some of the complexities of eVelopment. While this is the staff development path of the future, there are a number of issues that still need further investigation:

- ✓ The range of tools and approaches that will cater for the spectrum of individual needs, must be further explored, implemented and tested.

- ✓ A management system must be developed that is both economically viable and at the same time sensitive to the developmental needs of staff in a rapidly changing academic environment.

- ✓ Methods must be explored by which members of a learning organisation can be made sufficiently aware of their duty towards active participation in the creation of a learning organisation.

- ✓ An international consortium of staff developers could unite in order to collectively identify, design and develop systems that could be used by staff at these institutions to better equip themselves. The system within which such co-operation could function fast and reliably enough to be feasible, needs to be investigated.

- ✓ Methodologies to reward staff members for educational efforts and contributions that will aid learning can assist in raising awareness with staff of the need for educational development. Existing methods of this kind do not prove sufficient and new ways must be found.

9. Finale

Yesterday's solution will not solve today's problems and the solutions of today must be sufficient to prepare academics to prepare learners for tomorrow. eVelopment has the potential to provide the answers, but a blind rush to adopt technological delivery of content will not work automatically.

The specific circumstance and the intricate balance between lucidity, dependency and receptivity need to be defined and specifically addressed in order for an eVelopment solution to succeed. Staff developers and change agents need to be aware of these factors and design accordingly.

Unless these challenges to staff development opportunities are treated with sufficient respect, the negative experiences of development staff that do not find instant gratification from quick fix approaches may cause them to elect not to utilise the great potential that is available. In doing so institutions of higher education may find staff unable to cope with the rate of change expected of them.

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