CHANGE IN HIGHER EDUCATION: THE PSYCHOLOGICAL EXPERIENCE OF FACILITATORS AND CO-ORDINATORS IN A RESOURCE-BASED LEARNING COURSE

by

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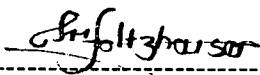at the

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Sophia Maria Holtzhausen

To Mauritz and my parents

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Table of Contents

PART 1: Literature study

Chapter 3
RESOURCE-BASED LEARNING AS NEW LEARNING MODE

Chapter 4
FACILITATORS AND CO-ORDINATORS IN A RESOURCE-BASED LEARNING COURSE

PART 2: Empirical study

Chapter 5
THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY

Chapter 6
RESEARCH METHODS AND PROCEDURES

Chapter 7
QUANTITATIVE RESEARCH RESULTS

Chapter 8
QUALITATIVE RESEARCH RESULTS

Chapter 9

TRIANGULATION OF RESEARCH RESULTS

Chapter 10
CONCLUSIONS AND RECOMMENDATIONS

Chapter 11
REFERENCES

List of figures and tables

Abbreviations

HSRC	Human Sciences and Research Council
NCHE	National Commission on Higher Education
NQF	National Qualifications Framework
QPU	Quality Promotion Unit
RBL	Resource-based learning
RBLCPP	Resource-based learning Career Preparation Programme
SA	South Africa
SAQA	South African Qualifications Authority
SAUVCA	South African Universities' Vice-Chancellors' Association
SoC	Stages of Concern
UK	United Kingdom
UOFS	University of the Orange Free State
USA	United States of America
$\bar{X}$	Mean

List of figures and tables

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Chapter 1

INTRODUCTION

1.1 RESEARCH PROBLEM

*W*orldwide there is a demand for higher education systems and institutions to be responsive to the changes taking place in society in virtually every country (Cloete & Ekong, 1997). The concern to adapt higher education to changing needs resulted in the need to transform the higher education system to meet the requirements of technological development, massification, quality and economical sustainability, etc.

Within the South African context, a fundamental framework for transformation of higher education is recommended, which consists of the following central features:

❑ increased participation by a more diverse constituency of learners;

❑ greater responsiveness to a wider range of social and economic needs; and

❑ increased co-operation and more partnerships between higher education and other social actors and institutions [National Commission of enquiry into Higher Education (NCHE), 1997]. (This will be expanded in 3.2 & 3.6.)

The NCHE (1997) declared that transformation would also have implications for the curriculum of higher educational institutions in terms of content and the learning process, which is the primary business of higher education. In addition, the diversity in student population has meant that traditional teaching methods have become less effective [Higher Education Quality Council (HEQC), 1997]. This emphasises the fact that worldwide, as well as in South Africa, higher education institutions should make significant changes in their offerings and delivery systems to address the diversity in the student population in order to survive in the twenty-first century.

At the core of these significant changes is the shift from the **Teaching Paradigm** to the **Learning Paradigm.** At the individual level it means the shifting to new ways of thinking about learning, while at the organisational level it implies mission shifts from providing instruction to producing student learning as well as the shift to operating as a learning organisation (Olivier, 1998).

Within the Learning Paradigm there are various methods, of which **Resource-based Learning (RBL)** is one thereof. For the purpose of this study the focus will be on RBL, which represents a curriculum and delivery methodology by which the learning content is made more accessible to students and the emphasis is shifted to the facilitator as the manager of knowledge instead of the main source of knowledge (Bitzer & Pretorius, 1996, p.1). RBL also focuses on the material rather than the deliverer, which demonstrates the shift of roles from an information transmitter to a **facilitator** (Brown & Smith, 1996). Furthermore, RBL refers to the increased use of a variety of media, methods and mechanisms to meet the different and divergent needs of the learners (i.e. a vital aspect in the South African context) in a rapidly changing educational situation (see also 3.2.).

The implementation of the RBL methodology, within the South African context, is complicated by the following prominent problems:

❑ Massification or the shift from an elite to a mass system are widely used terms, which refer to a "participation process in the higher education sector that has both increased and widened, as well as the shift to a mass system in order to accommodate students from socially distributed backgrounds" (NCHE, 1996b, p.158). These types of students currently accepted at university level lack the minimum requirements of academic study (Louw, 1997).

❑ Another factor that could complicate the implementation of RBL is the diversity of the African culture, wherein the disadvantaged students grew up. These students lack the necessary type of experiences they need to be successful in a Western curriculum (Herbst, Schoeman & Huysamen, 1993). This emphasises the difference between Africa and the West, to confirm the statement Van der Walt (1997) declared that the African culture stresses the importance of human community, while the Western culture emphasises the importance of the individual. In RBL the focus is on independence and to work at your own pace, and therefore it would be more difficult to implement RBL in an African culture.

❏ It appears from The White Paper on Higher Education (1997) that RBL initiates learning in different contexts, at a multiplicity of sites, through a variety of mechanisms and approaches. A positive outcome might be quality and successful facilitating with limited staff available (e.g. more cost-effective) and the better utilisation of physical and human resources (The White Paper on Higher Education, 1997). In contrast, the Resource-based Learning Career Preparation Programme (RBLCPP), based at the University of the Orange Free State (UOFS), has more academic staff than a teacher-centred approach, which could be due to the fact that a pilot programme needs more administrative staff in the beginning to be successful (F.C. Marais, personal communication, 28 November 1997). A possible reason may also be that the RBLCPP strives to be cost-effective and thus for example appointed rather two facilitators on a lower post level than one lecturer at a higher post level like in the traditional teaching mode.

At the same time higher education changes worldwide opt for the Learning Paradigm. As an example one can mention the following: The Committee for the Advancement of University Teaching (CAUT) in **Australia** encourages the active participation of learners instead of viewing them as "an empty vessel that needs to be filled with facts of the teacher" (Anderson, 1997, pp.111-116). According to Hall (1996) the establishment of the National Qualification Framework (NQF) in **New Zealand** led to the improvement of access to education as well as a representation of a more open and flexible approach to credit transfer and recognition of prior learning (which is an important principle in RBL). Daniels (1996, p.ix) as well as Brown and Smith (1996) envisage that the higher educational problems in the **United Kingdom** (UK) could be addressed by the increased utilisation of RBL in order to accommodate more people on a continuous learning basis throughout their working lives. In the **United States of America** (USA) the RBL philosophy has already been established during the sixties in the Keller Plan with the development of individualised learning (Bitzer & Pretorius, 1996; Stoward, 1976). This new delivery mode was cost-effective and simple to organise as well as emotionally and intellectually satisfying to both the facilitators and learners (Stoward, 1976). In **South Africa RBL** should have a crucial role to play in accommodating the challenge of increased access and enhanced quality within a resource constraint and diverse student body context. The challenges are even bigger in South Africa than in other countries. On the one hand RBL has been opposed due to the culture variables (e.g. the African culture emphasises the importance of human community, while RBL emphasises the importance of the individual's independence) and on the other hand RBL can provide a solution (e.g. to massification, etc).

Central to RBL is the role of the facilitator, which is stressed by Baxter (1990), who states that the sudden nature of changeover to RBL innovation could trigger **cognitive** and **affective** experiences within the facilitator (e.g. fear of the unknown; the distrust in as well as the anxiety and uncertainty as regards their own skills/abilities towards the innovation, resistance towards change, etc.). For that reason RBL is not only a concern with educational development of the learner, but also with the psychological experiences of facilitators and/or co-ordinators (Beswick, 1977; Baxter, 1990). The term psychological experience refers to the totality of social, emotional, cultural and intellectual aspects within the individual, which is affected by an external stimulus (Plug, Meyer, Louw & Gouws, 1993). Psychological experience is a very complex and wide concept, which includes variables such as intelligence, aptitude, attitude, values and personality characteristics (Mahoney, 1991). For the purpose of this study psychological experience refers to a certain stimulus (e.g. RBL innovation) which the facilitators and co-ordinators were exposed to, that affected their cognition, affect and behaviour with special reference to attitudes, feelings, stress and their experiences of the self with regard to cope with RBL.

In order to comprehend the psychological experience of higher educational change on the facilitator and co-ordinator in a RBL course (research problem), this study will first focus on the broader context of the South African higher education band, which will provide a macro-perspective on the new developments such as the National Qualification Framework (NQF) and policy proposals like the NCHE (1996a; NCHE, 1996b), the White Paper on Higher Education (1997) and the Higher Education Act (1997). This perspective will be followed up by the meso-perspective that envisage the paradigm shift to the RBL mode as found in the new RBLCPP as discussed in Chapter 3. The RBLCPP is a bridging programme, based at the UOFS providing access to higher education and also representing the general context in which research will take place. Finally, in Chapter 4 the above-mentioned research problem will be investigated on micro-level which is the psychological experience of higher educational change of facilitators and co-ordinators in a RBL course.

1.2   SUPPORT OF THE RESEARCH PROBLEM

Higher education in South Africa is being characterised by massification, globalisation, the access of non-traditional and disadvantaged students who have limited language, science and mathematical skills, striving towards quality and cost-effective educational programmes, as well as a **paradigm shift** from lecture-centred to **learner-centred education** (Higher Education Act, 1997; The White Paper on Higher Education, 1997).

In the current changing and challenging South African higher education band, the need to transform stems from two factors, namely:

- a historical legacy that was characterised by inequity and inefficiency which limited its ability to meet the moral, social and economical demands of the new South Africa, and
- a context of unprecedented national and global opportunities and challenges (the Higher Education Act, 1997; The White Paper on Higher Education, 1997).

This contributes to the characteristics (i.e. rapid and far-reaching changes) of the South African higher education system (Gerwel, 1995). Furthermore, a fact that complicates the South African higher educational system is due to characteristics such as learners with inadequate mediated learning experiences (MLE) according to Feuerstein's Cognitive Theories (Mentis & Frielick, 1992), the presence of poor second language proficiency (e.g. English) and Vygotsky's theory of multiple zones of development (Rautenbach, 1996). Therefore, South African higher educational change is based on a context where one is dealing with *inter alia* a specific student profile [e.g. non-traditional students (see 1.5)]. These students have been disadvantaged due to poor secondary schooling, which especially result in the underdevelopment of language skills, science and mathematics (Louw, 1997).

In a time of transformation of the South African higher education system, various policy documents (e.g. NCHE, 1996b; 1997; The Green Paper on Higher Education Transformation, 1996; The White Paper on Higher Education, 1997; the Higher Education Act, 1997) propose **RBL** as the new delivery mode in education that can play an important role in this new context. This approach is confirmed by Welch (1998) namely that the RBL approach could play an extremely important role to meet the challenges posed to the university system such as massification, increasing diversity in the student population, the rising costs of books as well as the inabilities of libraries to cope with the number of books required for study.

Simmonds (1992) states that RBL has a role to play by introducing students to more self-directed and independent learning, and faculties to become more effective in assisting students to learn. Breivik (1992, p.12) claims that "the long-established educational goal of individualising the learning process has been accomplished via RBL". Lectures and pre-digested textbook information alone are insufficient to promote lifelong learning that enables students to think critically (Farmer & Mech, 1992). This highlights the value of using various
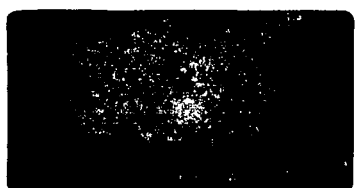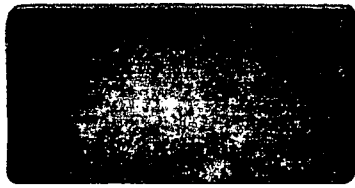
❑ to determine whether facilitators and co-ordinators have different psychological experiences of higher educational change in a RBL course;

❑ to make accountable recommendations to improve directly the functioning of the staff (e.g. facilitators and co-ordinators) and indirectly the whole programme [e.g. Brown & Smith (1996) stated that the success of any programme primarily depends on the staff involved].

In order to achieve these aims, the focus will shift to the specific research design and methodology that has been used in this study to accomplish these aims.

1.4 RESEARCH DESIGN AND METHODOLOGY

Social research is both a "**process** and a **product**" (Wolcott, 1990, p.7). This emphasises the need for this study to include both qualitative and quantitative research methods. The inclusion of both qualitative and quantitative research methods is called methodological triangulation (see 5.3.1.2). In this study data-, methodological and theoretical triangulation will be used to strengthen the research design (see 5.3). According to Brannen (1992) **triangulation** is the mixing of methods such as qualitative and quantitative research methods in order to enhance the validity of findings (see also 5.3 & 6.4).

In order to justify the inclusion of both qualitative and quantitative methods, the following:

❑ The importance of **qualitative research** is to direct the treatment of current problems facing social researchers, which are conceptual and dealing with the social understanding (Wolcott, 1990, p.7). Further benefits of qualitative research include the highlighting of the context and how the context relates to meaning, honours both feeling and thought and places data of study central and employs existing literature to compare, contrast or puzzle out study findings (Ely, Vinz, Downing & Anzul, 1997, p.380).

❑ On the other hand researchers should provide evidence that their data are from reliably scored instruments that stress the importance of **quantitative research** (Cone & Foster, 1993). Added benefits of quantitative research are that it lends to the description of opinions and attitudes, testing theories, determining facts, as well as the statistical analysis in order to demonstrate the relationship between and effect of variables (Garbers, 1996).

1.4.1 <u>Research groups</u>

According to Cone and Foster (1993), three important questions about the research group have to be answered, namely:

❑   Who should participate?

❑   How many should participate?

❑   How should they be selected?

In order to answer these questions, the research group of this study is described. The sample of this study will comprise a purposive selection of 10 voluntary facilitators and 10 voluntary co-ordinators from the adaptive new RBLCPP, where the first group had no prior experience with RBL. This indicated two criterium groups that have randomly been selected from the populations, which represent the various levels of the independent variable (i.e. learning facilitation) and used to measure the dependent variable (i.e. the psychological experiences due to higher educational change). The fact that each member of the population has a random chance to be selected, justifies the representiveness of the sample.

1.4.2 <u>Research methods</u>

The following research methods would be used in this study:

❑   The facilitators and co-ordinators would be asked to complete the **Stages of Concern (SoC) questionnaire** (Hall, George & Rutherford, 1977) which consists of the seven-hypothesised stages of concern (i.e. awareness, informational, personal, management, consequence, collaboration and refocusing).   According to Baxter (1990, p.233) a **concern** is defined as "an aroused mental state, a composite of feelings, thoughts, and preoccupation".   The reason for using the SoC questionnaire is because it has been regarded by various researchers as the best quantitative and diagnostic assessment tool for people involved in change (Hall *et al.*, 1977).   Respondents indicate the degree to which each concern is true by marking a number next to each statement on a scale of 0 to 7 to determine the level of comfort with, acceptance of, and commitment towards this innovation.

❑ All the facilitators and co-ordinators will also have to complete a **demographical and relevant information questionnaire**, which has a wider focus (see Appendix A). These results will later be compared to the qualitative data to support the results.

❑ The Mann-Whitney-U-test (Behr, 1988; Cozby, 1993), which is a nonparametric test, will be used to investigate and analyse the proposed statistical hypothesis (see 7.3.1.2).

❑ **Structured interviews** will be conducted to obtain information from the facilitators and co-ordinators regarding aspects of the research problem. A qualitative analysis of the data generated by these interviews will focus on the psychological experience of educational change on the facilitators and co-ordinators in a RBL programme. The results of this analysis will help to explain and serve as supplement and extension as regards the quantitative data gathered through the SoC questionnaire. For the purpose of this study the structured interviews will focus, *inter alia*, on psychological experiences with regards to affect, cognition and behaviour reactions as a result of higher educational change with special reference to attitudes, feelings, stress and their experiences of the self.

Herman (1993) notes that the analysis of paradigm shifts and methodology in the education band (as in this study) has to include both education and social sciences. Thus, this study will focus on both **higher educational changes** and **psychological experiences**. It is evident that this research project will be an interdisciplinary study that will reflect the concepts and frameworks of both Psychology and Higher Education. The reason for including both disciplines is due to the following:

❑ Transformation or educational change is influencing all facets of human existence and institutions (Diez-Hocleitner, 1997).

❑ Both educational and psychological researchers are interested in human knowledge, abilities, aptitudes or personality characteristics and the related learning concept (Peers, 1996).

❑ The possibility of humans to change and the impact of change are fundamental questions that lie at the heart of both psychology and education (Mahoney, 1991).

❑ Modern psychology possibly has some answers to the questions facing education (Fontana, 1995, p. xiv).

Both disciplines are vital for investigating the stated research problem, namely: "What is the psychological experience on the facilitators and co-ordinators in a RBL course due to higher educational change".

1.5   THEORETICAL CLARIFICATION OF TERMINOLOGY

The following terms need clarification because of their particular interpretation in the context of this study:

1.5.1   Co-ordinator

The co-ordinator role with regard to the RBLCPP implies that he/she has to be a subject expert who is the manager of the programme in a specific department (academic, administrative and organisational). The co-ordinator is responsible for developing learning material, monitoring the programme and training facilitators (see Appendix D).

1.5.2   Distance education

Within the South African context distance education implies the presentation of specifically designed educational programmes that facilitate a learning strategy which does not depend on day-to-day contact teaching, but makes the best use of the potential of students to study at their own pace (NCHE, 1996b). The provision of interactive study material and decentralised learning facilities are important resources which students can use for academic and other forms of educational assistance when necessary (NCHE, 1996b).

1.5.3   Facilitator

A facilitator could be defined as someone helping with the learning process of an individual/a group in a less directive way. He/she can possibly assist learners in activities such as arranging access to equipment and facilities, enquiring about progress, and resolving difficulties (National Extension College, 1990).

1.5.4   Higher educational change

Higher educational change refers to a process of co-ordinated efforts by the higher education band to adapt to new requirements and not instant radical changes due to the political situation

(Van den Heever, 1987). As in the case of the definition of transformation, higher educational change in this study indicates a movement from the traditional teaching mode towards the resource-based learning mode.

1.5.5   Non-traditional students

Eaton (1992) defined non-traditional students as those with characteristics such as being either part-time or older than 22 or prefer clock hour instead of credit instruction and being financially independent, and who are not high school pupils. The NCHE (1996b) added characteristics such as out of school youth, out of work adults or neglected school pupils. Thus, the emphasis is on the exclusion of traditional high school pupils. South Africa is also unique in terms of the absence of a learning culture (for example where non-traditional students' parents did not follow a tradition to continue studying in higher education).

1.5.6   Paradigm shift

For the purpose of this study a paradigm shift refers to a change in the established traditions of the educational discipline which includes accepted theories, models, research and methodologies (Meade, 1997). The educational discipline accommodated a variety of competing paradigms like in this study the teaching versus the learning methodology (e.g. RBL).

1.6   OUTLINE OF STUDY

This study is introduced by the research problem in chapter one, where it provides an introduction of the importance and relevance of this study, as well as the clarification of terminology.

This study is divided into two divisions. The first represents the literature study and consists of the following:

❑   Chapter two which reflects the conceptual orientation of change.
❑   Chapter three which reveals information regarding RBL as a new learning methodology. Special references are made regarding the origin, history and impact of this innovation.
❑   Chapter four, which focuses on the psychological experience of facilitators and co-ordinators in a RBL course.

The second division represents the empirical study and consists of the following:

❑   Chapter five consists of the theoretical foundation of the research design and methodology which provide an explanation of the technical and methodological aspects such as the composition of research groups, gathering of information and the associated procedures and processing relevant to the study.

❑   Chapter six stipulates the research methods and procedures being used.

❑   Chapter seven consists of the reflection on and discussion of the quantitative research results.

❑   Chapter eight consists of the reflection on and discussion of the qualitative research results.

❑   Chapter nine highlights the triangulation results.

❑   Chapter ten consists of the recommendations for future research.

This study can visually be depicted as follows:
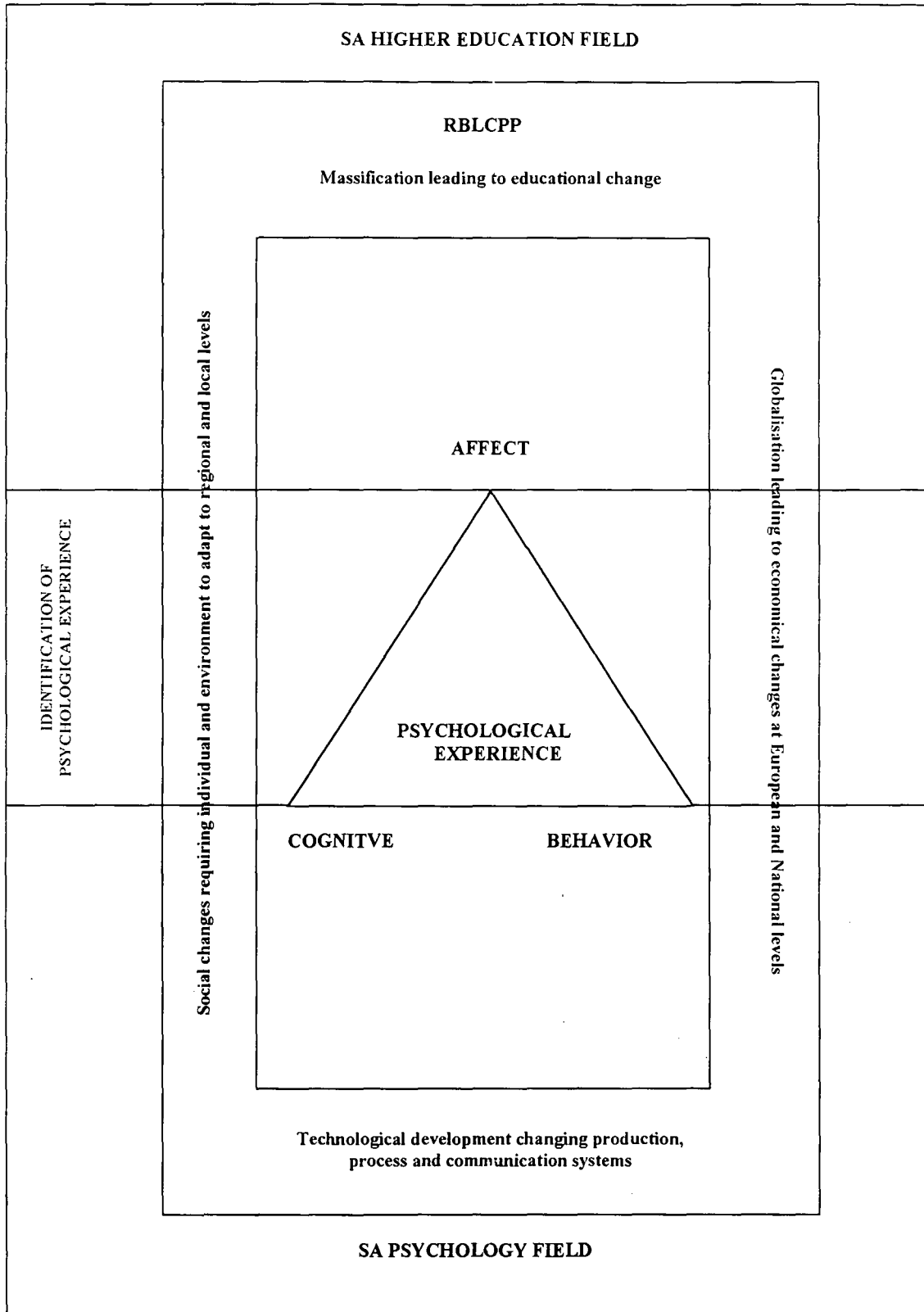
Figure 1.1: Conceptual framework of study

Having been orientated towards the research problem, the focus will now shift in Chapter 2 to an in-depth investigation of the concept change.

Outline of study:

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                    ┌─────────────────────┐
                    │      Chapter 1       │
                    │    INTRODUCTION      │
                    └─────────────────────┘
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PART 1

Chapter 2	Chapter 3	Chapter 4
THE CONCEPTUAL ORIENTATION OF CHANGE	RESOURCE-BASED LEARNING AS A NEW LEARNING MODE	FACILITATORS AND CO-ORDINATORS IN A RBL COURSE

PART 2

Chapter 5	Chapter 6
THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY	RESEARCH METHODS AND PROCEDURES

Chapter 7	Chapter 8	Chapter 9
QUANTITATIVE RESEARCH RESULTS	QUALITATIVE RESEARCH RESULTS	TRIANGULATION RESEARCH RESULTS

Chapter 10
CONCLUSION AND RECOMMENDATIONS

A CONCEPTUAL ORIENTATION
OF CHANGE

2.1 INTRODUCTION

*C*hapter 1 already pointed out that throughout the world transformed higher educational systems and institutions should address societal changes. These societal changes include social, economic, cultural, technological and pedagogical demands, which higher education has to respond to in order to keep up with international recognised standards of academic quality and to be sensitive to the prominent problems in the worldwide and South African context (Cloete & Ekong, 1997).

The demand for transformation of higher education in South Africa is reflected in various policy documents (e.g. NCHE1996 a, b; NCHE, 1997; the Higher Education Act, 1997; The White Paper on Higher Education, 1997). These policy documents proposed a framework for transformation, which has inevitable implications for the curricula of higher education institutions. Higher education institutions will have to make the necessary paradigm shifts regarding curriculums as curricula will have to reflect transformation in higher education.

This chapter will also strive to clarify concepts such as change, higher educational change and related concepts from the literature. This will be followed by a discussion on transformation in higher education, which usually results in curriculum changes (see paragraph 2.3). These changes will be argued within the context of delivery modes, where RBL is one thereof and is the focus of this study.

In order to comprehend the concept of change, this concept will next be elucidated.

2.2   THE CONCEPTUALISATION OF CHANGE

It may be an old truism to say that one lives in a changing world, for change is intrinsic to life. What is new is not change in itself, but the accelerating rate of change that we are experiencing (The Open University, 1995).

Bolam (1974) claims that change is a generic term that includes concepts such as innovation, development and renewal and is only beneficial when it leads to improvement. Another understanding of the change concept is that the change process is not necessarily negative, threatening or destructive, but can also lead to a condition of renewal and progress, depending on the context and objectives (Toffler, 1979; Hickman & Silva, 1986; Bennis, 1966). It is evident that there are different perceptions and reactions to change (vide paragraph 4.5).

Words in relation to change (although different in technical meaning) are transformation, modification, alteration, conversion, metamorphosis, and even revolution, to name a few. In order to explain the relationship between change and transformation, it seems that transformation refers to a complete and fundamental change, that affects the nature of something, especially for the better [Information Service on Higher Education (ISHE), 1998].

Furthermore, Esterhuyse (1996) claims that change is a multi-dimensional concept and to understand it holistically, one has to ask the following questions:

- What type of change are we talking about?
- What do we refer to when we utilise the concept?
- Which areas do we have in mind?
- What is the driving forces and trends?
- Who are the trend-setters?

In order to understand the multi-dimensional concept of change holistically within the South African context, the above-mentioned questions could be answered when the following perspectives are taken into account. South African higher education institutions are constantly struggling to adapt to the demands of the external environment, because the management of institutions cannot completely control its environment (Ramahlele, 1997). This author further argues that South African higher education institutions are continually having to introduce internal institutional changes which allow them to cope more effectively with new challenges from outside like increased competition, advances in technology, new government legislation and pressing social demands. It is evident that institutional changes are introduced in reaction to these environmental pressures, or changes are made in anticipation of future pressures or a proactive approach by institutions who are engaged in attempting to change their environments as well as themselves. This demonstrates the complexity of the South African context, which is confronted with two types of changes simultaneously (i.e. reconstruction of the society and transformation of higher education). Change forces in the South African higher education, such as massification, globalisation, diversity and the access of non-traditional students, address the psychological and behavioural aspects regarding the change process.

To change is not always easy, but vital for progression (Labuschagne, 1995). Fullan (1991) describes successful and meaningful change being when all individuals and groups can identify themselves with the reasons for change as well as envision the benefits of change, which once again emphasises the importance of participation of all stakeholders in the process of change. At the core of change there are two types of change processes that are vital for the purpose of this study namely, social and educational change.

2.2.1   Social change

Sokapase (1996) holds the view that **social change** is an alteration, a reformation in structure and function of a social system and that it can either be planned or unplanned and that it is most likely to lead to rewards.

In turn, the educational perspective of **social change** refers to it as changes in mechanisms of human association (Ottaway, 1966). Within such a situation people become rebellious against the current social constraints and seek for solutions outside the established framework. With reference to the change concept (e.g. like in this study the shift in higher education to RBL), one must learn to adapt to new social attitudes (e.g. which the RBLCPP facilitators and co-ordinators are confronted with). More than before educators and the community have to know how to adapt, before they can help others to adapt to a rapidly changing world. This once again emphasised the importance of including both social and educational changes in this study.

According to Nordskog (1960) the following fundamental processes are needed for the fulfilment of social change and have also to be taken into account for the purpose of this study:

- **Communication** is the transferral process of messages from a source to a receiver.
- **Acclimatisation** is when an individual becomes adapted to a new climate.
- **Accommodation** could be described as the functional changes where old habits and customs are broken and new co-ordinations are made.
- **Adaptation** refers to the gradual organisation process to develop an integrated scheme of structures and functions under specific conditions.
- **Competitions** serve as a social development agency where two or more people compete for the same object.
- **Conflict** is an indispensable condition and contracts those engaged in the struggle.
- **Discovery** of new facts presupposes the **invention** of new acting and thinking methods. The latter two processes are interrelated.
- **Diffusion** refers to the process where a new environment is adopted in a specific area as well as in the neighbouring areas. In some cases it even continues to be adopted in adjacent ones until it may spread over the whole earth.
- **Acculturation** represents the various ways (e.g. education is the chief method) through which individuals or groups take on new cultural traits.

The above-mentioned can also serve as prerequisites for the successful implementation of RBL, due to the fact that the success of RBL implementation will mainly depend on the staff involved and thus staff development is a necessity, but sometimes an expensive component of change (Brown & Smith, 1996).

It can be concluded that education is the tool needed to achieve social change due to its interrelationship with education. It is also evident that educators are playing a vital role in the bringing about of social change and that various fundamental processes are necessary for successful implementation.

In order to expand on the interrelatedness between educational and social aspects, educational change will now be discussed.

2.2.2   Educational change

In linking-up with what have already been mentioned about educational change (see chapter 1), the following can be elucidated.

Educational change has already been defined in chapter 1 (see 1.5). It is evident that the higher educational band is caught up in a major transitional crisis that is influencing all facets of human existence and institutions (Diez-Hochleitner, 1997). It is important to remember that institutions are complex social systems defined by the relationship between the people, bureaucratic procedures, structural arrangements, institutional goals and values, traditions and the larger socio-historical environment (Hurtado, Milem, Clayton-Pedersen & Allen, 1998). Any effort to change (e.g. the shift to RBL) would effect the whole institutional environment, which links with the systematic approach between elements. This means that if one element of the structure is being changed, it causes change in all other elements.

Writers such as Ottaway (1966), Kamat (1985) and Sokapase (1996) are also of the opinion that educational change is one of the instruments through which people would let go of the old and accept the new. In order to progress from a traditional teacher-

centred to the new learner-centred approach, certain paradigm shifts need to be made in order to respond effectively to the influences of change on curriculums.

2.3 INFLUENCES OF CHANGE ON CURRICULUMS

Certainly educational transformation will have a definite influence on the nature of curriculums. South Africa is being associated with the assumption that higher education is driven on the one hand by the Reconstruction and Development Programme (i.e. an instrumentalist approach to higher education that insists on problem-solving skills, applied research, relevance, local or African content and community service) and on the other hand by an institutional autonomists approach that demand autonomy, critical thinking, basic or "blue sky" research and a strong Eurocentric curriculum (Cloete & Ekong, 1997). Although these two driving forces are still alive, it seems that towards the end of the century a more constructive way of posing the curriculum and the nature of higher education institutions will emerge. In addition, South Africa is also in the process of adopting the outcome-based education approach to curriculum development. The outcome-based education approach is also reflected in the NQF, where emphasis is on outcomes, which are stipulated as critical and subject specific outcomes (Lubisi, Wedekind, Parker & Gultig, 1997). The driving force behind the outcome-based approach is to ensure that higher education institutions provide well-skilled, knowledgeable, qualified people to the labour market.

Curriculum changes require from all stakeholders involved in the learning process to make certain paradigm shifts. These shifts influence especially the following areas:

2.3.1 Philosophical frameworks

According to Bitzer & Pretorius (1996) the underlying philosophy of the **teaching paradigm** is that knowledge is something external, cumulative and linear which is obtained through a piecemeal manner and transmitted via a lecturer. It is also being characterised as teaching-centred, individualistic and competitive. With the **learning paradigm** knowledge is constructed by the learner and created by individual

experience, but is definitely not a passive, receiving action (Bitzer & Pretorius, 1996). It is evident that the learner-centred paradigm puts the learner in the centre of the education process, which represents the core elements of humanism.

Skills development (i.e. study skills and transferable skills) is an important fact of resources in RBL (Gibbs, Pollard & Farrell, 1994). For example RBL strives to develop and enhance learners' ability to think logically and analytically. Critical thinking is also a characteristic of social reconstruction, which is aimed at social transformation (Hay, 1998). It can be deducted from the above-mentioned that critical theory and social reconstructivism are embedded elements of RBL.

2.3.2   Roles of educators and learners

According to Bitzer and Pretorius (1996) the roles in the **old paradigm** consisted of an independent working and planning student-lecturer relationship, where the lecturer principally teaches. The same author emphasised that the lecturer was regarded as a subject-specialist who could only transmit knowledge. The role in the **new paradigm** reflects a wo...able student-facilitator-team relationship where the facilitator is the designer of learning strategies and the learning environment (Bitzer & Pretorius, 1996). Shifting to the RBL mode is not an "either or" situation, but is regarded as challenging and complex (Haycock, 1991). Within the Learning Paradigm (i.e. RBL) the shift from instruction to facilitation, results in a shift of roles from knowledge transmitter to facilitator (Brown & Smith, 1996). These writers also emphasised that the emphasis in RBL is on the materials rather than the deliverer.

The RBL practice causes fairly radical changes for students. Students are now in control of the pace and delivery of learning, which requires responsibility as regards the ability of regulating their own learning (Brown & Smith, 1996). It is evident that learners are more actively involved in the learning process which requires internal motivation and discipline.

2.3.3   Syllabi

Traditionally educators strictly followed syllabi and textbooks (Hay, 1998). Currently the responsibility shift to curriculum developers to develop learning programmes and

syllabi based on the critical outcomes as recognise by the South African Qualification Authority (SAQA) in order to contribute to the full personal development of the learner as well as the social and economic development of the society at large (Lubisi, *et al.*, 1997).

2.3.4 Assessment

If one changes the curriculum delivery strategy without changing the assessment methods, problems can ensue (Brown & Smith, 1996). In the old dispensation assessment methods primarily relied on information recall (e.g. traditional exams), which represented an end-point assessment. These assessment methods were inappropriate to test the abilities and skills developed by RBL, which require a more continuous assessment strategy (Brown & Smith, 1996; Welch, 1998). According to Knight and Scott (1997) RBL users are facing a challenge of devising an assessment strategy that will maximise the skills and knowledge that RBL students have developed by including case studies, in-tray exercises, assessed seminars, presentations and open-book exams.

It can be deducted that, in order to respond effectively to the influences of change on curriculums, it is paramount for all stakeholders in the learning process to receive staff development in this regard.

2.4   CONCLUSION

In Chapter 2 the concepts change and higher educational change for the purpose of this study has been conceptualised. For the sake of clearness, different paradigm shifts that educators have to make, due to the demands of the new curricula, have been discussed.

With this the first specific aim of the literature study has been accomplished, namely to conceptualise higher educational change.

In Chapter 3, RBL as a new learning methodology, will be investigated via a literature study.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2

THE CONCEPTUAL ORIENTATION OF CHANGE

Chapter 3

RESOURCE-BASED LEARNING AS A NEW LEARNING MODE

Chapter 4

FACILITATORS AND CO-ORDINATORS IN A RBL COURSE

PART 2

Chapter 5

THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY

Chapter 6

RESEARCH METHODS AND PROCEDURES

Chapter 7

QUANTITATIVE RESEARCH RESULTS

Chapter 8

QUALITATIVE RESEARCH RESULTS

Chapter 9

TRIANGULATION RESEARCH RESULTS

Chapter 10

CONCLUSION AND RECOMMENDATIONS

RESOURCE-BASED LEARNING AS NEW LEARNING MODE

3.1 INTRODUCTION

$\mathcal{J}$he focus in Chapters 1 and 2 was on explaining concepts such as higher educational change, psychological experience, facilitator, co-ordinator and RBL to a limited extent, as well as the changing society within which higher educational change takes place in South Africa.

This chapter conceptualises the RBL concept in more detail. Subsequently the rationale for RBL in order to meet the demands of higher education within a changing South African context, will be discussed.

3.2 PROBLEMS FACED BY HIGHER EDUCATION

Writers such as Gibbs *et al.* (1994) stated that the presence of a variety of pressures and changes in higher education (see 1.1 & 1.2) was one of the main reasons for many courses to adopt RBL. The same authors emphasised that some courses even adopted both open learning and RBL as if they are an end in itself. There are different forms of RBL and each one has a different purpose. Therefore, the user has to be clear about the purpose for which RBL is to be considered and which problems should be addressed. Gibbs *et al.* (1994) noted the following problems:

3.2.1   The increase of student numbers and class sizes

Massification has placed enormous pressure on various resources such as teaching accommodation, library facilities and staff time. Furthermore, course rationalisation and modularisation, due to budgetary cuts, caused students to be accommodated into larger classes (e.g. at the UOFS the RBLCPP has extended from 184 students in 1997 to approximately 566 students in 1998). This has led to restricted access of basic learning resources, in the class situation interaction is impossible and even seeing and hearing clearly is difficult. The same writers noted that RBL could provide alternatives to conventional library use, replace lecturers, prepare students for seminars and provide guidance for independent learning.

3.2.2   Increased student diversity

In the traditional learning mode the student population was more homogeneous which assumes that all the students learn the same facts at the same pace. Now the majority of students is heterogeneous and has differences in backgrounds (in especially mathematics and science), which caused conventional lecture programmes to be unsatisfactory. Therefore, more flexible RBL forms and less fixed teaching schedules were recommended to cope with heterogeneity (Higher Education Bill, 1997).

3.2.3   Limitations of library provision

The library cannot cope with the demand due to an increase in the number of students who cannot afford books as a result of the increase in the cost of books and journals and the decline in purchasing of their own books. Furthermore, the decrease in library space per student has caused even more limitations on the availability of resources. Simultaneously, teaching methods have changed to approaches such as RBL, which puts more emphasis on resources, and therefore complicates successful RBL implementation, due to limitations of library provision.

3.2.4   The reduction of funds and threats to quality

Gibbs *et al.* (1994) stated that resources were reduced and in response to reduced resources many departments used a very unstrategic and incremental method by cutting crucial course components. This resulted in a threat to continue with the support of quality in learning (Welch, 1998). They also noted that many context radical alternatives to traditional course delivery are vital if quality is to be rescued cost-effectively. Within the South African context, the quality concept remains a key issue. The South African Qualifications Authority Bill (1995), for example, views it as a necessity of enhancing education and training and the White Paper on Higher Education (1997) noted that RBL is necessary to improve quality.

3.3.   RATIONALE FOR RESOURCE-BASED LEARNING

The increase in student numbers, the growth of class sizes and limited funding available to students is a worldwide reality. Thus, traditional course design, delivery and support services have demonstrated severe signs of strain. Information resource specialist Patricia Senn Breivik (1992) makes the assumption that if education consists of only lectures and textbooks, you are unprepared for problem-solving in the current complex world. Farmer and Mech (1992) declared that a knowledge base alone is no longer efficient for individuals to cope in a swift changing world. The same authors emphasised the need for techniques to explore new information, connecting it with other information, synthesising and finally utilising it into the practice. Breivik (1992) continued with the dialogue on the importance of an information literate person and further articulates that information literacy abilities could be acquired through a change process from passive to active learning. The shift to active learning results in various methods, where RBL is one of these methods. According to Meade (1997) this paradigm shift can visually be demonstrated (see Figure 3.1 & 3.2).
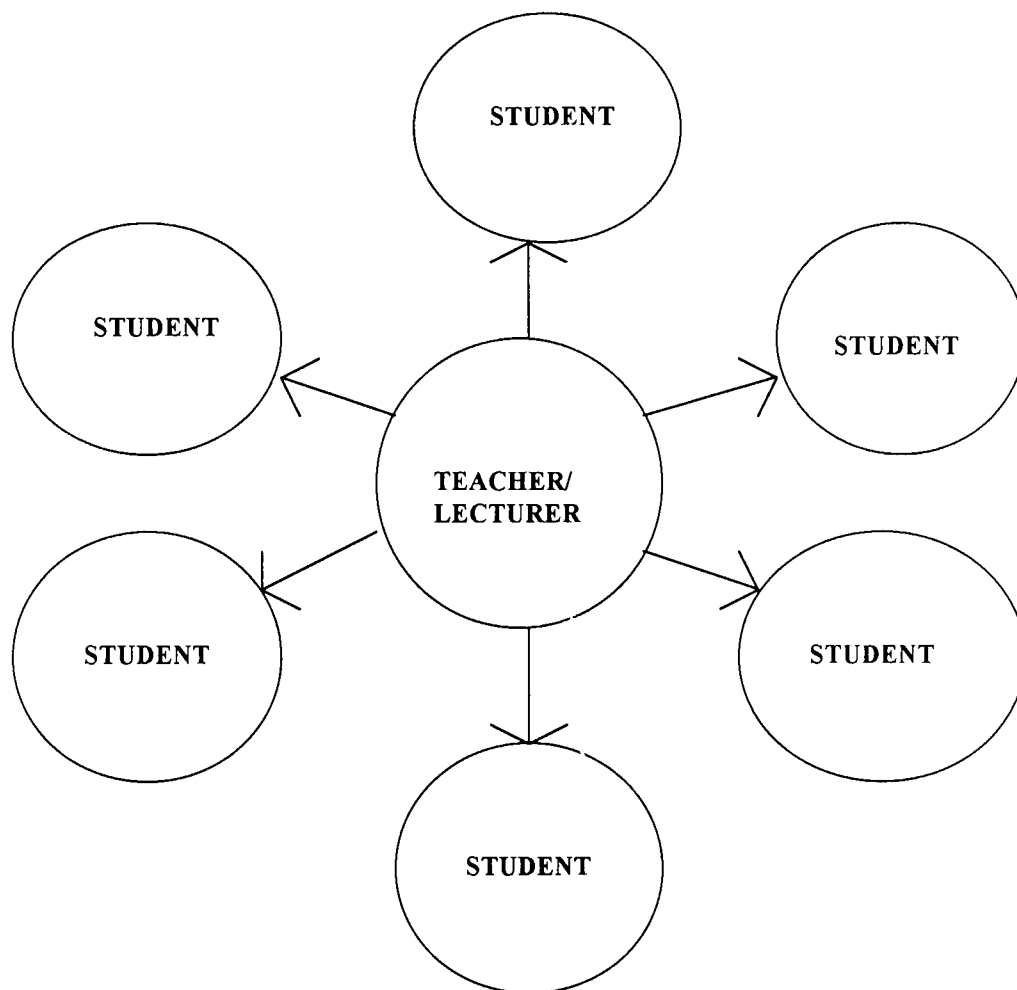
Figure 3.1: The traditional teacher-centred model

In a teacher-centred approach knowledge is amassed, students cluster around information and the teacher/lecturer (Meade, 1997). This writer also stated that according to this paradigm, learning is viewed in terms of teaching outputs (e.g. the curriculum is designed to ensure that teachers cover a certain amount of contents and that students spend a certain amount of time studying the contents. The limitations of the above-mentioned paradigm is that this approach is more inflexible and is likely to inhibit the development of lifelong learning skills that are recognised as the most valuable outcome of university education (Meade, 1997).
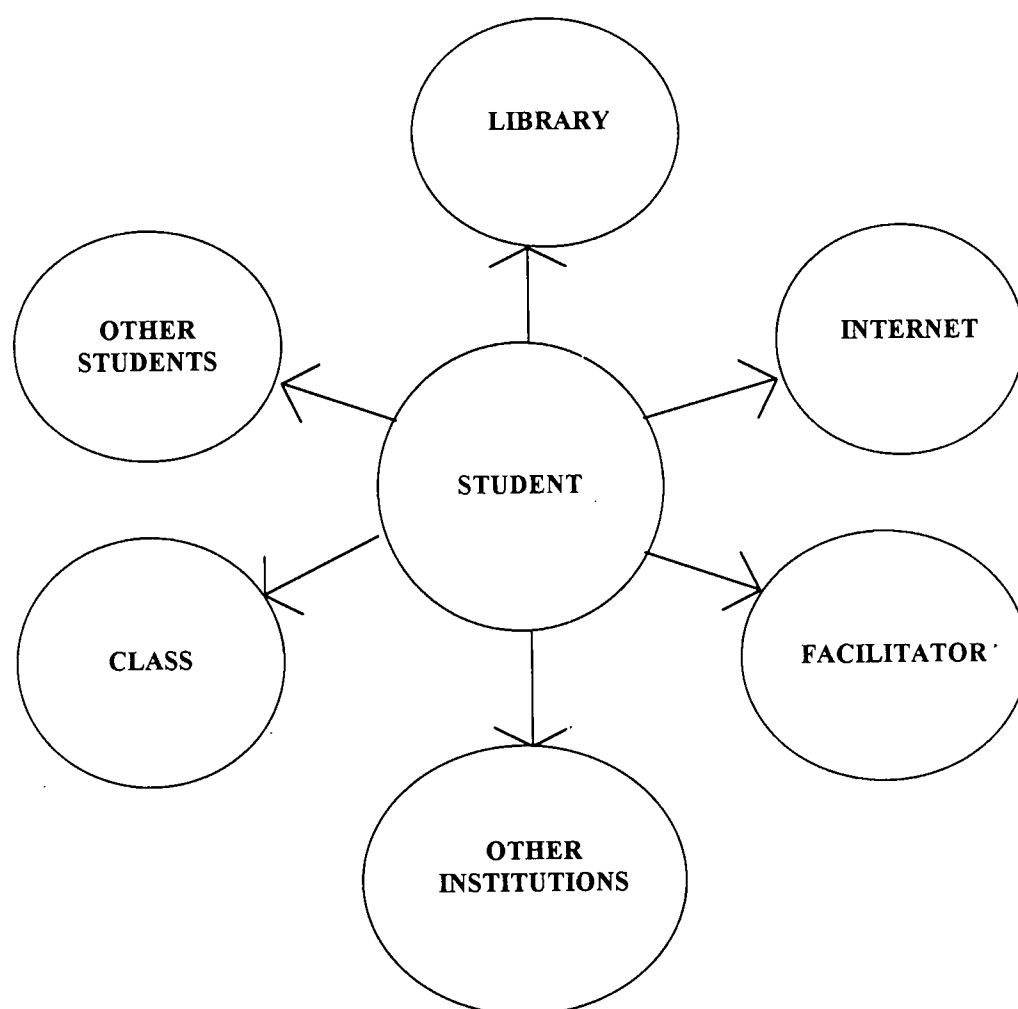
Figure 3.2 The learner-centred model

In Figure 3.2 it is evident that in RBL the student is in the centre of the learning process and all the other circles around the student represent resources of learning. Learner empowerment should involve a more equal relationship between the educator and the learner with the acknowledgement that the educator is not the sole provider of knowledge, but rather facilitating the learning process (Brown & Smith, 1996; Meade, 1997). Meade (1997) further argues that this paradigm puts the emphasis on learning outcomes. RBL, thus, tends to lead to the development of learning techniques (e.g. choose their own modes of study, work at their own pace and different ways to evaluate their effectiveness), which enable students to become lifelong learners (Brown

& Smith, 1996). Using the best **RBL** material can be a beneficial, practical and promising approach to higher education concerns raised earlier (see 3.2). This approach will also assist students to take responsibility for their own learning needs.

Taylor (1972, p.204) makes the following statement "I am taught by teachers, but I have learnt from books". It is clear from this syntax that the passive "I am taught" changes to the active "I learn", which demonstrates the paradigm shift from teacher-based learning to RBL. The former delivery mode is based on the teacher and requires support such as a physically constraining environment for the class with aids such as the blackboard and desk, sets of books for large groups, the time-table and period bells (Clarke, 1982; Brown & Smith, 1996; Welch, 1998). The student is taught and learns in a passive way. In contrast, the same authors stated that RBL is focused on learning and the aids required (e.g. Resource Centre), which represent a more active learning process. The challenge of creating, preserving and transmitting knowledge is now in the hands of the learner. In practice it implies that **student experience** is central in RBL where the teacher acts as an intellectual (Pence, 1992). Hence, the paradigm shift from teaching to learning implies that education staff demands transformation of the whole education system with RBL at its core. Although not everyone refers to the RBL concept when demanding change, the underlying principles such as active and independent learning, working at own pace, etc. are compatible.

Other important areas such as what is RBL, where it comes from and what problems in higher education led to RBL, will be addressed next.

3.4   DEFINITION OF RESOURCE-BASED LEARNING

The term **RBL** has several meanings. According to Beswick (1977) it means to some people **learning**, that is **closely sequenced, teacher-directed**, and **programmed**; but for others it is used for very open-ended work based on **enquiry** and **discovery techniques**, with a considerable element of student choice. The same author stated RBL as being an umbrella term, which includes a variety of possibilities or modes,

according to the temperament and professional decision of the facilitator and the circumstances of the subject matter, class and institution.

Gibbs *et al.* (1994) noted that RBL is difficult to define and therefore this broad definition namely, RBL is the use of mainly **printed materials**; written, collated or signposted by **tutors** and a substitute for some aspects of teaching and library use.

Brown and Smith (1996) describe RBL as **hard work**, with long-lead time, always involving more than one person, works well if a professional back-up team is available, and may involve blood, sweat and tears. The latter can have long-term effects such as the resistance of the facilitators towards the RBL innovation.

The core element is that students will learn through **direct confrontation** (individually or as a group) with a **learning resource** or set of resources and activities connected to them, rather than through the conventional exposition by the teacher (Beswick, 1977). The term RBL is used to cover a wide interpretation of learning based on different human, information and support materials (Slope, 1996). This broad definition also includes distance, open and flexible learning. In order to establish flexible learning programmes via RBL it actually describes an alternative to traditional education provision (Moore, 1996). This reflects the paradigm shift from teacher-centred to **learner-centred** approach, from a pedagogic approach to a **facilitative** one (Moore, 1996).

In the South African context, RBL appears to be one of the approaches that provides the basis for a new integrated education system. Such a system will align all possible delivery modes and have the capacity to support the entire system to address the urgent needs of the country.

RBL is not the only type of learning experience, but is regarded as a supplement to be added to the variety of educational life, rather than a substitute for which has traditionally been offered. Furthermore, RBL is not new, but RBL materials have been used for years to promote learning, called books (Brown & Smith, 1996). These

writers continue to argue although books will remain the most significant learning resource, and there has been an increase of using media such as open learning materials, study guides, textbook guides, workbooks, video or tape packages, etc. It is also evident that the teacher is not replaced, but given another strategy to implement learning (Beswick, 1977).

RBL is a broad term that has different meanings to different people. In order to address the confusion as regard the diversity of the RBL concept, the researcher has formulated a specific definition of RBL for the purpose of this study (see 1.1), which represents the perceptions of the researcher. As a result of the variety of definitions, the researcher formulated the following criteria of the RBL definition for the purpose of this study:

□ Changing the roles from information transmitter to facilitator where the student is an active learner and discoverer.

□ The emphasis is on the materials rather than on the deliver and the main aim of the material is to support independent learning.

□ Using new and a wide range of technology.

□ RBL actively involved the students in recognising the need for information, evaluating it, organising it and effectively using it to address problems.

□ Using various resources such as the facilitator, technology, learning material, etc.

□ Working as a member of a team where the co-ordination and collaboration between academics, educational and administrative staff are vital.

□ RBL is based on open-learning and distance education principles.

□ Managing students' access to resources.

□ Frequent feedback has to be built in.

□ Use appropriate assessment strategies that maximises the students' skills and knowledge.

Currently, RBL receives worldwide attention in the higher education context. This emphasises the value of this study, the direct improvement of the functioning of facilitators and co-ordinators within a RBL course. This may indirectly lead to the

restructuring of the RBLCPP and possibly ensure successful transformation in the South African higher education. In Chapter 1 prominent problems have already been identified that could complicate the implementation of RBL within the South African context (see 1.1 & 1.2).

3.5   TYPES OF RESOURCE-BASED LEARNING

Faced with higher educational problems (see 3.2), courses have to make increasingly use of printed-based learning resources as replacement or supplement for teaching and the library to support independent learning. The following main types of RBL are described by Gibbs *et al.* (1994, pp. 8-10):

3.5.1   Enhancements to conventional courses

In order to support out-of-class activities, specially prepared materials such as readers and resource centres could serve as supplements for lectures, seminars and laboratory sessions (Gibbs *et al.*, 1994; Brown & Smith, 1996). Readers actually consist of basic reading material, which would originally be too difficult or expensive for students to obtain, in order to prepare them adequately for seminars (Gibbs *et al.*, 1994). The same writers noted that one of the benefits of resource centres is for example to support a student-led seminar programme. It is true that the initial cost design may be moderate due to the fact that this model explored a variety of existing material. However, the provision of learning resources caused additional cost which based its justice on the maintenance and enhancement of quality (Gibbs *et al.*, 1994; Brown & Smith, 1996).

3.5.2   Lecture substitutes

Complete and accurate learning materials support out-of-class activities, encourage independent learning and prevent student passivity by serving as a substitute for lectures (Gibbs *et al.*, 1994).

3.5.3 Distance learning on campus

The provision of comprehensive and self-contained tutorials in print is much more cost-effective regards staff time and accommodation, but lower the usage of the library facilities (Gibbs *et al.* 1994). The same source stated that in contrast, the development of the above-mentioned learning packages and the use of computer-based testing and monitoring systems are very expensive, but in the long-term cost-effective.

3.5.4 Hybrids

The paradigm shift from conventional teaching to RBL demonstrates various hybrid systems, each one having its own emphasis, which fluctuates between class contact and learning resources as dual mode of delivery (Gibbs *et al.* 1994; Brown & Smith, 1996). These writers also noted that teaching and the library are mainly being replaced by teaching technology.

3.5.5 Self-pacing

Writers such as Gibbs *et al.* (1994) and Brown and Smith (1996) declared that the flexibility of RBL allows students to work at their own pace, and to be competent to select relevant material. These writers also argue that the above-mentioned is also an answer to the diversity problem. With regards to testing and tutorial advice, the RBL versions such as self-assessment, computer-based testing, peer tutoring and the employment of graduate assistants are much more economical (Gibbs *et al.*, 1994).

3.5.6 Substitutes for specific learning activities

Gibbs *et al.* (1994) stated that RBL could be used as a substitute for learning activities which could be difficult to staff to handle. These writers emphasised that the reason for this is that learning activities usually involve detailed instructions for activities as well as reading material and replaces visits, experiments, field trips or other first-hand experience. When computer simulations serve as substitutes for experiments, it could also cause substantial savings in laboratory and equipment use and staff supervision

time (Gibbs *et al.*, 1994; Brown & Smith, 1996). Devising print-based learning activities, can contribute to utilise learning hours more cost-effectively than writing out course contents (such as open learning materials), but computer simulations can be prohibitively expensive to produce (Gibbs *et al.*, 1994).

3.5.7   Support for learning activities

Individual supervision is expensive, but a detailed guidance and advice print could serve as a substitute and promotes independent learning (Gibb *et al.*, 1994). It is also evident from these writers that a guided independent study is one of the most successful strategies to cut teaching costs, save on lecture time, as well as improve the quality and consistency of learning outcomes.

The results of the comprehensive adoption of RBL have been the reduction of the number of lecturers and the teaching cost whereas the non-academic support staff numbers have increased as well as the broadening of their role (Gibbs *et al.*, 1994). In addition F.C. Marais (Personal communication, 28 November 1997) confirmed that in relation to the number of lecturers, facilitators have increased, due to the methodology of RBL where a facilitator-student relation of approximately 1 to 35 is recommended. The attempt by the RBLCPP to contribute to cost-effectiveness was the appointment of more facilitators, who are on lower job levels which make the programme more cost-effective in comparison with the appointment of one lecturer in a teaching-centred approach together with the fact that it causes a decrease in the number of students per facilitator.

3.6   ADVANTAGES VERSUS DISADVANTAGES OF RESOURCE-BASED LEARNING

3.6.1   Advantages

Authors such as Keller (1974), Gibbs *et al.* (1994) and Radloff, Fox and Herrmann (1997) reveal the following advantages of RBL:

❑ A good student-facilitator relationship is formed.

❑ Adapts to the different rates at which students learn.

❑ The students are likely to become more self-motivated, independent learners.

❑ Is more flexible.

❑ Once set-up, it is easy to run.

❑ Access to a wider range of learning resources.

❑ Increases independence (benefiting part-time students).

❑ Thoroughness of planning (learning materials have to be more structured and comprehensive).

❑ Consistency of approach (where facilitators change regularly, resources such as seminar guides could standardise the approach and result in a shared understanding of what to cover and how).

❑ Focuses on active learning rather than teaching (e.g. what students need to do to learn instead of what the teacher needs to do to teach).

3.6.2. Disadvantages

In contrast with advantages, writers such as Keller (1974), Gibbs *et al.* (1994) and Radloff *et al.* (1997) are also aware of the disadvantages of RBL:

❑ Students ignore lectures.

❑ Unsuitable for immature students.

❑ Problems with administration and facilitators.

❑ Reading slower than listening.

❑ The initial effort required is time-consuming.

❑ Students may not know how to learn from resources or dislike the learning from resources.

❑ One may have access to resources, but the support given is limited.

What emerges from the above advantages and disadvantages, within a South African higher educational context, is that the country requires to consider carefully how RBL should be implemented. In essence, the full-blown implementation of RBL looks daunting, even impossible, given the abilities of facilitators/students and the available

resources/funding. It is, however, possible to work towards RBL gradually, through a series of stages, each one building on the last and incorporating additional features as experience is gained. This is very crucial, due to the fact that by using RBL for course delivery, it will have tremendous high pay-off such as enhancing the learning process, providing benefits for staff and students and encouraging students to develop abilities that will lead them to become lifelong learners.

3.7   PREREQUISITES   FOR   THE   SUCCESSFUL IMPLEMENTATION OF RESOURCE-BASED LEARNING

According to Brown and Smith (1996) RBL uses facilitators, accommodation and learning resources in new ways, but several of the institutional infrastructures block developments in resource-based learning (e.g. if a single lecturer wants to introduce resource-based learning, he/she might realise that the development of the course takes longer than expected, leaving no development time, the department would assume that developing a course is part of a lecturer's normal task which he/she has to do additional to his/her teaching and administrative tasks). Therefore, it is not enough to have the initiative of enthusiasts on small-scale local innovations, but in order for resource-based learning to become widespread and soundly integrated, the institutional infrastructure needs to change. This refers to an internal factor (i.e. organisational change) which is the primary responsibility of the top structure (Labuschagne, 1995). Brown and Smith (1996) stated possible implementation strategies such as:

❑ **Explicit policy**

The NCHE (1996b) and The White Paper on Higher Education (1997) have made explicit policy statements regarding RBL as the new delivery mode. These policy statements include the ministry's encouragement of developing RBL materials to improve quality and cost-effectiveness. According to Brown and Smith (1996) it has been assumed that action will follow policy transformation, but there is little control or central support to make the implementation swift and comprehensive.

❑ **Integration of central support services**

According to Brown and Smith (1996) large-scale organisation includes the integration of library and other support services such as computing, study skills, audio and visual equipment, etc. The same writer emphasised the fact that the University of North London uses learning centres to integrate the learning support services. Certainly, the above-mentioned approaches improve the learning environment.

❑ **Forced change**

The reallocation of key facilities, such as teaching space for learning space or learning centres which prevent conventional teaching, are ways which force change (Brown & Smith, 1996). While this allocation may produce rapid change it tends to be centrally imposed and may precede staff development or detailed strategies to cope with the change. According to Evans (1990) personal involvement with the changing process is necessary to decrease anxiety, uncertainty and resistance. This once again emphasises the relevancy of this study, namely to look at the psychological experience of facilitators and co-ordinators due to higher educational change.

❑ **Single solutions**

Brown and Smith (1996) state that institutions that express a commitment to a single solution or teaching technology (e.g. open or computer-based learning) demonstrate major investment in extensive and sophisticated learning production material facilities and expert teams.

❑ **Bottom-up support**

The above-mentioned possibly includes staff development, educational development constancy, sharing best practice, reward (i.e. promotion) for

innovation, funding for development projects and improvements in facilities for lecturers to produce their own materials (Brown & Smith, 1996). The same writers emphasised that, although this could be a challenge or provide more clear direction, the unsupportive infrastructure could slow down the change process.

❑ **Developing students as independent learners**

One of the main aims of resource-based learning is to guide students towards independent learning via the use of resources to broaden their learning base (Haycock, 1991). This writer emphasises the fact that the initiatives of independent learning have to be built into these programmes that require regular reinforcement in order to have any impact.

❑ **Devolving budgets and providing course costing information**

Cost-effectiveness is a priority factor in the South African Higher Education band. Unfortunately, internationally the link between budgetary and performance pressures and quality delivery has not successfully been demonstrated (Welch, 1998).

The above-mentioned strategies demonstrated the complexity of implementing RBL.

3.8 IMPLEMENTING RESOURCE-BASED LEARNING IN THE RBLCPP AT THE UOFS

The RBLCPP started in 1997 as an access pilot programme to further studies in higher education via a four-subject package (i.e. English, Mathematics, Sociology and Foundation Course in Lifelong Learning) offered at the Bloemfontein College. It was developed by the Strategic Services of the UOFS in co-operation with the South African Institute for Distance Education and participating institutions (Bloemfontein College and Hillside View College).

In order to be accepted at university level, the students are required to pass at least one of the university-credited subjects (e.g. in the three fields of study such as Economic and Management Sciences, Human and Social Sciences or the Natural Sciences), attend at least 75% of the Foundation Course in Lifelong Learning sessions and achieve at least a year mark of 40% as well as an examination mark higher than the year mark in Computer Practice and/or Communication.

In 1998 the programme was extended to a ten subject package (i.e. English, Sociology, Psychology, Mathematics, Chemistry, Economics, Accounting, Public Development and Management, Industrial Psychology, as well as a compulsory Foundation Course in Lifelong Learning for all the students) offered by means of resource-based learning. During this expansion the student numbers also increased from 185 to 566.

The facilitators and co-ordinators of this programme mainly received theoretical and practical training via workshops that were conducted by SAIDE. The Academic Development Bureau's Learning Facilitators Training package, that consists of a handbook and a supplementary video, was available for additional training. This training instrument aims towards the improvement of learning and understanding facilitating, clarifying the facilitator's role, working through negative feelings towards this role and develop sensitivity towards a diverse student population. Support and guidance were provided through the staff of Strategic Services, the staff of SAIDE as well as class visits in order to monitor facilitation.

In 1999, the programme will be expanded even further to include at least two other learning centres at Kimberley and Bethlehem.

3.9   CONCLUSION

Learning is a transformational journey where one adapts to the world around one. In the current era a key challenge is to be equipped to adapt to rapid and continuous change.

It seems as if RBL is here to stay as one of the means one has available for course delivery. This chapter therefore succeeds in meeting the second specific research aim namely to conceptualise RBL as a new learning methodology.

It is also important to consider the strains such as infrastructure blockages for implementing an innovation as well as the psychological experiences. This study demonstrated that the successful implementation of RBL within the South African context could be harmed by prominent problems (see 1.1). In order to implement RBL successful in South Africa, it is vital to learn from the above-mentioned, which complicates the implementation, but does not make it impossible.

Although there is no single solution for the transformation of the higher education band available, RBL can have enormous benefits such as enhancing the learning process for both facilitators and students as well as encouraging lifelong learning.

In the next chapter the facilitators and co-ordinators in a RBL programme will be discussed.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2	Chapter 3	Chapter 4
THE CONCEPTUAL ORIENTATION OF CHANGE	**RESOURCE-BASED LEARNING AS A NEW LEARNING MODE**	**FACILITATORS AND CO-ORDINATORS IN A RBL COURSE**

PART 2

Chapter 5

THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY

Chapter 6

RESEARCH METHODS AND PROCEDURES

Chapter 7

QUANTITATIVE RESEARCH RESULTS

Chapter 8

QUALITATIVE RESEARCH RESULTS

Chapter 9

TRIANGULATION RESEARCH RESULTS

Chapter 10

CONCLUSION AND RECOMMENDATIONS

FACILITATORS AND CO-ORDINATORS IN A RESOURCE-BASED LEARNING COURSE

4.1 INTRODUCTION

A sudden changeover to RBL is complex, due to the fact that it causes different cognitive and affective experiences within facilitators. Clarke (1982) argues that educational change could be unpopular, it can even be potentially traumatic for the staff involved and it can also be stimulating or potentially rewarding. Therefore, it is evident that individuals respond differently to the same event. Mahoney (1991) noted that human experiences are affected by the following three domains:

Cognition

Affect   Behaviour
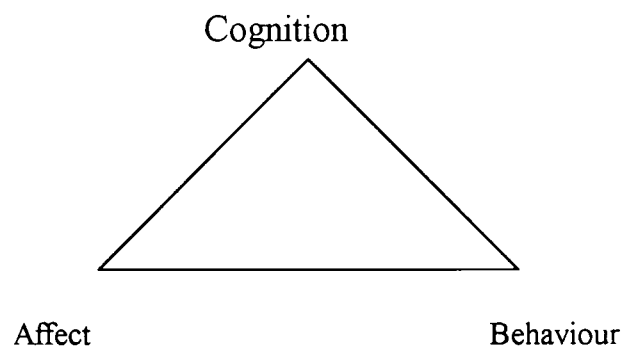
Figure 4.1: The three domains of human experience

The three above-mentioned domains are defined by Plug *et al.* (1993) as follows:

- *Cognition:* All the processes through which the human achieves knowledge regarding an object, or becomes familiar with the environment for example by observation, recognition, reasoning, judging, learning and thoughts.

- *Behaviour:* Anything that a human does, which could refer to a specific action on a response or action in general.

- *Affect:* An emotion that immediately leads to observable behaviour.

The relationships among these three domains have vigorously been disagreed on (Mahoney, 1991). This writer stated that behaviourists have favoured behaviour as the primary force in human experience and thus argued that changes in motoric activity produce changes in attitudes and affect, cognitivists support thought as the primary force of human experience and humanists have asserted that the primacy of emotionality is driving the other two realms. Cognition, affect and behaviour are therefore also the core aspects of the psychological functioning of an individual. Furthermore, there exists an inter-relationship between the cognition, affect and behaviour domains in any human experience. When change (e.g. higher educational change as in this study) takes place, it has an effect on all three domains within a human (e.g. on facilitators and/or co-ordinators as in this study) and therefore effects the RBLCPP, which is an example of a RBL programme.

The success of any educational project depends primarily on the caliber of the staff involved. In support of the above-mentioned statement The Worldbank's (1994) view was that good quality staff and a supportive professional culture are essential for a successful educational programme. This emphasised the need to investigate the psychological experience of higher educational change on the facilitator and co-ordinator, which could possibly lead directly to the improvement of the functioning of the staff and indirectly to the improvement of the RBLCPP. This study also strives to enhance the RBLCPP's chances of success.

Next the role of facilitators and co-ordinators in a RBL course will be conceptualised.

4.2   ROLES OF THE FACILITATOR

The role of the facilitator entails a variety, namely that of an expert, friend, helper and learner (Taylor, 1997). The Academic Development Bureau (1998) noted that the following three dominant roles of a facilitator are usually adopted:

- **Authoritarian/Hierarchical role:** The facilitator is representing the expert/authority/specialist who is making the rules and does all the talking. Within such a situation students are passive and want to be spoon-fed.

- **Co-operative role** encourages interaction, shares responsibility and co-operation during discussions and debates in order to find solutions.

- **Autonomous role** implies that matters are the responsibility of the entire group. Assistance will only be given when the group goes astray or when no noticeable progress is made.

Although the authoritative role is more a characteristic of teaching than facilitating, the facilitator could be pressurised to be the authority, due to factors such as large groups, limited time available to transfer knowledge, difficult content, etc. Neither of the above-mentioned roles are intrinsically better than the other, but rather reflects the politics of learning or the power of management in the different areas of experience (Taylor, 1997). These roles can be utilised interchangeable for example, in order to outline the topic and expected outcomes at the beginning (**authoritative role**), being in the **co-operative role** during discussions/problem-solving and the **autonomous role** can be prominent during summarising or providing their own solutions. Facilitators should be aware of the above-mentioned beforehand. Therefore, a vital skill for any facilitator to learn is to react on the demands of the situation and mainly focusing on encouraging co-operative, independent and autonomous learning (Academic Development Bureau, 1998; Taylor, 1997).

Brown and Smith (1996) argue that staff and educational developers are playing the key roles in implementing RBL successfully. Thus, the facilitators and the co-ordinators could be regarded as the key people to ensure successful implementation of

the RBLCPP. According to The Open University (1995) the task of the facilitator could be demonstrated as follows:

Learning Task

Facilitator

Individual Needs

The Group Process
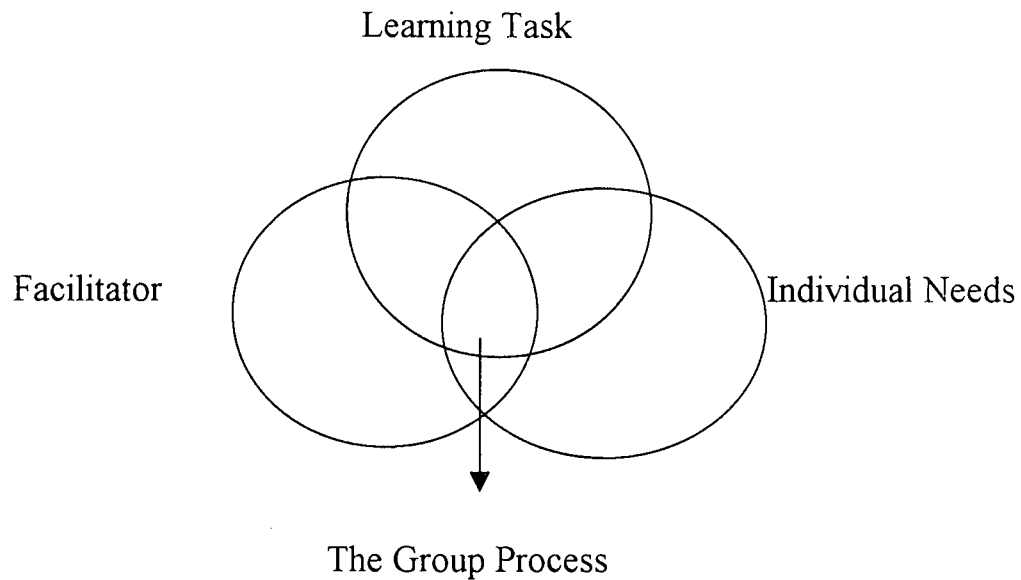
Figure 4.2: The facilitator's task

Figure 4.2 brings to the fore that the facilitator has the task of facilitating learning, which is a very complicated task, *inter alia* due to the fact that people differ in various ways for instance the preference of a learning method (Robson & Beary, 1995). Traditionally, the responsibility of learning was with the teacher, but a much more fruitful approach (e.g. RBL) places the responsibility on both the facilitator and customer/student (Brown & Smith, 1996). Boud, Keogh and Walker (1993) refer to the task of the facilitator as planner, evaluator, resource and instrument for action/change. These writers also viewed the facilitator as an instrument of change as particular helpful in professional education. It is clear from the above-mentioned figure that the facilitator's role is central to the learning process. Secondly, it is important to recognise that facilitating tends to be more powerful than generalised learning, and therefore ideally one should tailor one's approach to the specific learning needs of an individual (Robson & Beary, 1995). This could be demonstrated when the facilitator, as practitioner, has the role of identifying the learning need, planning an experience to meet that need, assisting the learner to comprehend and learn from experience and finally to work in collaboration with the learners to assess the learning

that has been achieved. According to The Open University (1995) this is leading to a continuous training cycle of the facilitators (see Figure 4.3).

Identifying training needs
LEARNING OBJECTIVES

Evaluating training outcomes
ASSESS/EVALUATION

Plan & design training
SESSION PLAN

Deliver training
LEARNING PROCESS
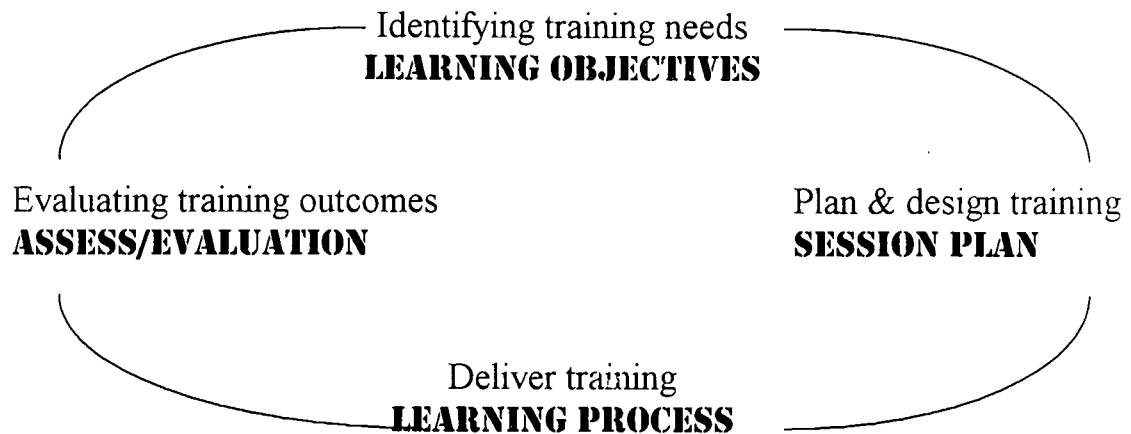
Figure 4.3: Training cycle

According to the above-mentioned, it seems imperative that the training of the facilitators should receive attention. Thirdly, Robson and Beary (1995) admitted that the management of the group process (as identified in Figure 4.2) is fundamental to success, due to the fact that 95% of the problems are caused by a lack of understanding group dynamics. These writers further argue that facilitators are interested in their customers' achievement of the learning task, and therefore expert facilitators will utilise the reservoir of knowledge, tools and techniques that have been developed to assist people to comprehend the way a group works and how to improve performance. Fourthly, what is fundamental to the effective performance of the facilitator's role is the notion of helping (Figure 4.2). This implies that the ownership of the agreed actions, the actions themselves and the credit for them, lie with the customers - not the facilitators.

The Open University (1995) also noted that learning is a transformational journey where one adapts to the world around one. In addition, the Academic Development Bureau (1998, p.13) noted that in order to succeed in RBL, the following prerequisites are vital for facilitators:

□   To be well-organised.

❑ To be positive and enthusiastic.

❑ To be empathetic.

❑ To have high, but reasonable expectations.

❑ That the facilitator-student relationship must be trustful and respect is present.

❑ To have good facilitation skills such as listening, questioning and responding.

Due to a paradigm shift to RBL, Brown and Smith (1996) noted that staff, library and support staff, have to comprehend the nature of RBL, before they would be able to reconceptualise their roles.   Thus, the success of the facilitators role depends on regular training and support in order to implement RBL to the best of their ability and for the good of institutions and academics.

Bitzer and Pretorius (1996) as well as Brown and Smith (1996) identify the new roles of lecturers as facilitators and no longer knowledge transmitters.   Changing to the facilitator's role, implies the increase of learner-centred strategies as well as the increase of flexibility in teaching methodology (Dixon & Woodhouse, 1996).   This paradigm shift to RBL has also various other implications for the role of the facilitator as demonstrated in the next table by Bailey (1992):

Table 4.1: The paradigm shift from teacher to facilitator

TEACHER	ISSUE	FACILITATOR
*Key relationship is with specialist knowledge. *Defined role.	**LOCUS OF CONTROL**	*Key relationship is with the learner. *Open-ended role.
*Works with a transmission model of learning. *Emphasis is on theoretical knowledge. *Focuses on cognitive domain and skills. *Talks most of the time.	**LEARNING METHOD**	*Works with a developmental and transformative model of learning. *Helps the integration of theory and practice. *Focuses on the experiential approach (cognition, connotation, affect).
*Classroom-focused. *Works within relatively fixed pace and timetable. *Mainly face-to-face.	**CONTEXT AND MEDIA**	*Works flexibly. *Possibly mixed-mode and multi-media.
⇐Institution-centred	⇔	**Learner-centred ⇒**

From Table 4.1, it can be deducted that there exists a distinctive difference between the role of the facilitator and the teacher's role. It is also evident that the facilitator is within a learner-centred approach where the emphasis is on learning rather than teaching.

In the RBLCPP the tasks of the facilitator are summarised in his/her job description (see Appendix D). According to the South Africa Institute for Distance Education (SAIDE) Report (1997), the facilitators tend to have a lack of clarity of their job descriptions (i.e. what is implied by managing the learning requirements effectively, etc.). The lack of clarity as a result of educational change may have a psychological effect on the facilitator, due to the fact that RBL is a new innovation which implies less clarity and less certainty as regards the implementation of RBL.

4.3   ROLES OF THE CO-ORDINATOR

The role of the co-ordinator is best described in the job descriptions (see Appendix D). A co-ordinator is a person with a post-graduate qualification and is a subject expert. In addition, the co-ordinator has to be familiar with the RBL principles.

Within the co-ordinator's role the following tasks are included:

❑ Has to be updated with the course material, learning outcomes and different ways of facilitation (utilising and dissemination function).

❑ Be responsible for the orientation and training of facilitators (advisory function).

❑ Serves under the head of department as an intermediate between the Strategic Service within the RBLCPP and the facilitators (co-ordinating function).

❑ Be responsible for the management of the programme within a certain department (controlling function).

❑ Be responsible for the development/re-development of course material (a design function).

❑ Has to monitor the progress of the programme (evaluation function).

❑   Attends and observes contact sessions and provides assistance if needed (Clarke, 1982).

In the RBLCPP at the UOFS it is also expected from the co-ordinators to act as facilitators for at least one year to become acquainted with the world of work of the facilitators (F.C. Marais, personal communication, 28 November 1997).

4.4   DILEMMAS OF FACILITATING

In the shift from teaching to RBL, facilitating is the new learning method (i.e. to both facilitators and co-ordinators). This new approach has been introduced to overcome the deficiencies such as being unable to retain knowledge for future use, not being skilled to apply theory in practice and other higher educational problems faced in South African context (see 3.2). In spite of the advantages of RBL (see 3.6.1), the implementation of RBL is faced with various problems:

4.4.1   Student-led versus professional-led learning

The central objective of RBL is to facilitate independent and interdependent learning that defines student learning (Heron, 1989; Robson & Beary, 1995). The main concern with regard to RBL is to follow a checklist approach that is too prescriptive and therefore risk dictating what and how to learn (Robson & Beary, 1995; Taylor, 1997). On the other hand, when facilitators leave everything in the hands of the students, the possibility exists that the students would not reach their aims. This stresses the role of the facilitator of encouraging different learning methods, whereas the facilitator is also responsible for providing students with an overview of the course as a whole and how it links in relation with the profession (Robson & Beary, 1995; Taylor, 1997).

4.4.2   Facilitating personal, process or propositioning learning

Taylor (1997) stated that the importance of the facilitating role is due to the fact that it enables students to form links between personal, process and propositional knowledge.

He also emphasised that in order for the facilitator to manage the competing demands, he/she has to:

❑ Establish a climate of trust.

❑ Contain difficult feelings.

❑ Link the different knowledge fields.

From the above-mentioned it can be deducted that the socio-emotional context of learning is vital (Boud *et al.*, 1993). In order to establish a trustful climate, the facilitator has to establish ground 'rules' of working together (Brown & Smith, 1996). Whereas the containing feelings imply to provide students with feelings to describe personal experience (Taylor, 1997). Robson and Beary (1995) added that an important facilitative behaviour is to create empathy, which puts the facilitator on the same wavelength as the student and breeds a feeling of comfort and confidence. In order to link the different knowledge fields, facilitators assist group members to comprehend an experience and make sense of it (Brown & Smith, 1996).

4.4.3   The facilitator as supportive or critically reflexive

Only if the students feel supported and valued by the facilitator, they would be able to express their own needs and interests (Taylor, 1997). Robson and Beary (1995) refer to the latter as genuineness. The importance to give critical feedback within a supportive learning climate has also been emphasised (Taylor, 1997). Robson and Beary (1995) admitted the importance of being precise and specific during feedback.

Diversity within a group could lead to tension and conflict where the role of the facilitator is to be responsible for normalising the process and has strategies ready to deal with the conflict (Brown & Smith, 1996). Robson and Beary (1995) added that a facilitator has to be able to highlight the muddled, dishonest and inappropriate thinking and then confront it without provoking defensiveness or a loss of ownership.

4.4.4   The expertise of facilitators

Taylor (1997) stated that the norm in higher education is to view the teacher as the expert who spoon-feed the subject expertise to students. It has also been argued that

in independent learning the focus will be on facilitating experts rather than subject expertise (Brown & Smith, 1996). Robson and Beary (1995) as well as Taylor (1997) pointed out that the two main concerns for staff are high levels of anxiety caused by facilitators being unsure whether students are on the right track and the risk of withholding subject expertise that is experienced by students as playing games.

Having discussed the dilemmas of facilitating, the focus will now shift to the psychological experience of higher educational change on the facilitator and co-ordinator in a RBL course.

4.5 THE PSYCHOLOGICAL EXPERIENCE REGARDING HIGHER EDUCATIONAL CHANGE OF FACILITATORS AND CO-ORDINATORS IN A RESOURCE-BASED LEARNING COURSE

According to the Gestalt psychology theory, all humans have the abiliy to have their physical and psychological needs met (Knight & Scott, 1997). The same writers emphasised that this can be demonstrated in Figure 4.4 where physical and psychological needs are met within the Gestalt cycle.

Need emerges

New situation

Awareness of need

Contact and satisfaction of need

Organised action to meet need
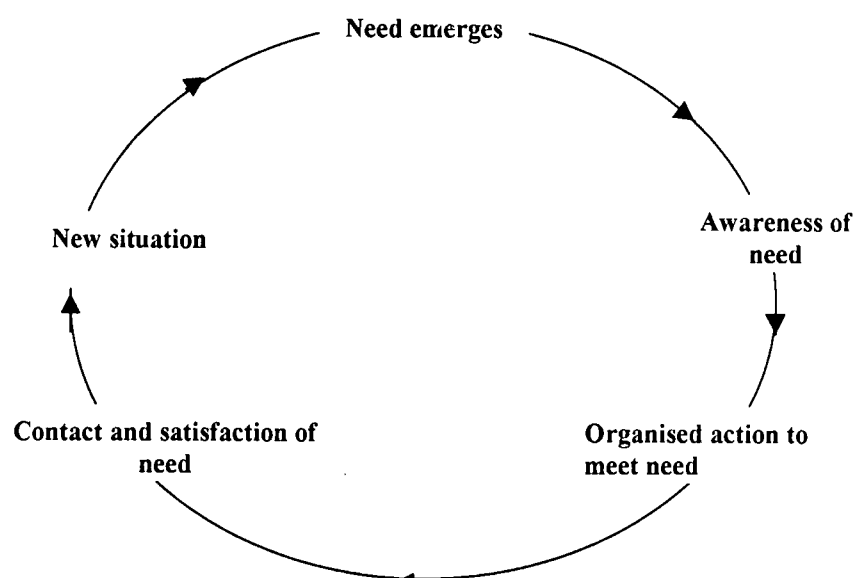
Figure 4.4: The Gestalt cycle

All facilitators experience emotional and psychological needs during their facilitative relationship such as approval, love, recognition, companionship, stimulation, interest, acceptance and communication (Knight & Scott, 1997). These writers also argue that if a need is not met, it remains unsatisfied and disturbs the healthy pattern of emerging needs which may restrict the development of the facilitator's practice and inter-relationships. The above-mentioned emphasised the need to investigate in the psychological experiences of facilitators and co-ordinators.

The theme, educational change, in South Africa became a reality with the introduction of the NCHE (1996b) and the Higher Education Act (1997) that promote RBL as a new delivery mode. For most of the role-players in education the implications of these are unknown and fear-provoking, since change in itself implies the entering of unknown territory. The following psychological reactions (both positive and negative), due to higher educational change, have been identified:

- higher educational change which caused for example the loss of jobs are situations which are potentially traumatic or a threat to survival (Beswick, 1977; Clarke, 1982),

- changes in higher educational practices are unpopular and/or may cause resistance (Clarke, 1982),

- higher educational change could even be stimulating, challenging or rewarding where learning methods have been improved (Clarke, 1982),

- higher educational change causes inner conflict within participants as regards the positive versus the negative outcomes of the change process (Stenhouse, 1975; Robson & Beary, 1995).

According to Basil and Cook (1974) the following psychological and economical threats, due to change, were identified:

- insufficiency, both economical and psychological, where the necessary abilities to keep a remaining job or find a new one, are absent;

❏ lack of development opportunities, when doors closed due to inappropriate qualifications;

❏ loss of a job, and therefore the economical and psychological impact;

❏ a lack of self-worth that may lead to depression and possibly to carelessness and recklessness.

Change, with special reference to higher educational change (see 2.2.2), causes different emotions within different individuals, because some will associate it with anxiety and fear, whereas others will view it with hope and as a solution (Kirkpatric, 1985).

The concept 'change' means **positive, negative or neutral emotions, attitudes, reactions and behaviour** (Owen, 1992). The researcher differs from the above-mentioned writer as regards the existence of neutral emotions, attitudes, reactions or behaviour, because when an individual decides to be neutral, he/she already has made a decision/choice. The change process usually proceeds through a series of stages and the higher education band is no exception (Halpern, 1994). By implementing the RBL innovation, higher educational change would also cause the facilitator and co-ordinator to experience the stages of change. Halpern (1994) noted that the stage of change is often based on Kübler-Ross's (1969) stages of grief reactions namely:

Denial

In this first stage, the level of involvement will fluctuate between the advocate ("That sounds good - in theory") and adversary ("You can't make me") on the continuum. Feelings of uneasiness and ambivalence are present during this stage.

Resistance

Kübler-Ross (1969) called it the fussing and fuming stage. It appears that initial change efforts tend to be unorganised and the individuals feel at risk at the beginning of the innovation and start questioning it (e.g. Why should I change?, What is in it for me?, Who's behind it, anyway?) Feelings of diffuse, unfocused

	anxiety precipitated by a perceived threat or anger is often expressed in terms of not having the time or resources to engage in this new innovation.
Understanding	When the energy of resistance is moving to a more positive and affirming direction of understanding the potential development of the innovation. Although still sceptical, the individual will become more positive towards the innovation (e.g. promoting/planning).
Campaign	This is Kübler-Ross's paradigm stage where the individual starts demonstrating to let go of the past and start moving towards the future. Attitude fluctuates between eagerness and moving ahead or to be reluctant/unsure of this action.
Collaboration	Acceptance is the main characteristic of this stage. The individual is now confident that this innovation can work for the good.
Institutionalisation	The general opinion of the innovation is one of consensus. Supporting this new innovation enables the individual to listen to conversations and take part.

The above-mentioned stages must be individualised to some extent. These stages of Kübler-Ross (1969) allow variations, yet capture the commonalties of the psychological experiences of higher educational change. Higher educational change also causes certain concerns as regards a new innovation such as RBL in this study (see 6.3.5.2.c). The above-mentioned stages also indicated certain cognitive and affective experiences as regards the following feelings and attitudes such as uneasiness, ambivalence, diffuse, unfocused anxiety, resistance, acceptance, consensus, etc.

4.6   CONCLUSION

In conclusion, it is evident that the paradigm shift to RBL is complex and individualised. The identification of the psychological experience of RBL on the facilitator and co-ordinator will not only help with the prevention of certain

psychological reactions, but will also identify strategies to cope more effectively with the RBL innovation. In this chapter the third specific research aim has been accomplished.

This chapter summarises the main focus of this study and is also the end of the literature review, which will serve as the foundation for the statistical analysis.

Outline of study:

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                    │     Chapter 1       │
                    │                     │
                    │    INTRODUCTION     │
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PART 1

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┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐
│    Chapter 2     │  │    Chapter 3     │  │    Chapter 4     │
│                  │  │                  │  │                  │
│  THE CONCEPTUAL  │  │  RESOURCE-BASED  │  │ FACILITATORS AND CO- │
│ ORIENTATION OF CHANGE │ │ LEARNING AS A NEW │ │ ORDINATORS IN A RBL │
│                  │  │  LEARNING MODE   │  │     COURSE        │
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PART 2

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        ┌──────────────────┐  ┌──────────────────┐
        │    Chapter 5     │  │    Chapter 6     │
        │                  │  │                  │
        │   THEORETICAL    │  │ RESEARCH METHODS │
        │  FOUNDATION OF   │  │  AND PROCEDURES  │
        │ RESEARCH DESIGN AND │ │                │
        │   METHODOLOGY    │  │                  │
        └──────────────────┘  └──────────────────┘

┌──────────────────┐ ┌──────────────────┐ ┌──────────────────┐
│    Chapter 7     │ │    Chapter 8     │ │    Chapter 9     │
│                  │ │                  │ │                  │
│  QUANTITATIVE    │ │  QUALITATIVE     │ │  TRIANGULATION   │
│ RESEARCH RESULTS │ │ RESEARCH RESULTS │ │ RESEARCH RESULTS │
└──────────────────┘ └──────────────────┘ └──────────────────┘

        ┌──────────────────┐
        │    Chapter 10    │
        │                  │
        │  CONCLUSION AND  │
        │ RECOMMENDATIONS  │
        └──────────────────┘
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Chapter **5**

THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY

5.1   INTRODUCTION

This chapter represents the rationale for the procedures and methods that were used to identify the psychological experience of higher educational change by the facilitators and co-ordinators in a resource-based learning course.   The chapter elaborates on the use of a combination of qualitative and quantitative research methods, which is called methodological triangulation (see 1.4 & 5.3.1.2). The term **triangulation** is more than just multi-methods of investigation and also more than one type of data, which would later be discussed in detail (see 5.3.1).

Worldwide there is a controversial debate amongst researchers on the dual approach, which implies the inclusion of both qualitative and quantitative methodologies (Brannen, 1992; Banister, Burman, Parker, Taylor & Tindall, 1994). Researchers such as Brown and Dowling (1998) argue that it is important and of considerable interest to old and new researchers to use multiple methods. The fact that phenomena in social sciences are so enmeshed (as in this study), supports the multi-method approach, which increases the understanding of human nature and social reality in their full complexity.

With reference to the research design, this qualitative research study represents a dual approach including both process and formative evaluations. In this study, the process evaluation represents a detailed description of the experience of educational change. This study will also try to demonstrate that the educational change process differs amongst facilitators and co-ordinators, that the educational change process is dynamic and fluid, and that the psychological experiences of facilitators and co-ordinators regarding the educational change processes is the key consideration. Formative evaluations primarily focus on programme improvement of the RBLCPP based on the processed data.

5.2   CONCILIATION OF QUALITATIVE AND QUANTITATIVE RESEARCH

5.2.1   Qualitative versus Quantitative Research

Writers such as Brannen (1992) as well as Brown and Dowling (1998) stated that the distinction between the two paradigm frameworks lies within the specific epistemology, theory and method used. These writers further argue that researchers soon realised that the practice of research is sometimes messy and untidy and almost never conforms to the models as prescribed in methodology textbooks and therefore recommend the combination of quantitative and qualitative approaches to improve the reliability of observation.

Brannen (1992) stated that researchers who oppose the combination of qualitative and quantitative approaches, usually refer to the following constraints:

❑ the choice of research methods are determined by the funding context (for example the requirements of the funders, the researchers' perception of the funders as well as what the funders expect the researchers to provide);

❑ the established preferences of policy makers regarding what appropriate data and methods are;

❑ the constraints within the academic community where you rarely find a researcher to be equally competent in both qualitative and quantitative methods;

There also exist tension and confusion with some South African human scientists as regards the distinction between and appropriateness of **quantitative** and **qualitative research** (Lötter, 1995). In the past the qualitative/quantitative distinction was viewed as two discrete poles of a continuum. Lötter (1995) declared that the qualitative/quantitative distinction is rather a complex continuum that should not be seen as two discrete poles, but rather as fine grade differences between the two poles that will never completely be resolved. The researcher feels that every research project is unique and that it is the responsibility of the researcher to convince the science community, based on own merit, that elected research methods and procedures have been correctly applied. Such a judgement is scientific, rather than the view that by using or not using a certain method or technique, the results automatically will be scientific or not. For the purpose of this study both qualitative and quantitative methods are appropriate. For example where the **aim of qualitative research is to understand and interpret the meanings and intentions that underlie daily human actions, the aim of quantitative research is to explain human behaviour in terms of universally valid laws and generalisations or is concerned with the search for facts** (Brown & Dowling, 1998). The importance of both quantitative and qualitative research has already been stipulated in chapter one (see 1.4.). Furthermore, to justify the use of both quantitative and qualitative approaches stems from the fact that there is not only one truth, but life is merely multi-faceted owing to the fact that different levels of inquiry cannot be addressed through the same method (Brannen, 1992).

5.2.2   Issues and problems in combining qualitative and quantitative paradigms

It appears that the most important differences between the two paradigms are the **specific way** in which each one **handles/treats data** (Brannen, 1992; Brown & Dowling, 1998). The quantitative researcher looks through a narrow lens at a certain set of variables, which has been isolated and defined beforehand (e.g. in practice the quantitative researcher isolates and defines variables or variable categories in order to link these variables to formulate hypotheses before data are collected and are then tested upon). The qualitative researcher, however, looks through a wide lens in order to identify patterns or inter-relationships between the previously, unspecified set of

concepts [e.g. the qualitative researcher starts with defining general concepts, and as the research process progresses, the definition changes] (Brannen, 1992).

Secondly, there are differences on the **data collection** between the two paradigms (Brannen, 1992). In qualitative research, the researcher acts as a participant observer, and serve as the main instrument. For these researchers to achieve imaginative insights into the respondents' social worlds, the investigator is expected to be flexible and reflexive. In contrast, in quantitative research the instrument is a pre-determined and finely tuned technological tool (e.g. questionnaires) which is less flexible, imaginable and reflexive (Brannen, 1992).

Thirdly, Brown and Dowling (1998) argued that the distinctions between the two paradigms are in terms of the **traditional epistemological divisions**. The latter emphasised that the qualitative paradigm is carried out within an interpretative frame where the production of meaning is the main concern, while the quantitative paradigm is associated with the positivist inquiry format where the search for facts is the main concern.

5.2.3 Overlapping and logical differences between qualitative and quantitative paradigms

Analytic versus enumerative induction

Brannen (1992) as well as Brown and Dowling (1998) stated that qualitative research is associated with analytic induction, which is based on the testing of theory. Banister *et al.* (1994) emphasised that the qualitative researcher focuses on the context and integrity of the material rather than quantitative data. Quantitative research is associated with enumerative induction where the main aim is to identify the frequency and kinds of people in the general population whose characteristics agree with the sample population (Brannen, 1992). In qualitative research, concepts and categories play an important role, while in quantitative research incidence and frequency of characteristics or a relationship between variables in a general population plays the

main role (Brannen, 1992). The same writer argues that enumerative and analytic induction have different starting points, thus enumerative induction abstracts by generalising whereas analytic induction generalises by abstracting. Although both are subjected to the same criticisms it maybe not be so paradoxical when considering the extent to which the overlaps exist between the respective logic of inquiry (Brannen, 1992).

Generalisation versus extrapolation

The quantitative paradigm is based on generality where statistical sampling strategies are used (according to the probability theory) to accurately reflect the characteristics of the population (Brannen, 1992; Brown & Dowling, 1998). This writer also stated that quantitative methods such as questionnaires and structured interviews are used to explore theory. The qualitative paradigm is based on extrapolation where theoretical sampling strategies are used. The latter requires a balance between the point of theoretical saturation and the time and money available (Brannen, 1992; Brown & Dowling, 1998). It has been stated that in-depth interviews (which is a qualitative method) could be more holistic by using the statistical logic of enquiry (Brannen, 1992).

5.2.4   Crucial aspects in the controversial paradigm debate

The fact that the qualitative and quantitative paradigms involve opposing approaches, serves as possible evidence for the presence of the controversial debate between the two research methods (Patton, 1990). Triangulation is a powerful solution to strengthen a research design where the logic is based on the fact that a single method can never solve adequately the problem of rival causal factors (Denzin, 1978; Patton, 1990). These authors also stated that by not relying on only a single method/data source, it improves the validity and credibility of the findings (Denzin, 1978; Patton, 1990).

Some researchers support only the quantitative paradigm because they perceived it as more precise and accurate (e.g. improving the scientific value) than the qualitative paradigm (Patton, 1990). For researchers who would like to make use of the dual approach it is important to clarify whether it is pro-meaningfulness or not, rather than to think in terms of pro-numbers versus anti-numbers (Patton, 1990).

The quantitative paradigm is synonymous with objectivity due to the fact that it includes numbers and distance. The same writer addressed the above-mentioned aspect with his statements that numbers do not prevent bias and neither does distance guarantee objectivity. Peshkin (1988) disagrees with the above-mentioned statement by noting that subjectivity is inevitable. It is also vital to follow a holistic view where the focus will be on how methods will complement one another rather than focus on the contrast in approaches.

The question of a single truth (quantitative) versus multi-perspectives (qualitative) is a philosophical aspect where the differences are a matter of degree (Patton, 1990). This writer also sees pragmatic validation, which implies that the perspective presented is judged by its relevance to and use by those to whom it is presented, as an answer to find similarities between the quantitative researchers (e.g. who reckon that there is only a singular material reality and that propositions are ultimately true or false) and qualitative researchers (e.g. who reckon that what is true depends on one's perspective that is inherently, definitional, situational and internal). Another aspect, namely the move from generalisation towards extrapolation has already been discussed (see 5.2.3). It is evident that although the above-mentioned methods demonstrate opposing approaches, it also complement one another (e.g. quantitative methods provide generalisable findings whereas qualitative methods assist the successful operationalisation of the findings in practice). The attention will now be shifted to how a dual approach will improve credibility.

5.3   RECONCILING VIA TRIANGULATION

The concept triangulation will now be discussed.

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5.3.1   Outlining the types of triangulation

According to writers (e.g. Banister *et al.* 1994; Brannen, 1992; Denzin, 1970; Patton, 1990) triangulation consists of four types, namely data, investigator, theory and methodological triangulation.   This study has used data, and methodological triangulation.   **Investigator triangulation**, which refers to the use of multiple observers, coders, interviewers and analysts in a particular study (Brannen, 1992), has been left out in this study due to the small sample size and the fact that a single researcher was involved and not teams or partnerships of researchers.   **Theoretical triangulation**, which implies the usage of several frames of reference or perspectives in the analysis of the same data (De Vos, 1998), has also been left out due to the fact that the purpose of this study was not to include an in-depth investigation of different theoretical perspectives.

5.3.1.1 Data triangulation

Data triangulation implies the collection of accounts from different participants in a prescribed setting, from different stages in the activities of the setting and, if appropriate, from different sites of the setting (Banister *et al.*, 1994, p.146).   It also means the cross-checking of the consistency of specific and factual data items from various sources via multiple methods at different times (Guba & Lincoln, 1989; Patton, 1990).   With reference to this study, it would entail the comparison of data received from the qualitative structured interviews with facilitators and co-ordinators.   By using this dual approach it does not provide a single, clear-cut, consistent picture, but rather provides the researcher with challenges to improve his/her comprehension of the various reasons for the existence of inconsistencies between the two sets of data (Patton, 1990).

5.3.1.2 Methodological triangulation

Methodological triangulation entails the dual approach of combining both qualitative and quantitative data collection methods (Banister *et al.*, 1994). This writer further argues that all methods have limitations, validity threats, etc., but **by using a single method the danger is that the results be an artefact of the method**. This study combined quantitative methods such as questionnaires with the qualitative method such as structured interviews.

In this study **data triangulation** between qualitative and quantitative measures, and **method triangulation** between quantitative and qualitative methods will be utilised.

5.4   QUALITATIVE METHODOLOGY

With reference to 6.3.5.3, structured interviews were used in this study for the collection of qualitative data, which is a relatively systematical procedure that facilitates the comparison of data (De Vos, 1998).

5.4.1   Qualitative interviewing

According to Patton (1990) and De Vos (1998) the purpose of interviewing is not to influence respondents' minds via the interviewer's preconceived categories to organise the world, but to investigate what is in and on the respondents mind or to enter another one's perspective on things that cannot be observed superficially (e.g. feelings, thoughts, intentions, etc.). Patton (1990) firmly believes that qualitative interviewing should start with a supposition that the respondent's perspective is meaningful, knowable and the ability to make explicit has to be present. In addition, it has been emphasised that the role of the interviewer is the main dependent factor during the process of gathering qualitative information and therefore the skills of the interviewer are vital (see 5.4.2.4).

5.4.2   Qualitative structured interviews

Open-ended questions in structured interviews is a systematic data gathering procedure where the exact wording and sequence of questions have repeatedly been used with all the respondents (Patton, 1990; De Vos, 1998). These writers also stated that the skills of the interviewers and the nature of the interview are the two factors determining the flexibility in probing.

5.4.2.1 Advantages

Patton (1990) and De Vos (1998) admitted that, due to the fact that the exact wording and sequence of questions are used with all the respondents, the comparability of responses increases and data is complete for each respondent on the topics addressed in the interview. This also prevents the problem of receiving more comprehensive information from some respondents and less systematic information from other respondents. Patton (1990) and De Vos (1998) pointed out further benefits such as the reduction of the interviewer's judgement during the interview, the fact that it also facilitates the organising and analysis of data which is easier and quicker, and it allows the evaluators to see and review the instrumentation used during the evaluation. This is a highly focused interview where the interviewee's time is carefully used and also only used when it is possible to interview respondents for a limited period of time.

5.4.2.2 Disadvantages

Structured interviews demonstrate limited flexibility during interviews in order to accommodate certain individuals and circumstances (Patton, 1990; De Vos, 1998). These writers also noted that constraints are present when standardised wordings of questions are used which caused limitations on the naturalness, spontaneity and relevance of questions and answers.

5.4.2.3 Practical implementation

attempt was made to ensure validity and reliability concerning the feedback of all the respondents on similar issues (Patton, 1990; De Vos, 1998). As regards the content of the questions, there are five different types as demonstrated in the following table:

Table 5.1: Types of questions during interviewing

TYPES OF QUESTIONS	DESCRIPTION OF QUESTIONS
Experience/Behaviour	Description of experiences, behaviour, actions and activities of a person.
Opinion/Values	Aimed at understanding the cognitive and interpretative processes of respondents.
Feelings	Aimed at understanding respondents' emotional responses as regards their experiences and thoughts.
Sensory	Allow the interviewer to enter into the sensory apparatus of the respondent.
Background	Help the interviewer to locate the respondent in relation to other people (e.g. age, education, occupation, etc.).

As regards the time frame of questions, all of the above-mentioned questions can be asked in the present, past or future tense (Patton, 1990). The same writer noted that with reference to the sequence of questions, there are fixed rules as regards the organising of the sequence, e.g. in this study a fixed sequence of questions was used due to the structured format (Patton, 1990; Brown & Dowling, 1998). It is important to start with present non-controversial aspects which require straightforward descriptions which could be followed-up by probes for more in-depth understanding (Brown & Dowling, 1998). The same writers stated that, due to the fact that knowledge and skill questions are threatening, they have to be used in conjunction with a familiar context. Demographic questions tend to be boring to respondents and cause ineffective listening and a decrease in their attentiveness. In order to prevent the

former, this researcher has used a demographical and relevant information questionnaire, which covers a wider area.

5.4.2.4 Skills required for interviewing

According to Patton (1990) the researcher is the instrument of qualitative inquiry during interviewing, where the researcher brings certain experience, training and perspective to the field/interview. Therefore, **neutrality** and **impartiality** are important skills that are required from the researcher in order to minimise the interviewer effects (Denzin, 1989). Although the researcher agrees with the importance of the former statement, it seems to be doubtful if neutrality within the science field is possible. Patton (1990) noted that the quality of information received during the interview, is highly dependent on the interviewer.

It is important for the interviewer to **maintain the control** of the interview in order to reduce long-winded responses, irrelevant remarks, etc. (Patton, 1990; Brown & Dowling, 1998). The former emphasised that to maintain control, the interviewers have to be **focused** (e.g. be sure what he/she wants to find out, be confident that he/she is asking the correct questions which will provide him/her with the appropriate answers and provide the respondents with the appropriate verbal and non-verbal feedback).

Brown and Dowling (1998) stated that interviewers have to be good **decision-makers**, because they have to consider the usage of prompts when respondents are struggling with questions or decisions as regards how far to probe.

The interviewers have to create an atmosphere of **respect** where the respondents feel worthy and able to deliver a valuable contribution (Patton, 1990). The same writer also stated that the interviewers have to own the access of data and therefore **ownership** is vital. Furthermore, interviewers have to maintain a good **mental health state** in order not to be affected when conducting interviews, and have an **ethical framework, which** will guide them with sensitive issues. **Honesty** and **confidentiality** is vital and therefore interviewers have to make reasonable promises in

this regard and establish **rapport,** which means the ability to convey empathy and understanding without judgement (Patton, 1990).

5.5   QUANTITATIVE METHODOLOGY

In this study the quantitative data methods consist of a demographical and relevant information questionnaire and the SoC questionnaire (Appendix B).

5.5.1   Quantitative questionnaires

Questionnaires used in this research consisted of a demographical and relevant information questionnaire and the SoC questionnaire (see 1.4.2). These questionnaires mainly reduce the wide range of opinions to specific, but limited questions, which will then be analysed according to the predetermined response categories (Brown & Dowling, 1998).

5.5.2   Advantages

Quantitative methods demonstrate a high degree of coherence with the theoretical framework, therefore the argument is that reliability is gained, but in respect of validity is lost (Brown & Dowling, 1998). Quantitative statistics is a visual presentation of the results which provide more clear comparisons and more precise generalisations (Patton, 1990; Brown & Dowling). The quantitative research methods (as in this study) agree with the psychological field where the perceptions and beliefs of individuals have been studied within their immediate situation as well as regards the relationships of the above-mentioned with their current behaviour (Leong & Austin, 1996). Due to the fact that the format is an exact structure, it is more time-effective and it also tends to be more scientific and convenient to the respondents (Brannen, 1992).

5.5.3   Disadvantages

Brown and Dowling (1998) emphasised the value of in-depth understanding as a result of qualitative research methods whereas quantitative research methods are insufficient

to investigate complex social relationships or interaction patterns. Practical problems such as accommodating cultural and language differences etc. are time-consuming and there also exists the misperception that the quantitative research method tends to be more cost-effective (Brannen, 1992).

5.6 SUMMARY

It is appropriate for this study to make use of a combination of the quantitative and qualitative approaches, due to the fact that it is insufficient to use a single method for the investigation of the complexity of human nature and social reality (e.g. the psychological experiences of facilitators and co-ordinators due to higher educational change). In this study the quantitative research methods (the SoC- and the demographical and relevant information questionnaires) will be combined with the qualitative research methods (structured interviews). Triangulation will also be used to strengthen the research design.

This chapter covered the theoretical foundation for the research design and methodologies, while the attention will be shifted to the research methods and procedures in the next chapter.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2

THE CONCEPTUAL
ORIENTATION OF CHANGE

Chapter 3

RESOURCE-BASED
LEARNING AS A NEW
LEARNING MODE

Chapter 4

FACILITATORS AND CO-
ORDINATORS IN A RBL
COURSE

PART 2

Chapter 5

THEORETICAL
FOUNDATION OF
RESEARCH DESIGN AND
METHODOLOGY

Chapter 6

RESEARCH METHODS
AND PROCEDURES

Chapter 7

QUANTITATIVE
RESEARCH RESULTS

Chapter 8

QUALITATIVE
RESEARCH RESULTS

Chapter 9

TRIANGULATION
RESEARCH RESULTS

Chapter 10

CONCLUSION AND
RECOMMENDATIONS

Chapter **6**

RESEARCH METHODS AND PROCEDURES

6.1   INTRODUCTION

*T*his chapter is reserved for the **theoretical** foundation of the **empirical** and **methodological** aspects such as the aims, how the sample is obtained, a description of the nature and implementation of the research methods and procedures as well as to specify the data collection methods and statistical techniques which were applied to investigate the proposed hypothesis. The above-mentioned is important because it provides details of the participants, apparatus and measures as well as the procedures which have been used to present stimuli and measure the responses.

6.2   THE AIMS OF THE EMPIRICAL RESEARCH

For the purposes of this study, the main aims of the empirical research are (see also 1.3.2):

❑   firstly, to determine the psychological experience of educational change of the facilitators and co-ordinators in a RBL course;

❑   secondly, based on the collected information, to determine whether facilitators and co-ordinators have different psychological experiences of educational change in a RBL course;

❑ thirdly, based on this scientific evidence, to make accountable recommendations to improve directly the functioning of the staff (i.e. facilitators and co-ordinators) and indirectly the whole programme (e.g. Brown & Smith stated in 1996 that the success of any programme primarily depends on the staff involved) according to the theme of this study.

6.3   RESEARCH METHODS AND PROCEDURES

In this study non-experimental research is being used. Non-experimental research represents an investigation of connections between two or more variables, without a planning intervention (Huysamen, 1993). There exist different non-experimental designs of which the criteriumgroup design is the most appropriate for this study. In a criteriumgroup design, criteriumgroups are being selected randomly from the populations that represent the different levels of the independent variable (classification factor) and measure the dependent variable (Huysamen, 1993). The independent variable is viewed as a classification factor, because the researcher has no power over the different and definite levels of the independent variable. In this study the independent variable is the facilitation of learning. This facilitation of learning is the responsibility of two groups namely, facilitators and co-ordinators. The dependent variable in this study is the psychological experience of higher educational change. A purposive sampling strategy has been used [e.g. a purposive selection of facilitators (Group 1) and purposive selection of co-ordinators (Group 2)]. The details of the exclusion criteria for the purposeful selection are to be found in paragraphs 1.4.1 and 6.3.1. The researcher decided on the above-mentioned approach to serve as a retrospective tool for both facilitators and co-ordinators (i.e. to reflect on the psychological experience of higher educational change in a RBL course) in order to understand change and the accompanying process that are key ingredients in any theory about human behaviour (Banister *et. al*, 1994; Maxwell, 1996).

6.3.1 Research group

The respondents include all new facilitators (n_1 = 10) and all the current co-ordinators (n_2 =10) involved in the RBLCPP based at the UOFS. These respondents of the universum were included in the empirical research due to the fact that the respondents have firsthand experience of all the phenomena being investigated (Maxwell, 1996).

The first group of ten facilitators could be classified as all new facilitators in the RBLCPP who only started in 1998. Exclusion criteria such as experience of the RBL mode and facilitators and co-ordinators in any other programme than the RBLCPP contribute to the homogeneity of the group. The factor taken into account during the selection of the second group (e.g. represents co-ordinators in the RBLCPP) is that they have to be involved for longer than six months.

Table 6.1 is reflecting Group 1 (facilitators) and Group 2 (co-ordinators) of this study.

TABLE 6.1: Composition of the population facilitators (n_1 = 10) and co-ordinators (n_2 = 10).

GENDER	FACILITATORS	PERCENTAGE	CO-ORDINATORS	PERCENTAGE
Male	2	20%	3	30%
Female	8	80%	7	70%
TOTAL	10	100%	10	100%

As indicated in the above-mentioned table, only 20% of the facilitators are male, while only 30% of the co-ordinators are male. A Chi-square-test was done to determine if there is a significant difference in the proportions of genders between the two groups. The calculated χ^2 value is 0,267 (p = 0,606) and is not in the least significant regarding the 5% level. Consequently it can be accepted that the two groups are reasonably homogeneous and should not affect the results.

A pilot study was undertaken by doing a complete structured interview with four facilitators, who is not included in the sample. This pilot study was designed to test the questions within the questionnaire and to explore their implications. All the structured interviews were recorded and then submitted to the co-promoter for discussion and recommendation purposes before the researcher could continue with the remaining interviews. Only formulation and structural changes as regards the interview questions were affixed.

As already mentioned, the respondents were recruited from the RBLCPP of the UOFS. After obtaining approval from the director of the programme to include facilitators and co-ordinators as respondents, letters were sent to the respondents informing them of the purpose of this study and were then contacted to determine a convenient time for the interview. The respondents were again contacted a day before the interview to ensure maximum participation.

6.3.2   Hypothesis formulation

The following central research hypothesis was proposed as regards the quantitative research:

> *A significant difference exists in the psychological*
> *experience as regards resource-based learning between*
> *those who act as facilitators and co-ordinators in the*
> *RBLCPP based at the UOFS.*

From this proposed research hypothesis a null and alternative/non-directional hypothesis can be stated for each of the seven stages of concern. With regard to stage one, the null and alternative hypotheses are as follows (Everitt, 1996):

$$H_0 \quad : \quad \mu_1 \quad = \quad \mu_2$$

$$H_1 \quad : \quad \mu_1 \quad \neq \quad \mu_2$$

Where μ_1 =   the mean stage 0 (Awareness) score for the population facilitators and,

μ_2 =   the mean stage 0 (Awareness) score for the population co-ordinators

The above-mentioned apply also for the other six stages (see 6.3.5.2.c).

6.3.3   Statistical procedure

This study will make use of descriptive statistics in order to get an indication of the first empirical research aim (see 6.2). Due to the size of the investigated groups (n_1 = 10 and n_2 = 10) a non-parametric statistical technique had to be used to investigate the proposed hypothesis as stated in the second empirical research aim (see 6.2). The reason for this is that with small group respondents, there are doubts as regards the supposition of normality of the distribution of scores and the homogeneity of variances. All the dependent variables of the seven stages of concern are measurable on an interval scale (i.e. quantitative data) and therefore the Mann-Whitney-U-test could be considered as a counterpart of the t-test for two independent (uncorrelated) groups (Behr, 1988; Cozby, 1993). In this study the 5% level (α = 0,05) of significance will be used for interpretation of the third empirical research aim (see 6.2). The responses of the co-ordinators and facilitators to the structured interviews were transcribed and computerised, before the qualitative data could be analysed and systematised. The qualitative data from the structured interviews will be analysed by using the Qualitative Solutions and Research's Non-numerical Unstructured Data Indexing Searching and Theorising [(QSR NU*DIST4) Application Software Package, 1995] software to assists in a partially ordered meta-matrix, cross-case analysis (Miles & Huberman, 1994). The second data analysis activity consisted of the grouping of all the various responses of facilitators and co-ordinators via coding and pattern coding in order to catogorise the responses through meta-matices which facilitate theorising (Patton, 1990; Miles & Huberman, 1994). In this study a comparative analysis of both qualitative and quantitative data would be done via triangulation. As mentioned in

paragraph 5.3. of this study, the two mentioned types of triangulation will be used. The implications of the usage of triangulation are the following:

❑ on the positive side, this research design perhaps best reflects the research process of fluctuation between inductive and deductive thinking in a research study;

❑ for some researchers the use of triangulation is very complex and difficult, because it requires sophisticated knowledge of both paradigms, conveys the linking of paradigms which may be unacceptable to some researchers and requires that the researcher conveys a combination of paradigms unfamiliar to many researchers (De Vos, 1998).

6.3.4   Gathering of information

In this study the qualitative data collection method will consist of structured interviews. The above-mentioned writer emphasised that quantitative researchers do not become directly involved with the respondents, but remain aloof.

6.3.5   Measuring instruments

The quantitative survey component consists of the completion by the facilitators and co-ordinators of the **Demographical and relevant information Questionnaire** and the **SoC Questionnaire**, which consist of the seven hypothetical stages of concern as stipulated in chapter one (see paragraph 1.4.2). The qualitative part of the study was designed to assess the psychological experience of educational change on the facilitator and co-ordinator in a resource-based learning course via **structured interviews**. These interviews had also helped to advance the researcher's understanding of variations in psychological responses and skills, due to the fact that it is a more in-depth investigation and also provide reasons for clarification. The results of the above-mentioned will help explain and serve as a supplement and extension as regards the quantitative data gathered through the SoC Questionnaire and the Demographical and relevant information Questionnaire.

The quantitative data will be analysed by using the Mann-Whitney-U-test to investigate the proposed statistical hypothesis. The Mann-Whitney-U-test indicates whether the median scores of the persons in the two groups are significantly different (Behr, 1988; Cozby, 1993). These authors also stated that this test is based on the calculation of the value of the statistic U, and therefore this calculated value is compared with tabled critical values at the usual 0,05 and 0,01 significance levels. Converting scores to ranks, which simplify computation (Behr, 1988; Cozby, 1993), derives the value of U.

The collected quantitative and qualitative data will be combined, triangulated and analysed to assess what psychological experiences are present among facilitators and co-ordinators in a RBL course due to educational change.

6.3.5.1 Demographical and relevant information questionnaire

A demographical and relevant information questionnaire was used (see Appendix A) to obtain quantitative data from the facilitators and co-ordinators in the RBLCPP, which is a bridging programme for disadvantaged students in order to gain access to higher education studies. The demographical data is extremely useful for both sample description and correlation purposes (Hall *et al.*, 1977). This questionnaire is based on the demographical questionnaire developed by the Research and Development Centre for Teacher Education at the University of Texas in Austin (Hall *et al.*, 1977). The latter was translated and expanded for the purpose of this study to accommodate the South African context, by using as reference the Biographical Questionnaire for the RBLCPP which was used in another study where the focus was on the counselling needs of students of the RBLCPP (Strydom, 1997). The **demographical and relevant information questionnaire** (Appendix A) being used, consists of 21 questions that include questions on home language, health, education, career, factors that have an effect on your facilitation, attitude towards education and identification of staff development opportunities.

6.3.5.2 Stages of concern (SoC) Questionnaire

a) Background

Research regarding problems and satisfactions of teachers has been a popular subject for years (Hall *et al.*, 1977). According to the British Journal of Educational Psychology, adjustment problems are present during the early years of a teacher's life (Phillips, 1932). In order to improve quality education, these aspects had to be investigated.

Researchers such as Travers, Rabinowitz and Nemovicher (1952); Sawrey and Telford (1959) and Thompson (1963) focused on the anxieties of student teachers that were tested respectively by a 21-item sentence completion and a 35-item checklist of anxieties (Hall *et al.*, 1977). Gabriel (1957) added the strains and stresses for new teachers as well as their relationship with other variables such as inexperienced versus experienced.

Francis Fuller was the pioneer researcher in the area she named 'teacher concerns' (Hall *et al.*, 1977). Due to the fact that she was a clinical psychologist, her studies reflected a more clinical than pedagogical viewpoint as regards teacher concerns (Hall *et al.*, 1977). According to the latter writers a concern represents a composition of feelings, preoccupation, thought and consideration as regards a specific issue. The same writers emphasised that the pioneering research of Fuller serves as the foundation of the SoC questionnaire which is based on the Concerns-based Adoption Model. Follow-up research by the Inter-Institutional Programme led to hypotheses such as the presence of innovation adopters, concern categories that tend to be logical progressive (e.g. users became more skilled when there is a higher frequency of usage of the innovation). In time, the seven SoC questionnaire was identified, which is one of the two crucial dimensions (e.g. focusing of feelings) that describes the individual innovation adopter. In this study the seven stages of concern (see 1.4.2) are representing a diagnostic tool for the assessment of facilitators and co-ordinators of the RBLCPP in relation to the adoption of the innovation (i.e. educational change as a result of implementing the resource-based learning mode). The second performance

dimension (i.e. focusing of skills, knowledge and behaviour) would be investigated through the structured interviews, which will later be discussed (see 6.3.5.3.).

b) Composition

The SoC questionnaire (see Appendix B) consists of 35 statements to which the individual (e.g. facilitator and co-ordinator) responds. Each statement describes a concern felt by the individual at the time when the innovation (e.g. RBL) was implemented. Therefore, the respondent marks each statement on a 0 to 7 Likert scale according to how true each statement is of himself/herself. When statements are totally irrelevant it is recommended to mark "0" at the end of the scale. The stage definitions (see 6.3.5.2 c) provide a conceptual basis for the development of the SoC Questionnaire and the interpretation of its data.

c) Description of the seven stages

According to literature (Hall *et al.*, 1977), there is a developmental pattern present namely earlier concerns have to be resolved (lowered in intensity) before future concerns appear (increase in intensity). In this arousal and resolution of concerns, a person's concern tends to develop through a range of stages depending on the time involved and the acquisition of new knowledge and skills, etc. (Fuller, 1970). It is also vital to note that concerns development cannot simply be controlled by an external agent, due to the fact that it is an internal reaction (Fuller, 1970). Furthermore, the same writer stated that, by holding concerns or changing concerns it is a dynamic process of each individual who owns the choice whether to change or not. The original developmental conceptualisation of the adoption process within education institutions consists of the following stages (Hall, Wallace & Dossett, 1973):

Stage 0 (Awareness): This stage indicates a minimum concern about or involvement with the innovation.

Stage 1 (Informational): It is indicated that this stage represents a general awareness of the RBL innovation and is only interested to learn more detail. A person in this stage seems unworried in terms of his/her own relation with, for instance, the RBL innovation, but interested in the substantial factors (e.g. general characteristics, effects, requirements) in a selfless manner.

Stage 2 (Personal): This stage represents an uncertainty within an individual as regards his/her inadequacy to meet the demands of or role within an innovation. The presence of an analysis of his/her role in relation with the organisation reward structure, decision making, personal commitment and possible future conflicts with the existing structures. Other implications (e.g. financial or status) of the programme for the self/colleagues may possibly also reflect in this stage.

Stage 3 (Management): Attention is primarily focused on the processes/tasks involved in the usage of the innovation (e.g. RBL) and the best strategy to use information and resources. Related issues that are of vital importance are efficiency, organising, managing, scheduling and time demands.

Stage 4 (Consequence): The impact of the innovation (e.g. RBL) on the students in their immediate sphere is in this stage reflected. This stage primarily focuses on the relevance of the innovation for students and the evaluation of student outcomes (e.g. including performance and competencies as well as which changes are required to increase student outcomes).

Stage 5 (Collaboration): Co-ordination and co-operation amongst users of the innovation (e.g. RBL) are the main focus of this stage.

Stage 6 (Refocusing): The main aim in this stage is to explore more universal benefits of the innovation (e.g. including possible changes or replacements with a more powerful alternative). In this stage the individual has definite ideas as regards alternatives to the proposed or existing form of the innovation (e.g. RBL).

The next two subsections presents more detailed psychometric information of the SoC questionnaire.

d) Reliability of the Stages of Concern (SoC) Questionnaire

The SoC questionnaire is likely to represent a high internal reliability, due to the presence of a necessary condition, namely that all the items representing a certain stage of the SoC questionnaire have to demonstrate a higher correlation than items on other scales.   The alpha coefficients of internal consistency for each of the seven SoC questionnaire scales are demonstrated in Table 6.2. The degree of reliability of these coefficients among items on the scale is reflecting the overlapping of variance. This formula is a generalisation of the Kuder-Richardson-Formula-20 for dichotomous items (Cronbach, 1951; Leong & Austin, 1996). In order to compute the coefficients, the program TESTAT on the VSTAT library was used and the required data from a stratified sample of 830 teachers.   These responses reflect the respondents' involvement in the two-year longitudinal studies and their first exposure to the questionnaire.

Table 6.2: Coefficients of Internal Reliability for the Stages of Concern Questionnaire, N = 830

STAGE	0	1	2	3	4	5	6
ALPHAS	.64	.78	.83	.75	.76	.82	.71

As regards the computed re-test data in Table 6.3, only hundred and thirty-two of a sample of 171 individuals completed the SoC questionnaire for the second time, and therefore the test-re-test correlations are as follows:

Table 6.3: Test-re-test Correlations on the Stages of Concern Questionnaire, N = 132

STAGE	0	1	2	3	4	5	6
ALPHAS	.65	.86	.82	.81	.76	.84	.71

e) Validity of the Stages of Concern (SoC) Questionnaire

The validity of the SoC questionnaire is not so easily demonstrated, due to the fact that there does not exist another measure of concerns, which could serve as a comparison for the SoC.   Thus, to investigate the validity of the SoC questionnaire scores, Cronbach and Meehl (1955) outline a strategy where an attempt was made to demonstrate that scores on the questionnaire relate to each other and to other variables as the concerns theory would suggest.   The inter-correlation matrices, judgements of concerns based on interview data and the confirmation of expected group differences and changes over time have been used to investigate the validity of the SoC scores.

6.3.5.3 Structured interviews

The qualitative data will be collected through open-ended questions in structured interviews for the purposes of data triangulation.   The latter was specifically designed for the facilitators and co-ordinators of the RBLCPP.

Structured interviews mainly consist of questioning and it seems that there exist various perceptions around the concept questioning.   Interview questions serve as a stimulus that is creating or generating responses from respondents (Patton, 1990). Payne (1951) views questioning as an art.   There exists also the perception that vital functions of research questions within a research design are to **assist focusing the**

study (e.g. providing the relationship between purposes and contextual context) as well as **serve as a guidance as to how to conduct the research** (e.g. determine the relationship between method and validity) (Miles and Huberman, 1994).

For the purpose of this study, within qualitative inquiry there are four requirements namely open-ended, neutral, singular and clear questions (Patton, 1990). In this study **open-ended questions** have been used, because it allowed more interpretative interplay between the respondents' experiences and the stages of concern of an innovation such as educational change, due to the implementation of the resource-based learning mode (Ely *et al.*, 1997).

Neutrality is also of vital importance, therefore the researcher in this study made use of a pilot study to ensure that the open-ended questions and the researcher's transfer of these questions are not leading in any way which could influence the results (Patton, 1990). It is also important to keep to **singular** questions, otherwise it is impossible to interpret these questions during the analysis. Asking **clear** questions solves problems of confusion, but when the respondent requested clarification, the researcher in this study made use of probes.

There exists tension within qualitative research when the researcher has to act simultaneously being a participant versus an observer, a professional versus a stranger or to be both knowledgeable and capable of being surprised. Therefore, it was of vital importance for the researcher to make a detailed study of the literature beforehand as regards the planning, structuring, procedural and required skills involved in structured interviewing (see 5.4.2.3 and 5.4.2.4). The formulation of the questions asked in the interviews of this study, was gained from the guidelines by Patton (1990). The contents of the questions were based on all the literature on educational change, RBL, and psychological experience of RBL, which were already discussed in chapters two to four. All the structured interviews were audiotaped and were later transcribed verbatim.

6.4   DATA COLLECTION

In this study the data collection took place over a period of two months, from May to June 1998. The fact that both the quantitative and qualitative data collection procedures were voluntary, and that the required population was limited, had definitely had an impact on the consistency and generalibility of data gathered (Maxwell, 1996).

6.4.1   Quantitative procedures

In this study, the data from the SoC questionnaire and demographical and relevant information questionnaire were obtained at the same time. The 10 new facilitators (100%) and 10 co-ordinators (100%) completed both the **SoC Questionnaire** and the **Demographical and relevant information questionnaire**. The answer sheets of the SoC questionnaire and the Demographical and the relevant information questionnaire were analysed by a statistical analyst.

6.4.2   Qualitative procedures

After completion of the quantitative questionnaires (i.e. Demographical and relevant information questionnaire and the SoC Questionnaire), the twenty respondents were submitted to qualitative structured interviews. Due to the fact that all the structured interviews were audiotaped, all the participants were requested to sign the letter of consent (see Appendix E). In this letter of consent the researcher emphasised that all the data of the structured interviews would strictly be handled confidential. All the structured interviews were conducted in English or Afrikaans, depending on the respondent's home language in order to meet equity demands.

6.5   FACTORS INFLUENCING DATA PROCESSING METHODS

6.5.1   Ethical research

Confidentiality is an important ethical issue. In order to ensure that the outcome of the research is confidential, all respondents have to read and sign the adult consent form for participation (i.e. which promises that confidential information will be handled with

care) at the beginning, as prevention for dropouts which would be negative on the findings, due to the fact that this would make the sample size even smaller (Cone & Foster, 1993).

6.5.2   Reactivity

Reactivity refers to the researcher's influence on the individuals or settings being studied, generally known as the "effect of the researcher" (Maxwell, 1996). The same writers emphasised that the goal is not to eliminate the researcher's effect, but to understand it and then to apply it appropriately. According to Maxwell (1996) it is not a meaningful goal to minimise your own effect, but rather to understand the effect you have as a researcher. In this study the researcher avoids leading questions during interviews to minimise the researcher's influence on the respondents.

6.5.3   "Researcher's/Evaluator's effect"

The two vital threats to qualitative conclusions are the selection of data to fit the researcher's current theory and preconceptions as well as that the data selection "stand out" to the researcher (Miles & Huberman, 1994; Maxwell, 1996). In addition, Patton (1990) indicated that there are four ways in which the researcher can influence the findings of the study, such as:

- ❑ the reaction of participants to the researcher,
- ❑ changes in the researcher (e.g. attitude, instrumentation),
- ❑ predisposition and bias of researcher, and
- ❑ the researcher's incompetence.

In order to ensure quality research, intellectual rigor is vital.

In this study the researcher has tried to minimise the researcher's influence on the research findings by remaining neutral during interviews (i.e. an attitude change by the

researcher) as well as by using probes to explore answers rather than leading questions (i.e. to handle the reaction of participants to the researcher appropriately).

6.5.4 Language

The fact that the SoC Questionnaire (SoC) was translated into Afrikaans can also have an influence on the findings, due to the fact that there are nuance differences between languages as well as the fact that the SoC questionnaire was originally developed for the United States of America (USA) and in this study has been applied in the SA context. In this study each respondent had to answer the questionnaire in his home language [e.g. Afrikaans (70% of the facilitators and 80% of the co-ordinators), and English (10% of the facilitators and 20% of the co-ordinators)].

6.5.5 Characteristics of the respondents

Other factors such as the various personality traits and gender of the respondents as well as the fact that the respondents were involved in different subjects can also have an influence on the findings which have not been taken account of in this study.

6.6 SUMMARY

This chapter focused on the research aims and design, including data collection methods, procedures and processing. Thus, the study provides satisfying and necessary background for the research results as stated in the next chapter.

The quantitative and qualitative research results will be discussed respectively in Chapter 7 and Chapter 8.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2

THE CONCEPTUAL ORIENTATION OF CHANGE

Chapter 3

RESOURCE-BASED LEARNING AS A NEW LEARNING MODE

Chapter 4

FACILITATORS AND CO-ORDINATORS IN A RBL COURSE

PART 2

Chapter 5

THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY

Chapter 6

RESEARCH METHODS AND PROCEDURES

Chapter 7

QUANTITATIVE RESEARCH RESULTS

Chapter 8

QUALITATIVE RESEARCH RESULTS

Chapter 9

TRIANGULATION RESEARCH RESULTS

Chapter 10

CONCLUSION AND RECOMMENDATIONS

QUANTITATIVE RESEARCH RESULTS

7.1 INTRODUCTION

⌒he analysis and interpretation of the collected quantitative data will be focused on in this chapter, which correlates with the first two specific empirical research aims (see 1.3.2). The analysis of the demographical and relevant information questionnaire will be discussed first, whereafter the analysis of the SoC questionnaire will follow. Summaries of the results of the two quantitative research questionnaires will be found throughout the chapter.

7.2 RESULTS OF THE DEMOGRAPHICAL AND RELEVANT INFORMATION QUESTIONNAIRE

As mentioned in 6.4.1, twenty completed demographical and relevant information questionnaires were received. Of the total of the purposive selection facilitators and co-ordinators, 25% were men, while 75% were women. In the RBLCPP the median age of the facilitator population was 32 years and the median age of the co-ordinator population was 29 years. Tables 7.1-7.3 provide all the relevant results obtained from the demographical questionnaire, while Figures 7.1-7.11 represent the summaries of all the relevant data of this study.

7.2.1   Discussion of some of the data of the demographical and relevant information questionnaire

Only aspects as regards the psychological experiences of facilitators and co-ordinators due to educational change will be discussed, as obtained from the demographical and relevant information questionnaire.

7.2.1.1 Age

Although the age categorie is not a psychological experience, the researcher deemed it important to include it in the analysis due to the fact that it could have an influence on the psychological experience of higher educational change by facilitators and co-ordinators in a RBL course.

Figure 7.1: A bar diagramme to indicate the age distribution of facilitators and co-ordinators
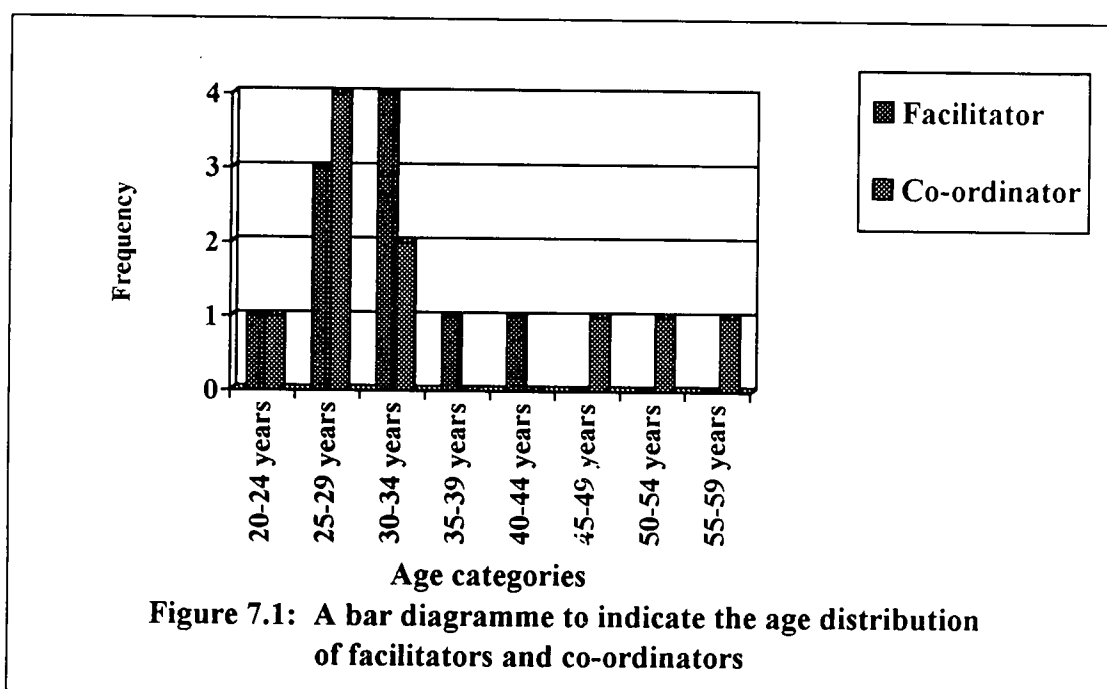
According to Figure 7.1 it appears that 40% of the facilitators are between 30 and 34 years old, while 40% of the co-ordinators are between 25 and 29 years old. As regards the distribution of ages, it seems that the ages of facilitators are clustered between 20 and 44 years, while the co-ordinator's ages vary between 20 and 59 years. The median age of the facilitator and co-ordinator population have already been mentioned (see 7.2.) which implies that the mean facilitator and co-ordinator is in the

early adult phase. During the early adult phase, the important tasks as regards the self are to reach independence and responsibility, to establish and stabilise own identity, to establish value system and to develop the ability to belong to other (Louw, 1990). The only task as regards the above-mentioned, which is relevant for the facilitators and co-ordinators in handling the learners in RBL, is responsibility.

7.2.1.2 Home language

The facilitators and co-ordinators had to indicate their home language.

Figure 7.2: A sector diagramme to indicate the distribution of home language of facilitators
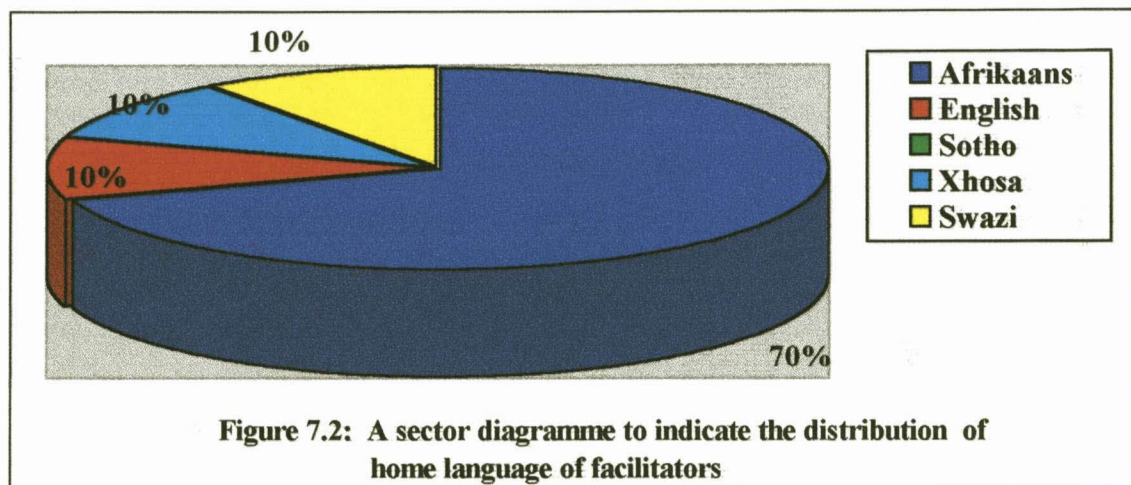
According to Figure 7.2 it appears that 70% of the facilitators is Afrikaans-speaking, 10% English-speaking, 10% Xhosa-speaking, 10% Swazi-speaking and none of the facilitators are Sotho-speaking.

Figure 7.3: A sector diagramme to indicate the distribuion of home language of co-ordinators
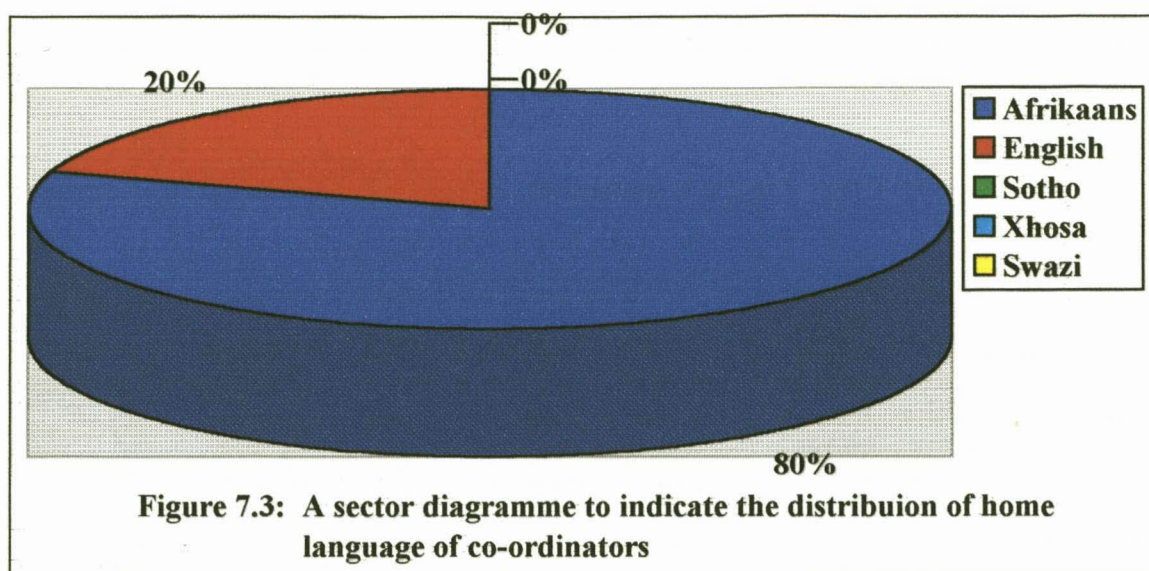
Figure 7.3 indicated that 80% of the co-ordinators is Afrikaans-speaking and 20% is English-speaking. None of the co-ordinators is speaking an African-language (e.g. Sotho, Xhosa, Swazi).

The fact that the RBL course is presented in English as well as the fact that English is the second language of both the staff (i.e. facilitators and co-ordinators) and the students may contribute to a language problem which can have a negative influence on the quality and effectiveness of the facilitating. It may also have a negative influence on the facilitator/co-ordinator (e.g. unsure and uneasy to present a new innovation in their second language). This indicates a main problem area in the RBLCPP.

7.2.1.3 Attitudes towards education

It was expected from facilitators and co-ordinators to announce their attitude towards education.

Figure 7.4: A bar diagramme to indicate the distribution of attitudes towards education by facilitators
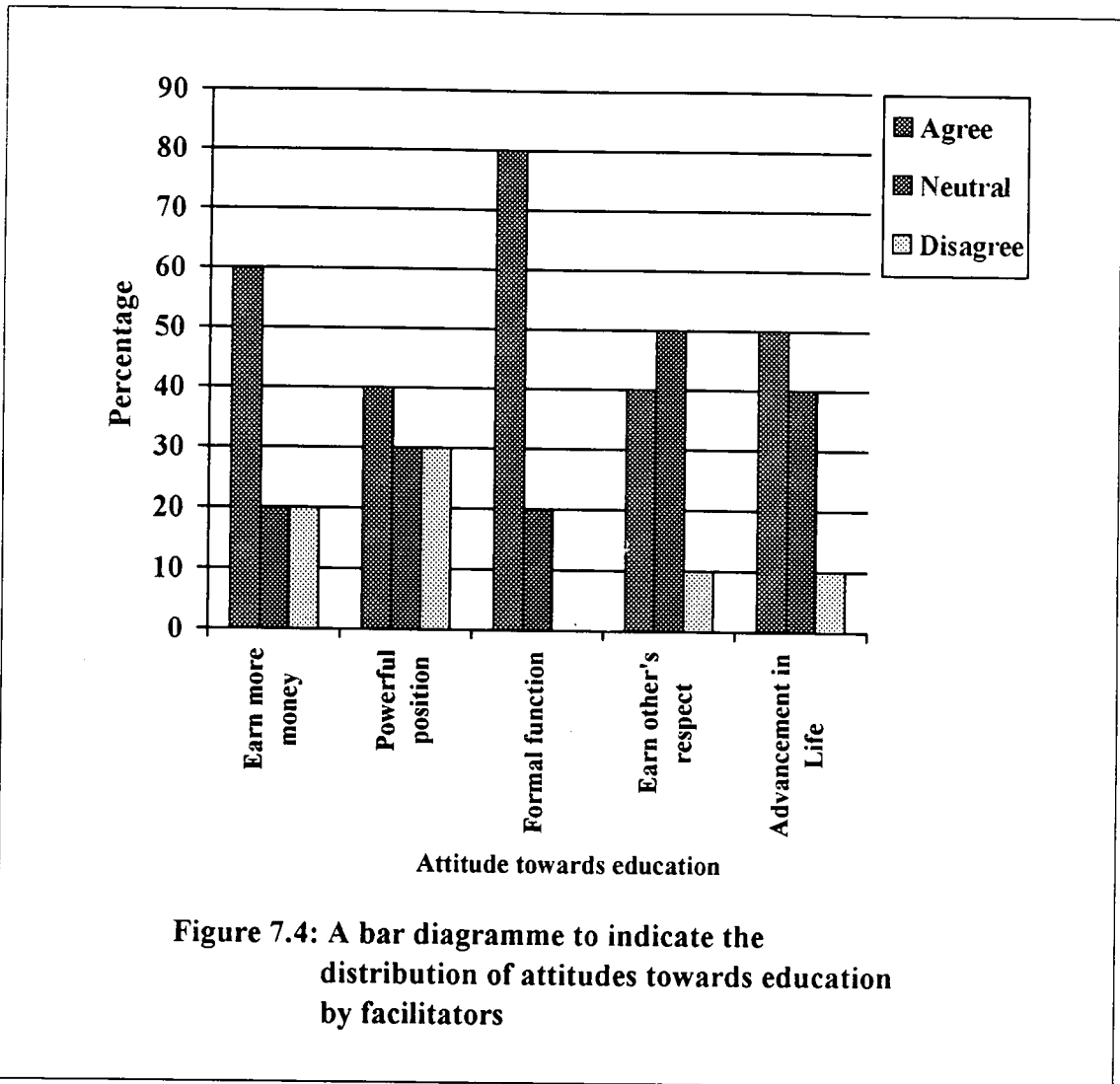
It is evident form Figure 7.4 that the majority of facilitators (80%) feel strongly that education has a formal function, which fulfils and enriches your life. According to Figure 7.4, 60% of the facilitators are positive towards education because you can earn more money by being involved in education and 50% of the facilitators regard education as a necessity for the advancement in life. Facilitators are also positive towards the fact that through education you earn other people's respect (40%) and that education enables you to be in a powerful position (40%).

Figure 7.5: A bar diagramme to indicate the distribution of attitudes towards education by co-ordinator's
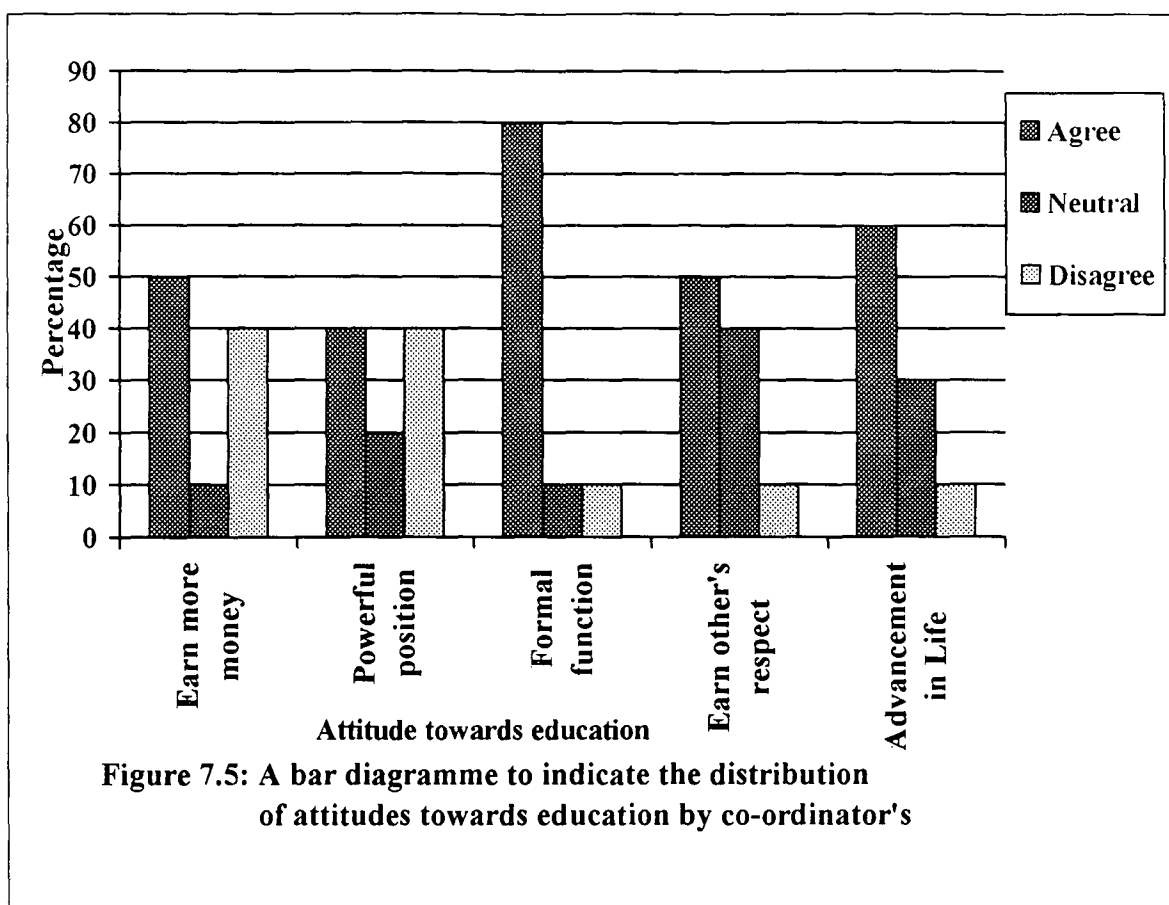
According to Figure 7.5, the majority of the co-ordinators (80%) feel strongly that education has a formal function, which fulfils and enriches your life. It is also evident that 60% of the co-ordinators view education as a necessity for the advancement in life, while 50% of co-ordinators are positive towards education, because you can earn more money and earn other's respect through education. Only 40% of the co-ordinators believe that education enables you to be in a powerful position.

It is evident from Figure 7.4 and Figure 7.5 that the majority of facilitators and co-ordinators feel strongly that education has a formal function namely to fulfil and enriche your life, as well as that the minority of facilitators and co-ordinators feel that education enables you to be in a powerful position. Taking into account the above-mentioned view of facilitators and co-ordinators, it is evident that work satisfaction as regards education is very important.

7.2.1.4 Job aspects

Facilitators and co-ordinators had to indicate what percentage of time was devoted to certain job aspects.

Table 7.1: A frequency distribution of the percentage of time devoted to certain job aspects by facilitators ($n_1 = 10$) and co-ordinators ($n_2 = 10$)

ITEM	MEAN PERCENTAGE TIME BY FACILITATORS	MEAN PERCENTAGE TIME BY CO-ORDINATOR
What percentage of your job is:		
*Teaching/Lecturing	$\overline{X} = 24,5\%$	$\overline{X} = 14,6\%$
*Administration	$\overline{X} = 17\%$	$\overline{X} = 24\%$
*Facilitating	$\overline{X} = 39,5\%$	$\overline{X} = 27\%$
*Other	$\overline{X} = 19\%$	$\overline{X} = 34,4\%$

$\overline{X}$ = "x-bar" a sample average

The above-mentioned Table 7.1 illustrates the differences in devoting time by facilitators and co-ordinators to certain aspects of their jobs. It is evident that a mean of 39,5% of facilitators devoted their time to facilitating, while a mean of 34,4% of the co-ordinators devoted their time to other aspects (e.g. writing material and preparation). This is an indication that the facilitators and co-ordinators have different focus-points, which may be due to their job descriptions. Due to the fact that no comparisons/differences between the traditional mode and RBL were requested in the demographical and relevant information questionnaire, it cannot be interpreted.

7.2.1.5 Appointment

Facilitators and co-ordinators were requested to indicate how they were appointed.

Figure 7.6: A bar diagramme to indicate the distribution of types of appointments by facilitators and co-ordinators
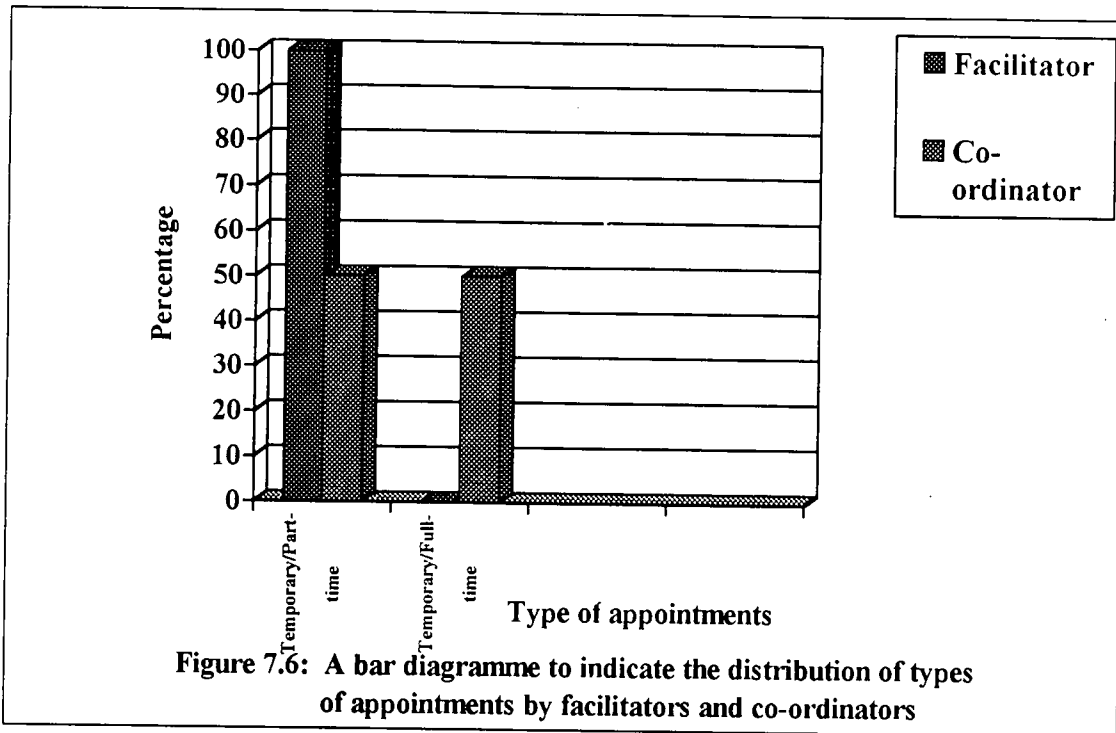
As indicated in Figure 7.6 all the facilitators' (100%) appointments are only temporary/part-time, while only 50% of the co-ordinators appointments are temporary/part-time and the other 50% are temporary/full-time. This might be an explanation of why the facilitators and co-ordinators experienced uncertainty/insecurity of the permanency of job (see 4.5.). This issue could have a negative influence on their psychological functioning and performance, because it affected their cognition, affect and behaviour (see 4.1).

7.2.1.6 Years of teaching/lecturing

Facilitators and co-ordinators had to indicate their total number of years of teaching/lecturing experience.

Figure 7.7: A bar diagramme to indicate the distribution of the total number of years of teaching/lecturing of facilitators and co-ordinators
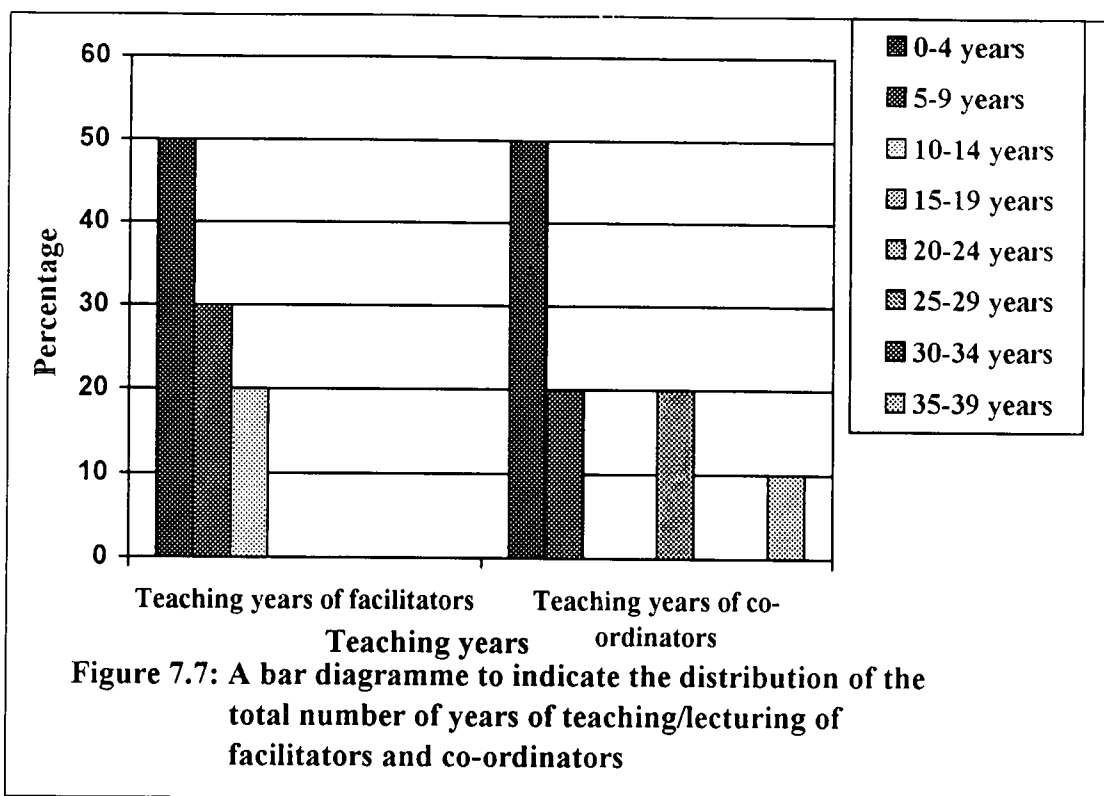
Figure 7.7 indicated that 50% of facilitators and 50% of co-ordinators appear to have a minimum of 0-4 years teaching experience. According to Figure 7.7, 30% of the facilitators have between 5 and 9 years of teaching experience and 20% of facilitators have between 10 and 14 years of teaching of experience. The co-ordinators indicated that 20% have between 5 and 9 years of teaching experience, 20% of the co-ordinators have between 20 and 24 years of teaching experience and 10% of the co-ordinators have between 35 and 39 years of teaching experience. It is evident that the facilitators' teaching experience varies between 0 and 14 years, while the co-ordinators' years of teaching experience indicated a wider distribution between 0 and 39 years.

7.2.1.7 Training

Facilitators and co-ordinators were requested to indicate in which RBL user category they are, what formal RBL training they received and to rate the training they received in RBL.

Figure 7.8: A bar diagramme to inidicate the user categories
of facilitators and co-ordinators
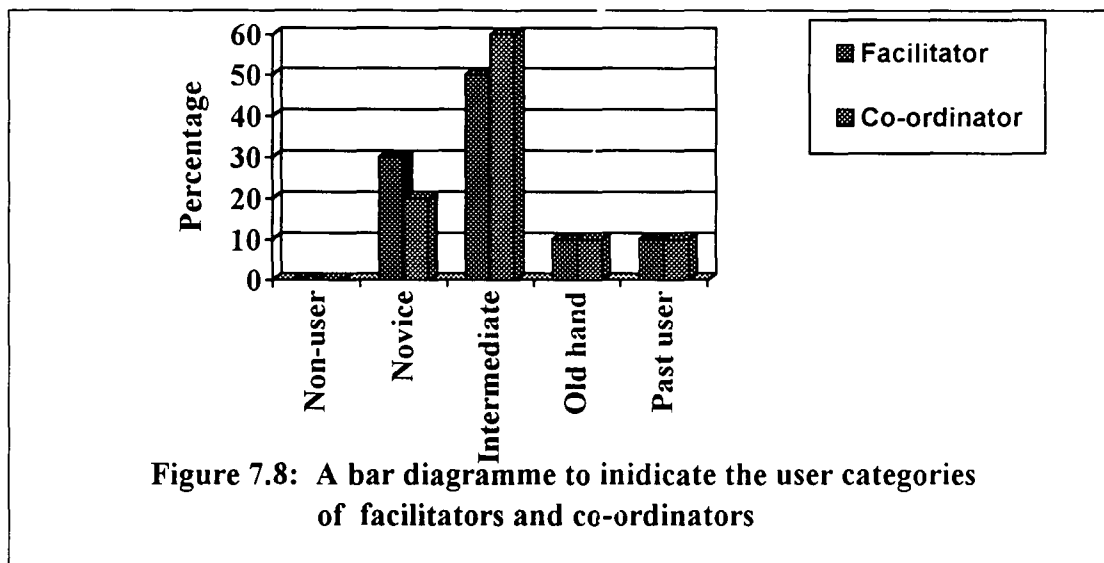
According to Figure 7.8 it appears that 50% of the facilitators and 60% of the co-ordinators view themselves to act as an intermediate. It is also evident that 30% of the facilitators regard themselves as being a novice, while only 20% of the co-ordinators consider themselves as being a novice. This is an indication that there are differences between facilitators and co-ordinators as regards their perspective of being RBL users, which may be on the basis of their job descriptions and the time period involved with RBL due to which they may have different psychological experiences.

Figure 7.9: A bar diaramme to indicate the distribution of
formal training categories of facilitators and co-
ordinators
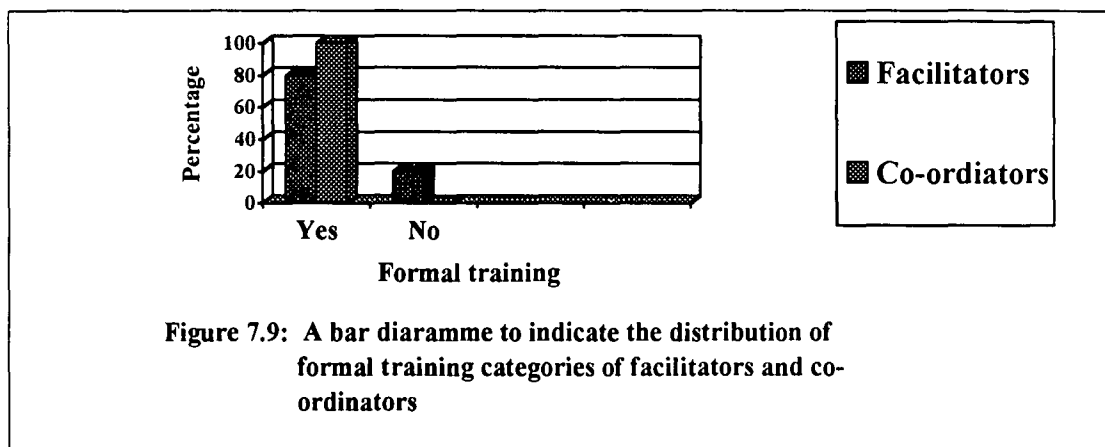
According to Figure 7.9 the majority of the facilitators (80%) and co-ordinators (100%) indicated that they have received formal training as regards RBL. The fact that co-ordinators have received more training may also have an effect on their psychological experience of higher educational change of RBL.

Figure 7.10: A bar diagramme to indicate the distribution of workshop rating categories of facilitators and co-ordinators
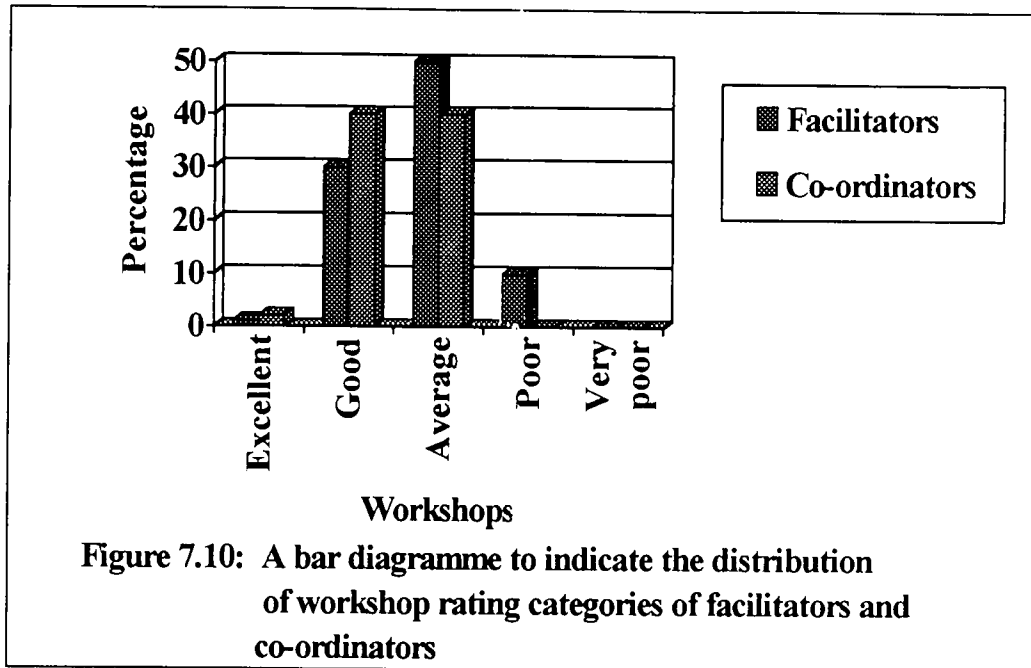
It is evident from Figure 7.10 that 50% of the facilitators and only 40% of the co-ordinators consider the quality of workshops as average. This indication may be a great concern for the developers of the RBLCPP, because training is the key issue for the successful implementation of the RBL innovation and is also vital for the co-ordinators, because they have also been responsible for the training of the facilitators.

7.2.1.8 Goals of facilitator/co-ordinator

This specific question has been included in the questionnaire to gather information as regards future planning of the individual within the specific role as facilitator or co-ordinator. The facilitators' and co-ordinators' future goals as regards their specific roles in a RBL course are summarised in Figure 7.11.

Figure 7.11: A bar diagramme to indicate the distribution of personal goal categories of facilitators and co-ordinators
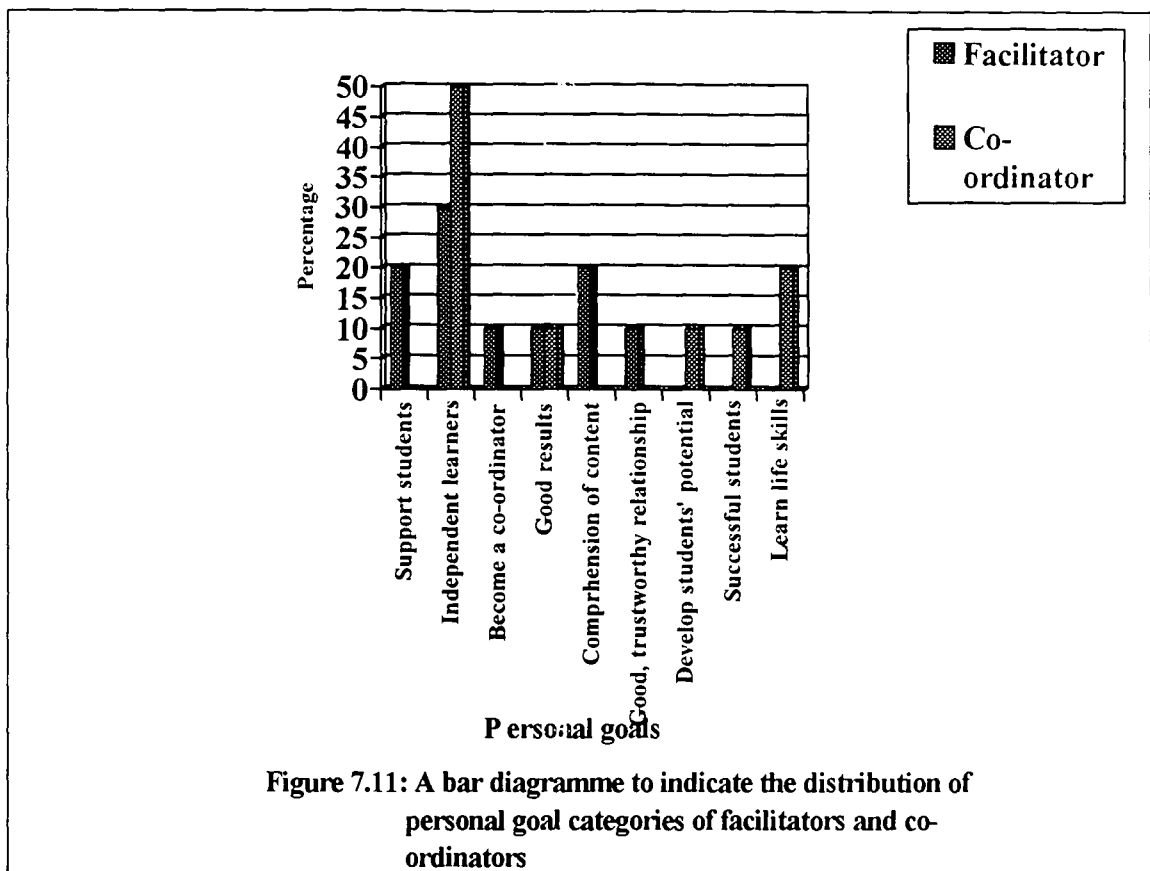
The goal with the highest score by facilitators (30%) and co-ordinators (50%) was to assist students to become independent and responsible learners (Figure 7.11). This correlates with one of RBL's main aims, namely to guide students towards independent learning via the use of RBL resources to broaden their learning base (see 3.6.). The facilitators also indicated other goals such as supporting students (20%), good results (10%), comprehension of content (20%) and good, trustworthy relationships with students (10%). Other goals indicated by co-ordinators are good results (10%), developing student potential (10%), successful students (10%) and learning life skills (20%). The fact that the majority of goals set by facilitators and co-ordinators are primarily focused on the students, correlates with one of the facilitator/co-ordinator roles, namely that the key relationship is with the learner (see 4.2). The fact that the majority of goals primarily focused on the students, may also indicate that personal goals are not a priority. It also may suggest that the facilitators and co-ordinators have not yet internalised RBL as a personal goal.

7.3   SYNOPSIS OF DEMOGRAPHICAL AND RELEVANT INFORMATION DATA

1. It is evident that diversity exists among the age factor of facilitators and co-ordinators, which is an important aspect that have to be taken into account by the developers of the RBLCPP in order to accommodate the variety of needs. The reasons for the age differences were not investigated in this study.

2. It is evident that the majority of the facilitators (70%) and co-ordinators (80%) are delivering the resource-based learning method in their second language (see 7.2.1.2). This suggests that the facilitators and co-ordinators have limited language proficiency, which can have a negative influence on their functioning and performance. This language problem has also been extended when reflecting the language difficulties that students experience as second language speakers (see 3.4.2.). Therefore, the extended language problem appears to have an effect on both parties. This language problem is not a unique problem, but rather a prominent problem in the current South African context.

3. The majority of facilitators (80%) and co-ordinators (80%) have a positive attitude towards higher education and its benefits (e.g. education being a formal function).

4. The fact that the majority of the facilitators (100%) and half of the co-ordinators (50%) are appointed on a temporary basis might explain the insecurity and uncertainty as regards the permanency of the job (see 4.5).

5. It is evident that 39,5% of the facilitators are devoting most of their time to facilitating, while 34,4% of the co-ordinators are devoting most of their time to other aspects such as writing materials and preparation which correlates with their job descriptions (see 7.2.1.4). It appears that the co-ordinators spend more time on preparation than the facilitators, which can possibly be due to the fact that they need more time for preparation to be able to do the orientation and training for the facilitators as well.

6. It appears that 50% of the facilitators and 50% of the co-ordinators have a minimum of 0-4 years of teaching experience, but the other results indicated a wide distribution of years of teaching experience (see 7.2.1.6). Therefore, it is also evident that there exists diversity among the years of teaching experience between facilitators and co-ordinators that need to be taken into account by the developers of the RBLCPP. This questionnaire does not indicate reasons or

whether the number of years of teaching experience has an effect on the adoption process of the new RBL methodology.

7. According to the responses (see 7.2.1.8) it seems that facilitators and co-ordinators are striving towards the same positive future goals, but are mainly focused on the benefits of the students. It thus seems as if personal goals are not regarded as a priority.

The above-mentioned results cannot be interpreted in isolation and therefore other quantitative and qualitative data, within the context, had to be included in the interpretation.

7.4   RESULTS OF THE STAGES OF CONCERN (Soc) QUESTIONNAIRE

The Statistical Package for Social Sciences (SPSS Incorporated, 1990) programme, which is widely used and comprehensive statistical programmes in social sciences, was used in the descriptive statistical analysis of the SoC questionnaire (Bryman and Cramer, 1990).

7.4.1 Stages of Concern (SoC) questionnaire

The SoC questionnaire was completed by ten facilitators and ten co-ordinators in the RBLCPP. Before proceeding to test the proposed hypotheses, the descriptive statistics for the seven stages of concern for the two independent groups (i.e. facilitators and co-ordinators) are provided in Table 7.2

Table 7.2: Means ($\bar{X}$) and standard deviations (S) for the seven stages of concern for facilitators ($n_1 = 10$) and co-ordinators ($n_2 = 10$)

Stages of Concern	Facilitators		Co-ordinators	
	$\bar{X}$	S	$\bar{X}$	S
Stage 0 (Awareness)	6,7	5,23	5,4	4,79
Stage 1 (Informational)	22,8	6,92	20,5	6,55
Stage 2 (Personal)	23,8	6,84	20,6	7,51
Stage 3 (Management)	10,6	7,62	10,8	4,18
Stage 4 (Consequence)	29,2	7,02	28,1	4,09
Stage 5 (Collaboration)	24,1	8,61	29,0	5,23
Stage 6 (Refocussing)	18,2	5,22	17,2	6,49

7.4.1.1 Discussion of results of Table 7.2

The facilitators' and co-ordinators' performance on the seven stages of concern of the SoC questionnaire is indicating the intensity of the concern. The higher the mean score, the more intense the concern at that stage, while the lower the mean score, the less intense the concern at that stage. The peak mean scores can be interpreted directly from the SoC definitions, with the exception of stage 0, because it has two meanings depending on whether the respondent is a non-user or user.

It is evident from Table 7.2 that except for stages three and five, the facilitators' mean score on the other stages is higher than that of the co-ordinators. The higher stage 3 mean score by co-ordinators, as reflected in Table 7.2, is only indicative of a small difference (0,2) and therefore does not justify further interpretation. A higher stage 5 mean score (4,9) by co-ordinators is indicating a more intense concern about collaboration, co-ordination and co-operation issues with other RBL innovation users. The fact that the co-ordinators' job description (Appendix D) is more focused on collaboration aspects explains why the co-ordinators demonstrate a higher intensity concern towards collaboration than the facilitators.

7.4.2 Mann-Whitney-U-Test

The proposed statistical hypotheses are investigated by applying the Mann-Whitney-U-test. Now is an appropriate time to calculate the statistic U_A needed for the test of significance of separation between the two groups. This test statistic of the afore-mentioned test is as below:

$$U_A \quad = \quad n_A n_B \quad + \quad T_B$$

Note further that while another statistic U_B, may be calculated directly, it is also given by

$$U_B \quad = \quad n_A n_B \quad - \quad U_A$$

In the above-mentioned example,

$$T_B \quad = \quad \text{the sum of the ranks of sample B, and}$$
$$U \quad = \quad \text{the smallest of } U_A \text{ or } U_B$$

The decision rule for a two-tailed test was applied in this case, because the alternative hypothesis is non-directional, and is as follows:

When observed $U \quad \leq \quad U_{1-\alpha/2}$ for n_A and n_B is rejecting H_O.

Since the results of the significant level are tested at the 5% level and the alternative hypothesis is non-directional, the cumulative probability of the critical value is 0,025. Since U equals the smallest of U_A or U_B, the null hypothesis will only be rejected if the calculated U-value falls on or below the critical value. The statistical analysis was done by using the SPSS-programme and these results appear in Table 7.3 The critical value is 23.

Table 7.3: Mann-Whitney-U-test results

Stage of Concern	U-value	p-value+
Stage 0	41,5	0,5164
Stage 1	41,5	0,5197
Stage 2	35,5	0,2716
Stage 3	40,5	0,4705
Stage 4	37,0	0,3228
Stage 5	33,5	0,2107
Stage 6	44,0	0,6485

7.4.2.1 Discussion of the results of Table 7.3

Not one of the calculated U-values is smaller than 23 and therefore not at least significant on the 5% level. In other words, the null hypothesis could not be rejected for any of the seven stages and the conclusion could thus be made that there exist no meaningful differences in the mean scores of the two groups. The fact that there exist no meaningful differences between the two groups does not imply the acceptance of the null hypothesis, but means only that the observed sample data are insufficient evidence to justify the rejecting of the null hypothesis (Huysamen, 1988). Other possible reasons which could explain the existence of no meaningful differences between the two groups, are as follows:

❑ one of the disadvantages of a non-parametric test is (e.g. the Mann-Whitney-U-test is a non-parametric test) that it does not utilise all the information provided by the sample. As a result of this wastefulness, a non-parametric test is slightly less efficient (Walpole, 1982);

❑ a non-parametric test will require a larger sample size (e.g. this study consists of a small sample size) than the corresponding parametric test to achieve the same probability, which demonstrates that the first test is much stricter.

7.5   CHAPTER CONCLUSION

This chapter reported and discussed the quantitative results of the empirical research. Hereby the first two main aims of the empirical research have partly been reached. These aims are about determining the psychological experiences of facilitators and co-ordinators of higher education change as well as determining whether there are differences amongst these two groups within their psychological experience of higher educational change.

Chapter 9 will follow with the results of the qualitative data, which will then be triangulated, and based on the interpretations, recommendations will be made to improve the resource-based learning course and identify future research areas.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2

THE CONCEPTUAL
ORIENTATION OF CHANGE

Chapter 3

RESOURCE-BASED
LEARNING AS A NEW
LEARNING MODE

Chapter 4

FACILITATORS AND CO-
ORDINATORS IN A RBL
COURSE

PART 2

Chapter 5

THEORETICAL
FOUNDATION OF
RESEARCH DESIGN AND
METHODOLOGY

Chapter 6

RESEARCH METHODS
AND PROCEDURES

Chapter 7

QUANTITATIVE
RESEARCH RESULTS

Chapter 8

QUALITATIVE
RESEARCH RESULTS

Chapter 9

TRIANGULATION
RESEARCH RESULTS

Chapter 10

CONCLUSION AND
RECOMMENDATIONS

QUALITATIVE RESEARCH RESULTS

8.1 INTRODUCTION

*H*aving focused on the quantitative results (see Chapter 7), attention will now be focused on the qualitative data obtained during the data collection phase of this study. In order to investigate the first two specific empirical research aims (see 1.3.2), open-ended questions in structured interviews with facilitators and co-ordinators in the RBLCPP were used. Qualitative methods have been used for the analysis of these structured interviews.

The responses of the facilitators and co-ordinators to each question are viewed as non-numerical and unstructured data. An aid to handle non-numerical and unstructured data in qualitative analysis which has been used in this study was the QSR NU*DIST computer package (Application Software Package, 1995). This supports the data coding system in an Index System, searching for text, patterns or coding and then theorising about the data. In this study the responses of the facilitators and co-ordinators are structured by using the Index Tree where data is organised hierarchically in categories and subcategories. These categories and subcategories will serve as the basis on which the data will be structured and displayed.

8.2 THE PSYCHOLOGICAL EXPERIENCE OF HIGHER EDUCATIONAL CHANGE BY FACILITATORS AND CO-ORDINATORS IN A RESOURCE-BASED LEARNING COURSE

This study has made use of a structured interview questionnaire (see Appendix C). The structured interview consists of open-ended questions and the subsections of

these questions have been used as probes (specifically in cases where the respondents were unable to provide the relevant information on own initiative).

8.2.1   Procedure

The categories and subcategories representing the facilitators' and co-ordinators' responses (see 8.1) will be discussed under the following headings:

❑ *Discussion of data results:* Due to the small size of the purposive selection of facilitators and co-ordinators, it is inappropriate to identify minor or major patterns for making generalisations, and therefore it has been decided to rather discuss the results.

❑ *Comments:* These are remarks by the researcher in an attempt to contextualise the responses of the facilitators and co-ordinators.

❑ *Implications:*   These represent the researcher's opinions of the possible implications of the facilitators' and co-ordinators' responses for future development of the RBLCPP.

Due to the nature of the data it is important to remember that not all three aspects will be appropriate in the discussion of all the categories or subcategories and will therefore only be used if applicable.

In order to obtain a holistic view of the qualitative analysis, diagrams will be used continuously in order to depict the qualitative findings visually.

An account of the psychological experience of higher educational change by facilitators and co-ordinators in a RBL course is based on the following obvious categories or subcategories:

8.2.2 Traditional teaching mode

The purpose of the first question namely, "How many years have you been involved in the traditional learning mode?", is to allow more interpretive interplay between the respondents' experience and the traditional learning mode. The responses of the respondents were divided in certain sub-categories (see Table 8.1).

a)   Years involved in the traditional teaching mode

Table 8.1 Frequency distribution according to the total number of years of traditional teaching of facilitators (n_1 = 10) and co-ordinators (n_2 = 10)

Years involved	Facilitators	Percentage	Co-ordinators	Percentage
0- 4 years	5	50%	5	50%
5-9 years	3	30%	2	20%
10-14 years	2	20%	0	0%
15-19 years	0	0%	0	0%
20-24 years	0	0%	2	20%
25-29 years	0	0%	0	0%
30-34 years	0	0%	0	0%
35-39 years	0	0%	1	10%

Discussion of results: It appears that 50% of both the facilitators and co-ordinators, were involved in the traditional teaching mode between 0-4 years (see Table 8.1). According to the results (the mean years involvement in the traditional teaching mode), the majority of facilitators were on **average** involved in the traditional teaching mode for 5 years, while the majority of co-ordinators were on **average** involved in the traditional teaching mode for 10 years. The co-ordinator sample represented a wider spread of involvement years in the traditional teaching mode than the facilitators.

Comment: The responses suggest that the majority of co-ordinators have more experience of the traditional teaching mode than the majority of the facilitators have.

Implication: There is a difference between the majority of facilitators and co-ordinators as regards the number of years of involvement in the traditional teaching mode.   The developers of the RBLCPP should take these differences into account with regard to training and development of facilitators and co-ordinators.

b)   Effectiveness of the traditional teaching mode

The aim of the probe question was to establish the perceptions of facilitators and co-ordinators with regard to the effectiveness of the traditional teaching mode.

Figure 8.1: A bar diagramme to indicate the perceptions of facilitators and co-ordinators with regard to the effectiveness of the traditional teaching mode
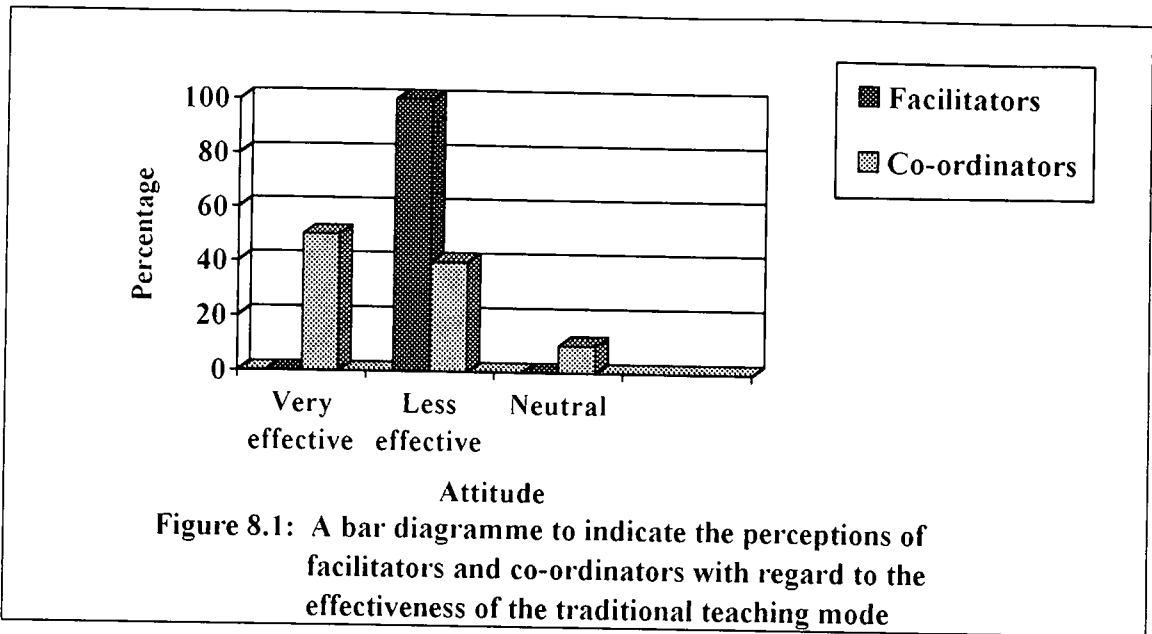
Discussion of results: It appears that all the facilitators (100%) consider the traditional teaching mode as being less effective, while only 40% of the co-ordinators regard the traditional teaching mode as being less effective (see Figure 8.1). It is also evident that 50% of the co-ordinators felt that the traditional teaching mode is very effective.

Comment: All the facilitators with less experience in the traditional teaching mode, were more negative towards the effectiveness of the traditional teaching mode, whereas some of the co-ordinators (50%) with more experience in the traditional teaching mode, were more positive towards the effectiveness of the traditional teaching mode.

c)   Belief in the traditional teaching mode

The purpose of this question was to investigate the facilitators' and co-ordinators' personal commitment towards the traditional teaching mode by requesting facilitators and co-ordinators to indicate whether or not they believe in the traditional teaching mode.
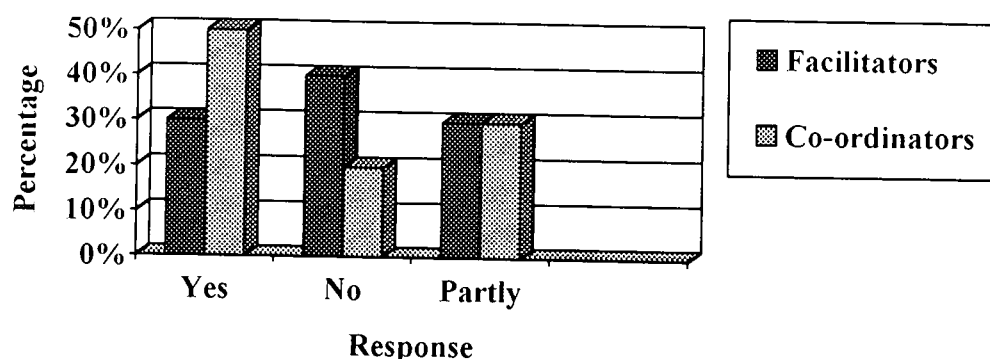
Figure 8.2: A bar diagramme to indicate the distribution of belief in the traditional teaching mode

Discussion of results: It appears that 50% of the co-ordinators seem to believe in the traditional teaching mode, whereas 40% of the facilitators do not believe in the traditional teaching mode (see Figure 8.2).

Comment: Some of the co-ordinators (50%) appear to be more positive towards and believe in the traditional teaching mode (see Figure 8.2). The fact that more co-ordinators believed in the traditional teaching mode may be due to a longer period of involvement and experience with the teaching mode.

Implication: Although some of the co-ordinators (50%) appear to have a positive belief in the traditional teaching mode, the RBL mode also appeals to them (see 8.2.3.e). As regards the latter, the majority of co-ordinators have not become involved in RBL on own initiative, but were nominated.

With regard to the responses on the traditional teaching mode by facilitators and co-ordinators in 8.2.2 it can be concluded that it is evident that some of the co-ordinators have a higher average of years of experience in the traditional teaching mode. These co-ordinators seem to be more personally committed towards the traditional teaching mode, due to their experience, the effectiveness and positive results in the traditional teaching mode, while the majority of facilitators have a lower average of experience in years in the traditional teaching mode. Some of these facilitators appear to be more

negative towards the effectiveness of the traditional teaching mode and/or do not believe in the traditional teaching mode.

8.2.3 Resource-based learning mode

It was important for the researcher to include questions on the RBL mode to gather more detailed information regarding the specific experience of facilitators and co-ordinators with regard to the RBL mode.

a)   How did you become acquainted with the resource-based learning concept?

The aim here was to identify the source of information with regard to the RBL concept.

Figure 8.3: A bar diagramme to indicate the distribution of ways of finding out about the RBL concept by facilitators
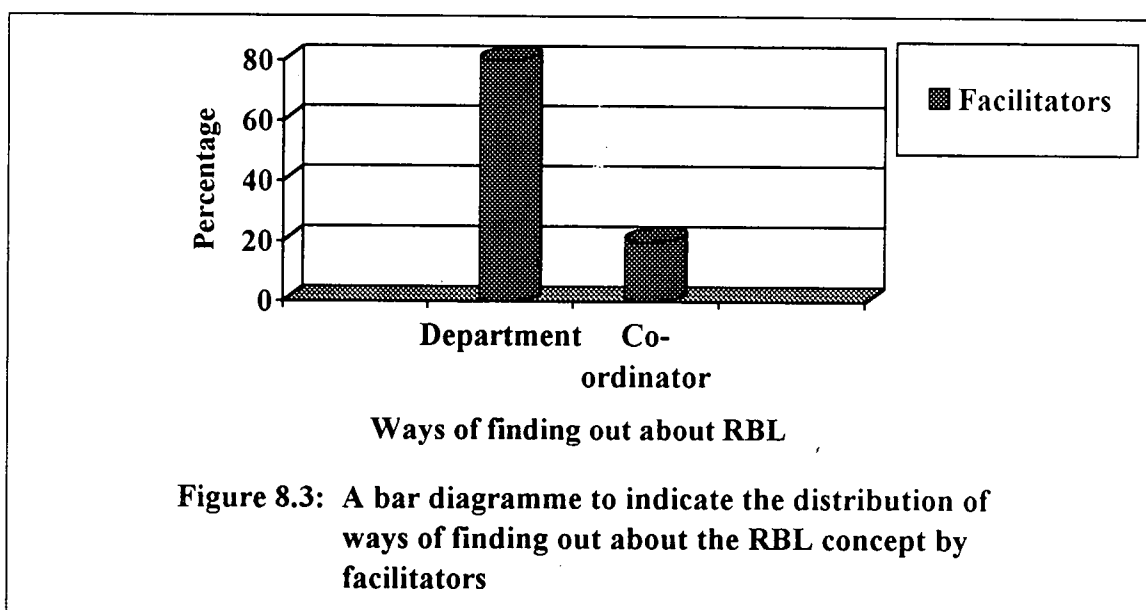
Discussion of results: It appears that the majority of the facilitators (80%) heard about the RBL concept via their department (see Figure 8.3). The other 20% of the facilitators heard about the RBL from a co-ordinator.

Figure 8.4: A bar diagramme to indicate the distribution
of ways of finding out about RBL concept by co-
ordinators
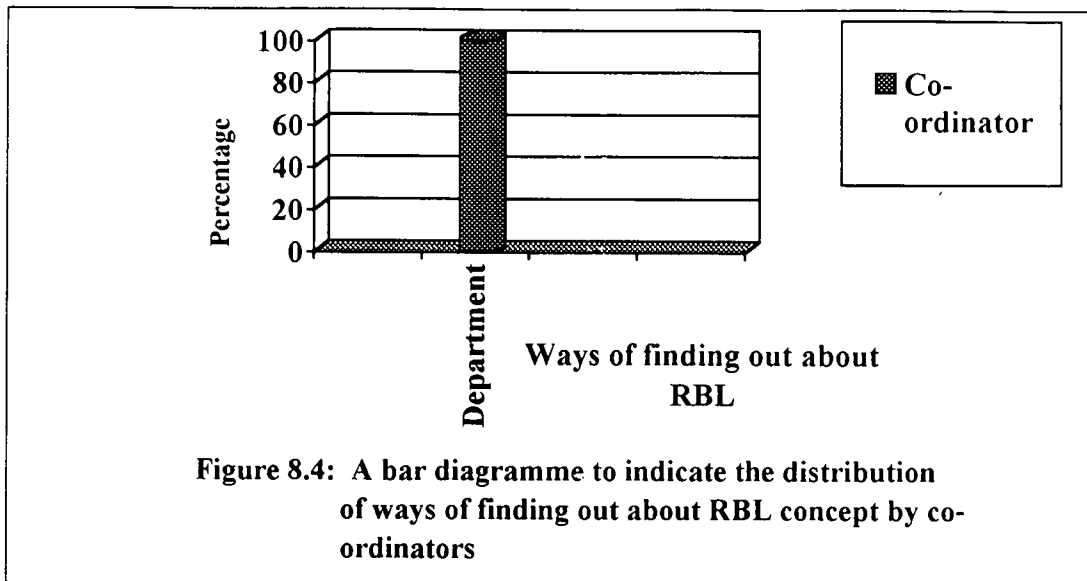
Discussion of results: It is evident that all the co-ordinators (100%) heard about the RBL concept via their departments (see Figure 8.4).

Comment: It appears that the various departments play a vital role in transmitting the RBL concept.   The respective departments were initially responsible for the nomination of facilitators and co-ordinators of the RBLCPP.   This could cause problems with the facilitators' and co-ordinators' personal commitment towards RBL, due to the fact that their involvement was a result of nomination and not volunteer choice.

b)   When did you hear about the resource-based learning concept for the first time?

The aim of asking this question was to indicate the extent to which facilitators and co-ordinators were familiar with the RBL concept.

Table 8.2 Frequency distribution according to when facilitators (n_1 =10) and co-ordinators (n_2 = 10) first heard about the RBL concept

Year	Facilitators	Percentage	Co-ordinators	Percentage
1995	0	0%	1	10%
1996	0	0%	3	30%
1997	10	100%	6	60%

Discussion of results: The majority of both the facilitators (100%) and co-ordinators (60%) have only heard about the RBL concept in 1997 (1997 is also the year in which the programme was initiated). It is important to take note that the facilitators and co-ordinators heard about the RBL concept in the same year that they got involved with the RBLCPP.

Comment: The above-mentioned results indicate that RBL is a relatively new concept to all the facilitators and the majority of co-ordinators.

Implication: Knowledge of RBL is an issue to be taken into account in the development and improvement of the RBLCPP. Therefore, staff orientation and development with regard to RBL is important in order to understand the nature and the different strategies of RBL as well as to re-conceptualise the new roles that the staff need to adopt within the different RBL courses.

c)   Involvement in the Resource-based Learning Career Preparation Programme

With this question the researcher wanted to determine the ways in which facilitators and co-ordinators became involved with RBL.
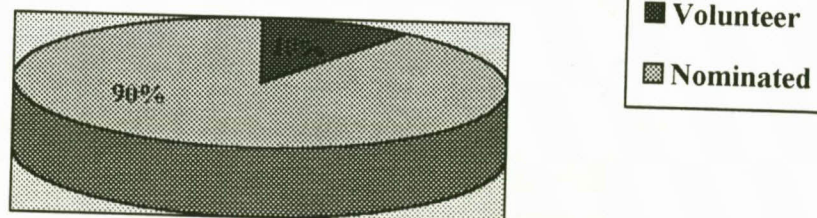
**Figure 8.5: A sector diagramme to indicate the facilitators'
participation in the RBLCPP**

Discussion of results: The majority of facilitators (90%) appear to have been nominated to participate in the RBLCPP (see Figure 8.5).

**Figure 8.6: A sector diagramme to indicate the co-ordinators'
participation in the RBLCPP**
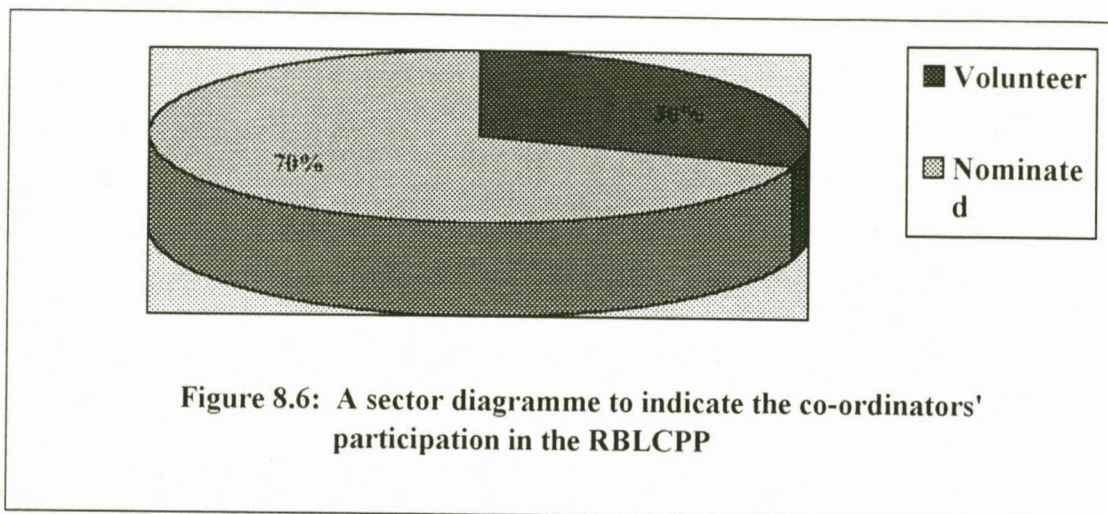
Discussion of results: The majority of the co-ordinators (70%) appear to have been nominated to participate in the RBLCPP.

Comment: The responses suggest that both the majority of facilitators' and co-ordinators' involvement in higher educational change, namely the new learning methodology (i.e. RBL), seems to be an obliged change due to the fact that they were nominated and did not volunteer. Although the majority of both the facilitators and the co-ordinators were nominated to become involved in RBL, the majority of the facilitators' and co-ordinators' experienced this nomination not as negative (a forced change), but rather as an opportunity and challenge.

Implication: In order to develop or improve the RBLCPP, it is vital for the developers of the programme to take into account the fact that the majority of both the facilitators' and the co-ordinators' involvement in RBL was due to an obliged change. The possibility that the majority of both the facilitators and co-ordinators might have experienced the change as compulsory can not be ruled out.

d)   Definition of resource-based learning

During the interview facilitators and co-ordinators were requested to give their own definition of RBL in order to gather the respondents' understanding and knowledge of RBL.

Discussion of results: Certain criteria for the RBL definition had been stipulated, as based on the literature (see 3.4). According to the results, the majority of the facilitators pointed out 7 of the 10 criteria (see 3.4) for the RBL definition. There appears to be a misconception by a few facilitators that RBL means the same as a bridging programme or that it implies being a second chance for disadvantaged students (as in this case of the RBLCPP, which are within the specific South African context).   The three criteria that have not been mentioned by the majority of facilitators were: Working as a team member, RBL is based on open-learning and distance education principles and uses appropriate assessment strategies that maximises the students skills and knowledge. The majority of the co-ordinators responses indicated that 8 out of the 10 criteria (see 3.4) of the RBL definition have been met. The two criteria that have not been mentioned by the majority of the co-ordinators were: To build in frequent feedback and RBL is based on open-learning and distance education principles.

The majority of both the facilitators and the co-ordinators emphasised the following three criteria:

❑   changing the roles from information transmitter to facilitator;
❑   the emphasis is on the materials rather than the deliverer;
❑   RBL is based on open learning principles.

Comment: The responses of the majority of both the facilitators and the co-ordinators suggested that they have a general idea of the RBL concept, but still there were misconceptions that needed attention. The fact that some of the facilitators and the co-ordinators did not mention all the criteria could either be due to a lack of knowledge or they did not mention everything they knew during the interview. On

the one hand it could reflect some of the weaknesses of this specific interview questionnaire, but on the other hand it could also reflect areas in the programme that needed attention.

e)   Attitudes towards resource-based learning

The attitudes of facilitators and co-ordinators towards RBL are vital, due to the fact that it can be an indication of an individual's motivation and commitment.

Discussion of results: All the facilitators and co-ordinators indicated that RBL appeals to them. The reasons mentioned by most of the facilitators, differed from the reasons given by the co-ordinators. The facilitators' reasons were as follows:

- ❏ I like the principle of active learning;
- ❏ RBL focuses on skills and personal development, which is a holistic approach;
- ❏ students have to work harder, be more responsible and learn to be independent;
- ❏ it is an indirect way to expect students to prepare for contact sessions.

The co-ordinators highlighted the following reasons, which differ from the facilitators' reasons, namely:

- ❏ students learn independently and therefore are more responsible and internally motivated;
- ❏ preparation for the information era;
- ❏ a creative learning method;
- ❏ a much more satisfying way to solve problems and also create a more active student.

From the above-mentioned reasons it is evident that both facilitators and co-ordinators regard RBL as valuable for the development of students and also regard it as for a creative and flexible learning methodology.

The similarities with regard to attitudes towards RBL, indicated by the majority of facilitators and co-ordinators were that students learn at their own pace, RBL is a different approach to teaching and that the facilitators, co-ordinators and students have to acquire certain knowledge and skills to make a success of RBL.

Comment: The positive responses from both facilitators and co-ordinators may contribute to their motivation, since they experience RBL as positive. The reason for the differences between facilitators' and co-ordinators' attitudes has not been investigated, because it was not the purpose of this study.

f)   Reasons for introducing resource-based learning

It was expected from facilitators and co-ordinators to indicate their understanding of the reasons why RBL was introduced to the broader higher education context. It was also an important aspect for the researcher in order to investigate whether facilitators and co-ordinators comprehend RBL within the broader higher education context.

Discussion of results: It appeares that 90% of the facilitators and 60% of the co-ordinators were not aware of all the reasons why RBL was introduced into the higher education band (see 1.1, 1.2 & 3.2). The possible reasons indicated by the remaining minority of both the facilitators and co-ordinators were as follows:

❑ good reasons for implementation namely preparation of students for further studies;

❑ RBL provides an alternative opportunity for students;

❑ the implementation of RBL in other countries appears to have had good results.

Comment: It appears that the majority of both the facilitators and the co-ordinators demonstrated shortcomings of clear-shared reasons why RBL was introduced in the higher education band.

Implication: The responses of both the majority of facilitators and the co-ordinators confirmed the need for clear briefing on the reasons for shifting to RBL in the wider higher education context. This is an important staff development aspect to be covered in the induction period to ensure that facilitators and co-ordinators are aware of what is expected and why it is expected from them. It should also help to keep the hearts and minds of staff (e.g. facilitators and co-ordinators) and management on the same level (see also 3.7).

g)   Feelings towards the introduction of resource-based learning

The purpose of this question was to identify the feelings of facilitators and co-ordinators towards the introduction of RBL in the RBLCPP.

Discussion of results: Although the majority of both the facilitators and the co-ordinators were unaware of all the reasons for introducing RBL in the higher education band (see 8.2.3.f), the majority of both facilitators (70%) and co-ordinators (70%) appeared to be positive about the introduction of RBL in the RBLCPP.

The majority of the facilitators emphasised that the introduction of the RBL via a bridging programme was a brilliant idea as well as the fact that it was done at an appropriate time and implemented in the correct way. This was a brilliant idea, because it also provides an alternative opportunity to students that really need it due to certain disadvantages.

The majority of the co-ordinators emphasised that introducing the RBL concept initially through a bridging programme was a good first step/initiative where positive results could serve as evidence for the value of such a programme as well as to convince other academics, which may enhance a paradigm shift. The majority of the co-ordinators also felt that this initiative was based on good quality planning beforehand and they felt positive towards the implementation thereof in the mainstream courses of the university. They also pointed it out as being a brilliant method for developing students (e.g. which is vital in the South African context due to lack of background problems) to become much more prepared for further study. The

utilisation of the bridging programme as a pilot study has the benefit which can overcome the big adaptation problem academics struggle with when they do not know what to expect.

Comment: It does appear that most of the facilitators and co-ordinators were positive towards RBL, which may contribute to their motivation.

h)   Relation with the use of resource-based learning

The purpose of this question was to investigate how the facilitators and co-ordinators relate to RBL.

Figure 8.7: A bar diagramme to indicate how facilitators and co-ordinators relate to RBL
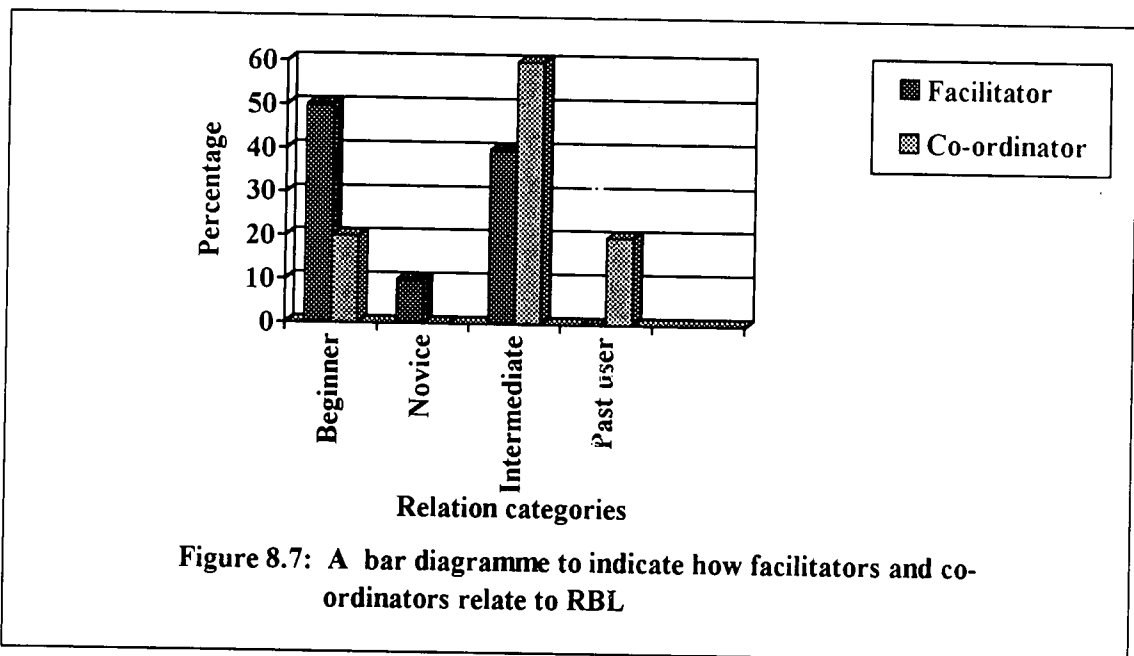
Discussion of results: Some facilitators (50%) view themselves as beginners, whereas the majority of co-ordinators (60%) see themselves in the intermediate role. Some of the facilitators indicated themselves as beginners, which is appropriate when you take into account that they have only been involved with RBL for six months. The fact that the majority of co-ordinators view themselves as intermediates correlates with their co-ordinator role as indicated in their job descriptions.

Comment: The time period involved in RBL as well as the role/tasks of facilitators and co-ordinators (see Appendix D) may be of value in clarifying the above-mentioned differences between facilitators and co-ordinators.

i) Status difference between a facilitator/co-ordinator versus a lecturer.

The purpose of this question was to determine what facilitators' and co-ordinators' perceptions were with regard to the status of their posts.

Table 8.3: Frequency distribution according to the belief regarding status differences between facilitators (n_1 =10) and co-ordinators (n_2 = 10) versus that of lecturers

Belief in status difference	Facilitators	Co-ordinators
Yes	20%	60%
No	80%	40%

Discussion of results: It appears that for the majority of facilitators (80%) they did not experience a status difference between the facilitator and lecturer positions (see Figure 8.3). While the majority of the co-ordinators (60%) indicated that they experience a status difference between the co-ordinator and lecturer positions. These co-ordinators' responses confirmed that they are in favour of the lecturer position, because they believed that the lecturer position enjoyed higher status.

Comment: The fact that 60% of the co-ordinators believed that the post of lecturers enjoyed a higher status than that of a co-ordinator may have a negative influence on co-ordinators' motivation and commitment towards the RBL mode and the RBLCPP.

It can be deducted from the responses of facilitators and co-ordinators in 8.2.3 that in general facilitators and co-ordinators accept RBL for the future as the new delivery mode. The implementation of RBL is still in the beginning phase taking into account the short involvement period and therefore the limited knowledge and skills. This correlates with the responses of the RBL user categories. A certain problem area that has been mentioned is to increase the facilitators' and co-ordinators' comprehension

of RBL within the wider higher education context. It is also important to extend the majority of both the facilitators' and the co-ordinators' comprehension of the RBL concept, because although the departments provided the facilitators and co-ordinators with information as regards RBL, it was insufficient. The majority of the facilitators did not view a status difference between the facilitators' position versus the position of the lecturer, while the majority of the co-ordinators viewed the lecturer with a higher status than their own co-ordinator position.

8.2.4 Preference of delivery mode

It was also important to determine the preference of delivery mode by facilitators and co-ordinators, which could contribute to an individual's commitment towards a certain delivery mode.

Table 8.4 Frequency distribution according to preference for the RBL delivery mode

Preference	Facilitators	Percentage	Co-ordinators	Percentage
Traditional learning mode	0	0%	0	0%
RBL	10	100%	9	90%
Both	0	0%	1	10%

Discussion of results: All the facilitators (100%) and the majority of co-ordinators (90%) pointed out that they prefer RBL. These results correlate with the results of the positive attitude towards RBL (see also 8.2.3.e).

Comment: The responses again emphasised that all the facilitators and the majority of the co-ordinators are positive towards RBL and this may contribute to their motivation regarding the shift to a new educational delivery mode.

Implication: The preference of RBL by all the facilitators and the majority of the co-ordinators corresponds with the higher education policy documents such as NCHE (1996b); The White Paper on Higher Education (1997); and the Higher Education Act (1997) that propose RBL as a new delivery mode (see 1.1 and 1.2).

In order to conclude, with regard to the responses of facilitators and co-ordinators on 8.2.4, RBL is regarded as the preferred delivery mode for the future by all the facilitators and the majority of the co-ordinators.

8.2.5 Training

It has already been indicated that staff development is vital in a higher educational change context (see 3.7). This confirms and emphasises the purpose of including questions on the RBL training aspects of facilitators and co-ordinators of the RBLCPP.

a)   Feeling towards attendance of workshops

The training of RBLCPP facilitators and co-ordinators in RBL was provided by means of workshops. The purpose of this question was to determine how the facilitators and co-ordinators have experienced the workshops.

**Figure 8.8: A sector diagramme to indicate
the facilitators' attitude towards
attendance of workshops**
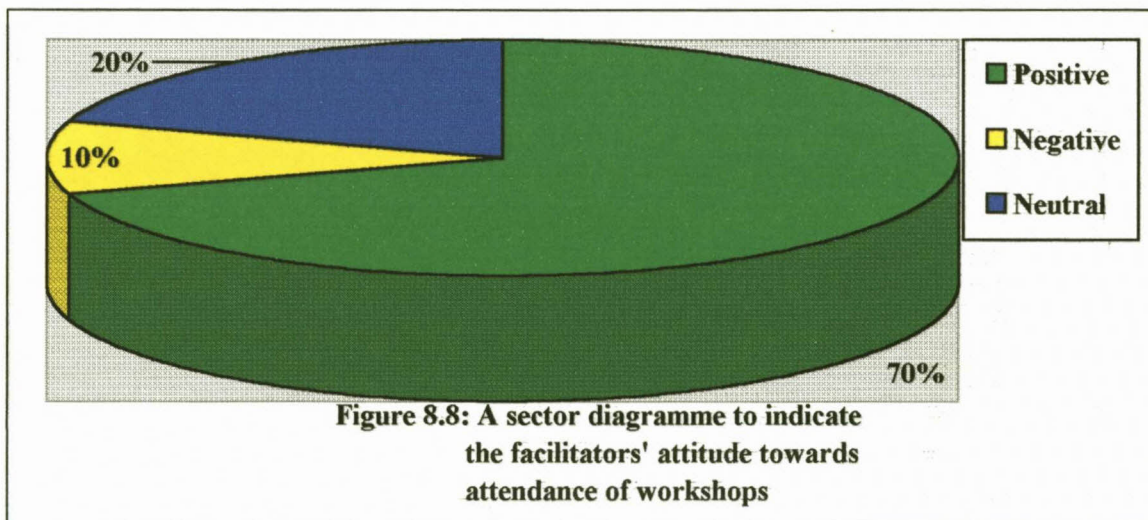
Discussion of results: The majority of the facilitators (70%) were positive towards the attendance of workshops.

**Figure 8.9: A sector diagramme to indicate the co-ordinators'
attitude towards attendance of workshops**
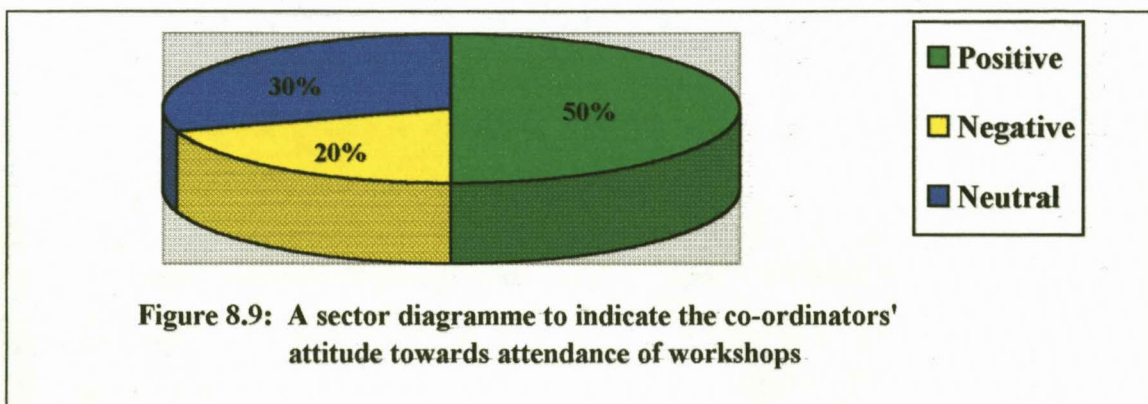
Discussion of results: Half of the co-ordinators (50%) were positive towards the attendance of workshops.

Comment: The 70% positive responses from facilitators indicate that they are positive regarding the attendance of workshops. Only 50% of the co-ordinators were positive towards the attendance of workshops, which causes a serious concern, if you take into account that co-ordinators have to be subject experts who are responsible for the training and orientation of the facilitators and therefore need workshops/training opportunities to keep up with the latest developments as regards RBL.

Implication: The indication that only 50% of the co-ordinators are positive towards the attendance of workshops, may be due to a variety of reasons. It is important for the developers of the RBLCPP to investigate these reasons.

b)   Benefits of workshops

The purpose of this question was primarily to determine the value of the training workshops for facilitators and co-ordinators in the RBLCPP.

Discussion of results: All the facilitators and co-ordinators agreed that workshops on RBL provide practical examples of how to implement RBL successfully and also demonstrate the effectiveness of the learning mode (e.g. to teach students to become independent and responsible learners). Some of the facilitators and some of the co-ordinators distinguish between certain benefits of RBL workshops, which will be discussed in the following paragraphs.

The facilitators indicated the following benefits of workshops:

❏   competent and professional trainers who provided good exposure opportunities to the facilitation process via role-playing, conducted workshops;
❏   improved knowledge of RBL;
❏   provided RBL strategies on how to handle students better, with greater confidence and more success.

Co-ordinators stated the following benefits:

- the fact that there was a lot of inter-activity during the workshops provided solutions for problem areas;
- interesting information was provided;
- provide assistance in visualising the programme.

Comment: The positive responses with regard to the benefits of workshops on RBL may contribute to the motivation of facilitators and co-ordinators.

Implication: The indication that some of the facilitators and some of the co-ordinators recognise the benefits of RBL and are positive towards RBL, may ease the paradigm shift to RBL and therefore ease the task of developers during training and orientation.

c)   Negative feelings towards workshops

The aim with this question was to investigate the current negative feelings towards training workshops. This may serve as a starting point to improve the RBLCPP in the future.

Discussion of results: The majority of both the facilitators and the co-ordinators indicated that there is currently a lack of regular follow-up development opportunities to provide support in this shift to RBL. More regular workshops would also be more effective, because they presently feel they have to do too much in a short period, or that there are many areas to be covered where more guidance is needed. All the facilitators and all the co-ordinators in the natural sciences felt that the current workshops do not specifically cater for the natural science field, but focus primarily on the human science field. This causes uncertainty and frustration among facilitators and co-ordinators in the natural science field.

Comment: From these responses it seemed that the majority of both the facilitators and the co-ordinators identified a lack in the all-encompassing training area. Therefore the effective management of diversity by developers becomes more important in order to accommodate the variety of needs.

Implication: The developers of the programme should reflect critically on how to adjust the training of staff (e.g. facilitators and co-ordinators) in order to address specific needs and to provide more regular training opportunities which will cover all subjects equally, as well as provide support and guidance during this shift to RBL.

d)   Orientation of role (e.g. facilitator/co-ordinator)

This question was included, so as to determine whether the facilitators and co-ordinators have in advance received appropriate information and guidance as regards their respective roles. The fact that workshops played a vital role in the orientation of the facilitators and co-ordinators (with reference to their respective roles) and the fact that 30% of the facilitators and 50% of the co-ordinators seem to be negative towards the current workshops (see 8.2.5.c), seem to be a concern that needs further attention.

Figure 8.10: A sector diagramme to indicate the orientation with regard to the facilitator's role
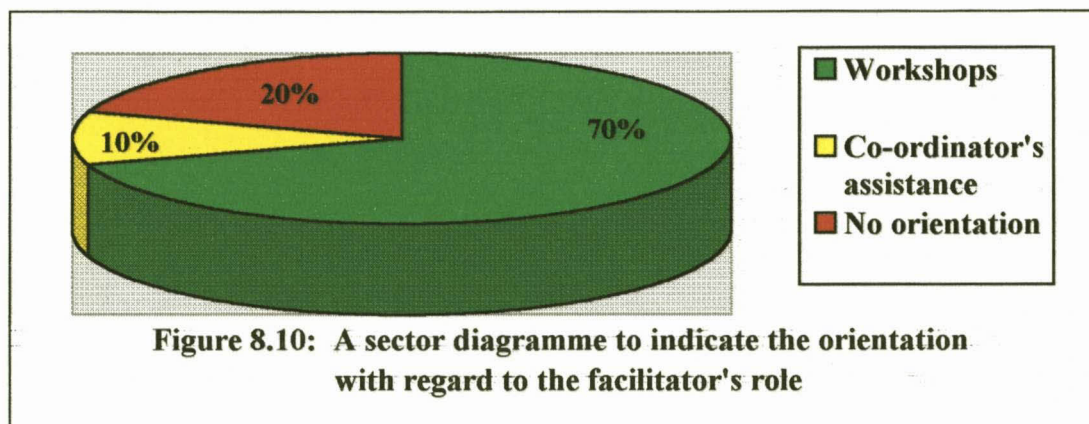
Discussion of results: The majority of the facilitators (70%) indicated that they were primarily orientated towards their role as facilitator by means of workshops. Some of the facilitators (10%) have been orientated towards their role as facilitator via the assistance of their co-ordinator, while 20% of the facilitators indicated that they were not orientated towards their role as facilitator.
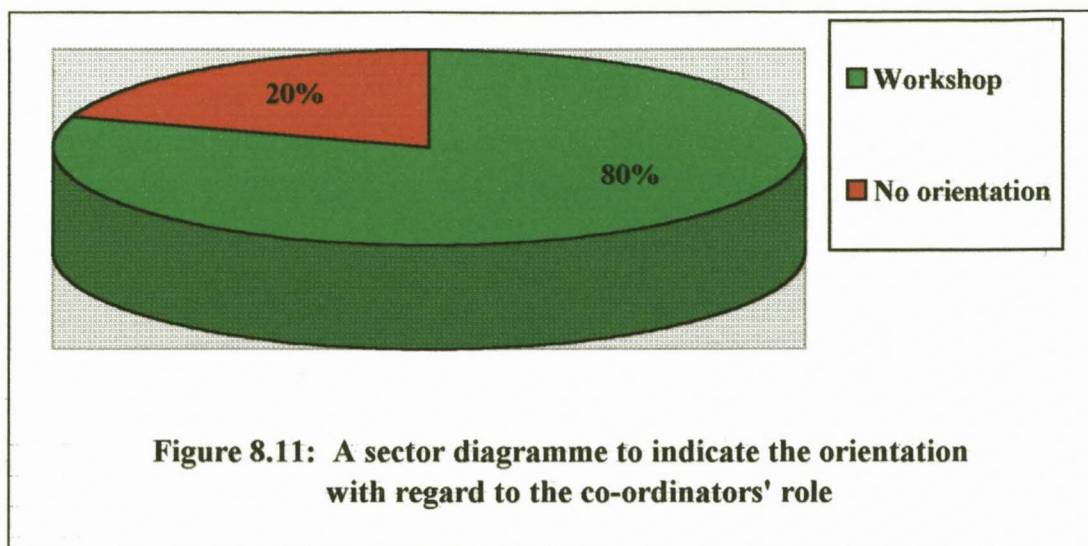
**Figure 8.11: A sector diagramme to indicate the orientation
with regard to the co-ordinators' role**

Discussion of results: The majority of co-ordinators (80%) indicated that they were mainly orientated towards their respective roles via workshops. Some of the co-ordinators (20%) indicated that they were not orientated as regards their role as co-ordinator.

Implication: The fact that the minority of the facilitators (30%) and half of the co-ordinators (50%) were not positive towards the all-encompassing standard of the workshops (see 8.2.5.c) as regards the improvement of the RBLCPP staff, might also have an effect on the quality of the orientation of the respective roles of facilitators and co-ordinators.

In conclusion, as regards the facilitators and co-ordinators responses on 8.2.5, it appeared that there is a need for training/workshops, but the fact that only 50% of the co-ordinators and 70% of the facilitators appear to be positive towards the current workshops, has to be investigated. The positive responses by the majority of both the facilitators and the co-ordinators as regards the benefits of workshops may contribute to the motivation of facilitators and co-ordinators to continue with the RBL delivery mode. It is also evident that the effective management of diversity by the developers of the RBLCPP becomes increasingly important to accommodate a variety of needs.

8.2.6 Concerns about resource-based learning

The purpose of this question was to determine the concerns of facilitators and co-ordinators with regard to the RBL delivery mode. This way serves as a starting point for future improvement of the RBLCPP.

Discussion of results: The majority of both the facilitators and the co-ordinators mentioned a variety of concerns regarding RBL, which can cause adaptation problems for staff as regards the new delivery mode. The majority of the facilitators and the co-ordinators also experienced a practical problem as regards the limited time available during contact sessions, as well as that the new delivery mode itself causes uncertainty whether all the relevant knowledge has been transferred. It was evident that the majority of both the facilitators and the co-ordinators required more knowledge and skills in order to implement RBL successfully (see 8.2.5). The following concerns were identified:

- the type of students involved (i.e. non-traditional students);
- the present lack of background knowledge;
- language problems of students;
- students who do not prepare for classes result in making the facilitators and co-ordinators sceptical about the appropriateness of RBL for non-traditional students (see also 1.5) to work on their own;
- the fact that there is no access to resources causes doubt whether RBL could be implemented successfully for masses of students;
- cultural diversity among the student population.

Comment: These opinions of the majority of facilitators and co-ordinators confirm the current problem areas as regards the implementation of RBL in the South African context (see also 1.1, 1.2, 3.2, 3.7 and 3.8).

Implication: It appears that the developers of the programme need to address the following aspects during orientation and training sessions:

- knowledge and skills as regards non-traditional students;

- knowledge and skills in order to accommodate the lack of background knowledge of students within RBL;

- knowledge and skills as regards how to bridge the language problem with students, under prepared students, the lack of resources and cultural diversity in order to implement RBL successfully in the RBLCPP.

As regards the responses of facilitators and co-ordinators on 8.2.6, it can be concluded that a variety of issues (such as knowledge and skills as regards non-traditional, under prepared, language proficiency difficulties of students as well as the lack of resources and cultural diversity among students) still need to be incorporated during the orientation and training of facilitators and co-ordinators to implement RBL successfully in the RBLCPP.

8.2.7 Positive feelings as a response to the shift to resource-based learning

a)   Positive feelings of facilitators and co-ordinators when started with resource-based learning

The purpose of this question was to identify the positive feelings towards RBL. These responses may be of value regarding the concerns, challenges and motivation of facilitators and co-ordinators, which could contribute to the improvement of the RBLCPP in future. This question was poorly answered by the majority of both the facilitators and the co-ordinators.
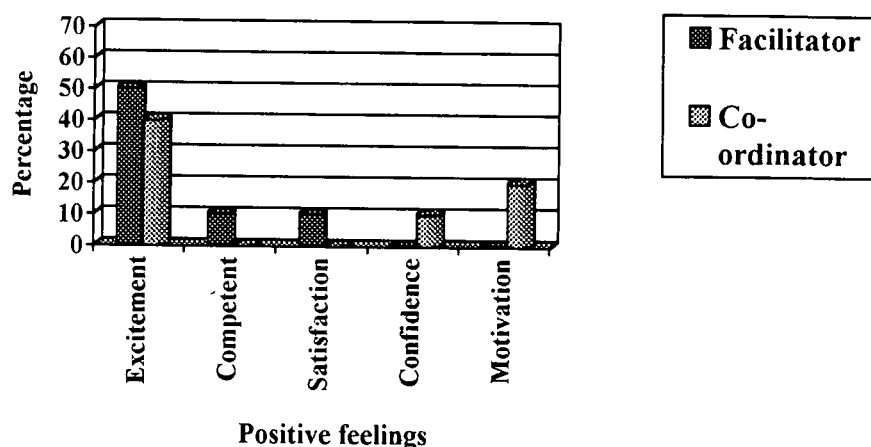
Figure 8.12: A bar diagramme to indicate the positive feelings towards RBL by facilitators and co-ordinators in the beginning of the RBLCPP

Discussion of results: Some of the facilitators (50%) and some of the co-ordinators (40%) have experienced feelings of excitement when they first started with the RBLCPP. A minority of facilitators has experienced feelings of confidence and satisfaction, while the minority of the co-ordinators has experienced feelings of satisfaction.

b)   Positive feelings of facilitators after 6 months and co-ordinators after 6 months – 2 years towards resource-based learning

Figure 8.13: **A bar diagramme to indicate the positive feelings towards RBL by facilitators after 6 months and co-ordinators after 6 months-2 years in the RBLCPP**
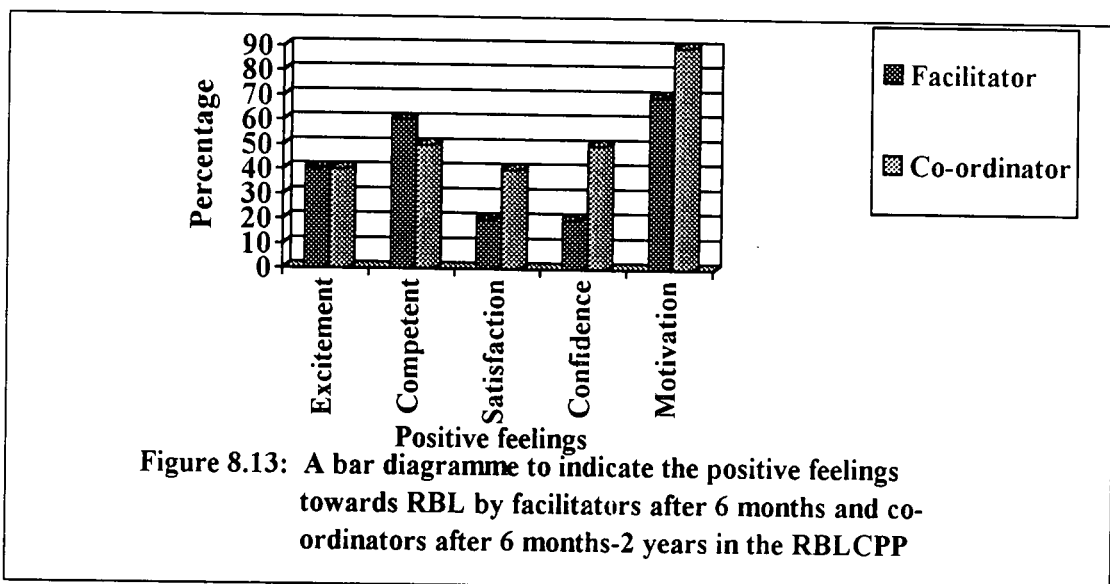
Discussion of results: It appears that some of the facilitators have demonstrated an increase in all the positive feelings over a period of six months (see inclusion criteria 1.4.1), except for the excitement levels that showed a decrease with regard to the facilitators (see Figure 8.12 & Figure 8.13). In addition, some of the co-ordinators' results also indicated an increase in all the positive feelings, except for the excitement levels that remained unchanged (see Figure 8.12 & Figure 8.13). A possible reason for the decrease or the remaining unchanged levels of excitement could be that the majority of both the facilitators' and the co-ordinators' experience frustration as regards prominent problems such as the lack of background- and language problems of students within the South African context that inhibits successful implementation and the fact that it is a new concept/innovation.

Comment: A possible reason for the decrease in excitement levels by some of the facilitators could be ascribed to the reality of the practice where problems and frustrations are present, whereas some of the co-ordinators' excitement levels remained unchanged which could be due to less direct confrontation with the frustrations and problems in practice due to the differences in roles as indicated in the job descriptions and/or also the fact that some of the co-ordinators have been involved in RBL for a longer period.

As regards the responses of facilitators and co-ordinators on 8.2.7, it can be concluded that the main positive feeling that has been experienced by facilitators and co-ordinators was excitement. The levels of excitement have been decreased in the case of some of the facilitators, while the excitement levels of some of the co-ordinators remained unchanged.

8.2.8   Negative feelings as a response to the shift to resource-based learning

The purpose of these questions was to identify the negative feelings towards RBL. These responses may be of value regarding the concerns, challenges and motivation of facilitators and co-ordinators, which contribute to the improvement of the RBLCPPP in the future. The intensity of these negative feelings was indicated as follows:

> 5 = To a great extent
>
> 4 = To some extent
>
> 3 = To an average extent
>
> 2 = To a lesser extent
>
> 1 = To no extent

a)   Stress versus no stress

The purpose of this question was to determine the intensity of facilitators and co-ordinators stress levels as regards their involvement with the RBL practice.

Figure 8.14: A line diagramme to indicate the intensity of stress levels of facilitators and co-ordinators
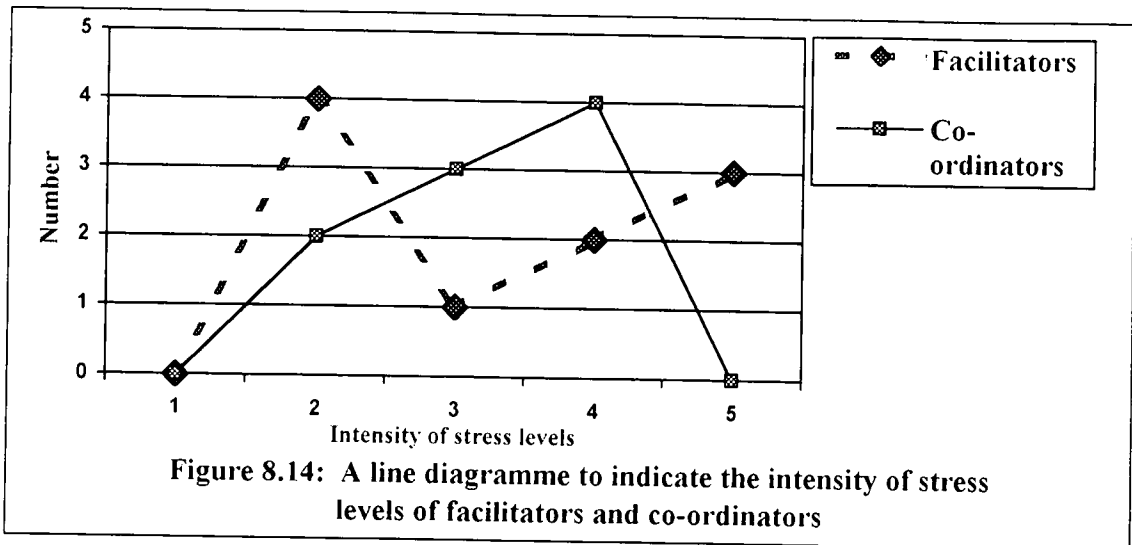
Discussion of results: It appears that some of the facilitators (40%) have experienced stress to a lesser extent, while some of the co-ordinators (40%) have experienced stress to a larger extent (see Figure 8.14).

Comment: The responses to higher educational change indicate the differences in intensity of experiencing stress by some facilitators (40%) and by some of the co-ordinators (40%). The fact that some of the co-ordinators indicate a higher intensity of stress may be due to their higher responsibilities (see Appendix D).

b)   Aggression versus no aggression

The purpose of this question was to determine whether feelings of aggression were present amongst facilitators and co-ordinators, as a result of their involvement in the RBL practice.

Figure 8.15: A line diagramme to indicate the intensity of aggression
levels of facilitators and co-ordinators
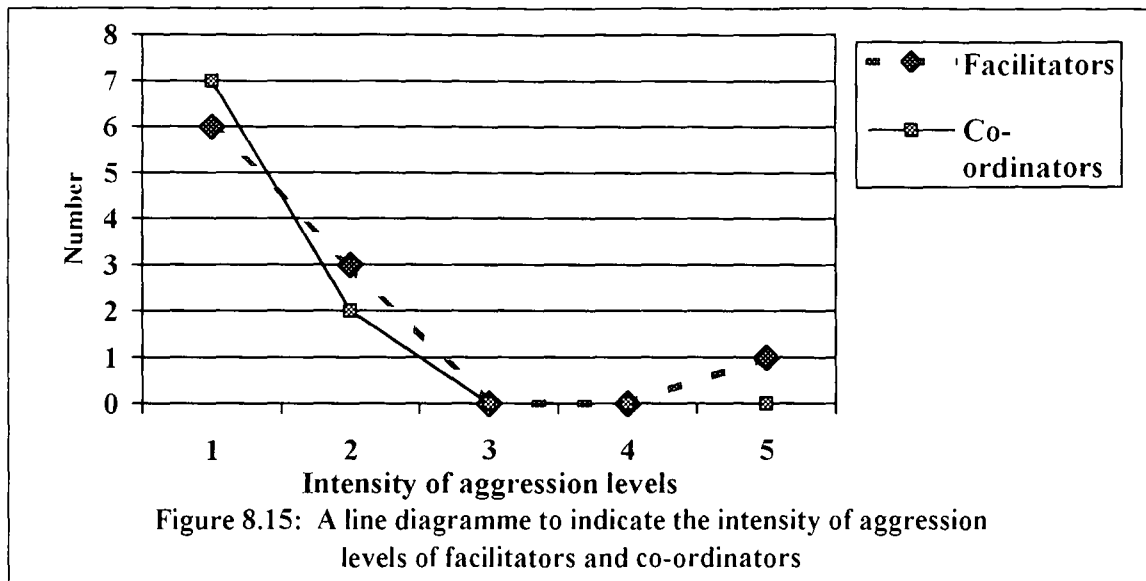
Discussion of results: The majority of both the facilitators (60%) and the co-ordinators (70%) indicated that they have not experienced feelings of aggression during their involvement in the RBL practice.

c)   Frustration versus no frustration

It was important for the researcher to determine whether facilitators and co-ordinators have experienced frustration during their involvement in the RBL practice.   In addition, it was also vital to identify the reasons for their frustrations, if applicable.
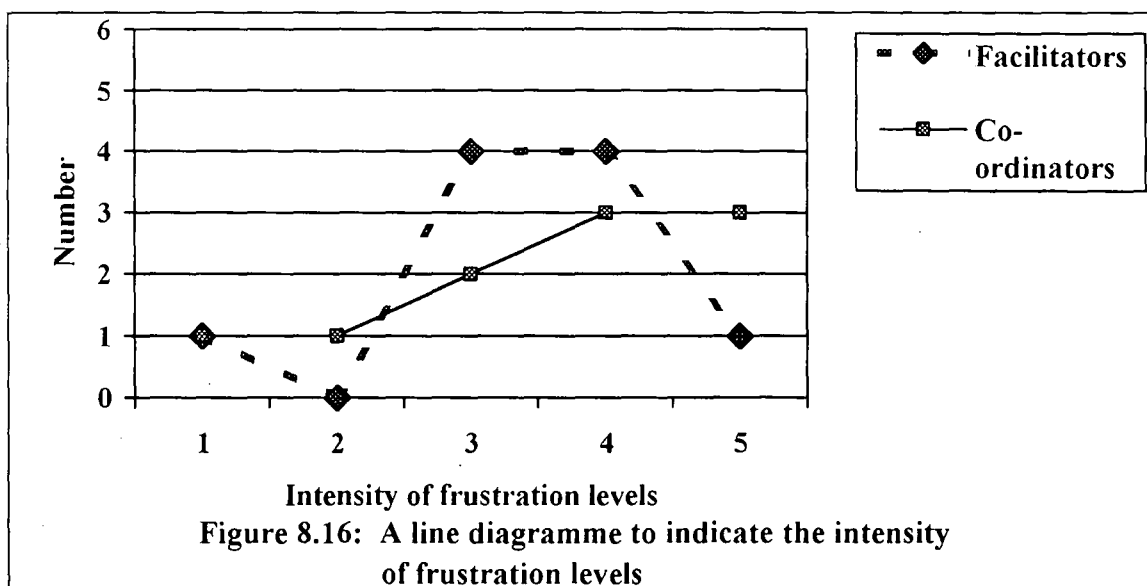
Figure 8.16: A line diagramme to indicate the intensity
of frustration levels

Discussion of results: It appears that the majority of both the facilitators (90%) and the co-ordinators (80%) have experienced frustration from an average to a great extent.

Comment: Frustration seems to be a major negative feeling by the majority of the facilitators (90%) and the co-ordinators (80%), which may be a result of typical problem areas in the South African context such as the lack of background knowledge (e.g. the under-development of mathematical and science skills) due to poor schooling, as well as the fact that they receive education in their second/third language. These frustrations appear to make the facilitators and co-ordinators feel disempowered and unsure towards the new innovation.

Implication: The developers of the programme as well as the policy-makers and managers at school level should take into account the above-mentioned frustrations, which are based on prominent problems in the South African context.

d)   Incompetence versus competence

The purpose of this question was to determine how facilitators and co-ordinators view themselves as regards their competency in RBL

Figure 8.17: A line diagramme to indicate the intensity of competency levels of facilitators and co-ordinators
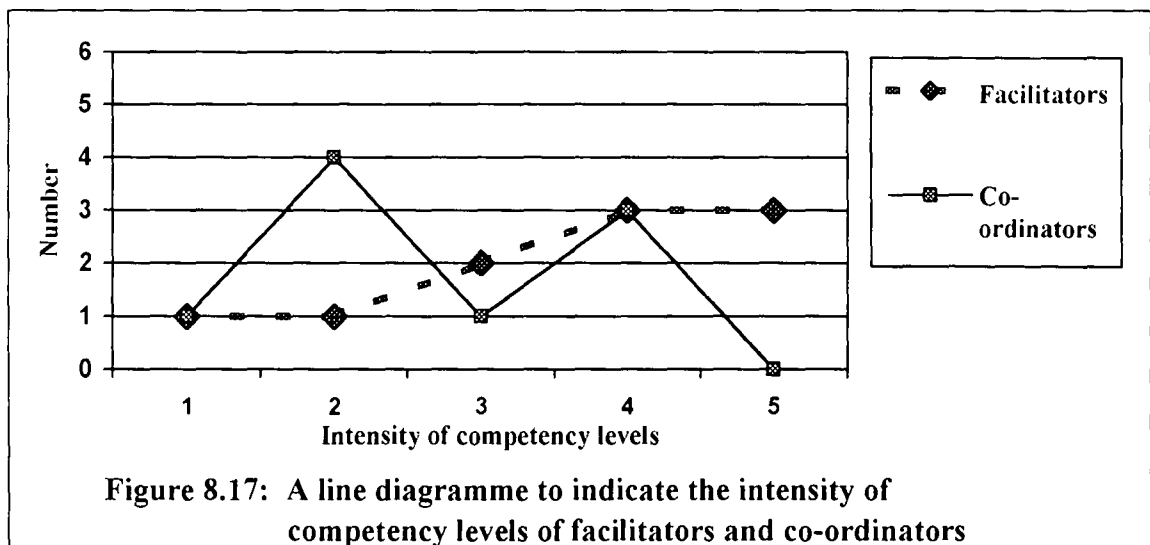
Discussion of results: It seems that the majority of facilitators (60%) views themselves as competent in RBL, while the minority of co-ordinators (30%) views themselves as competent in RBL. The majority of the co-ordinators (70%) indicated that they have experienced anxiety with regard to the delivery mode whether they are going to be successful. ʹ

Comment: It appears that the majority of the co-ordinators (70%) is more realistic towards their own competencies as regards RBL taking into account the short involvement period with the RBL innovation and the limited level of training in RBL.

e)   Negative experience of the self as regards coping with resource-based learning versus positive experience of the self as regards coping with resource-based learning

It was important for the researcher to determine how facilitators and co-ordinators cope with the RBL practice.

Figure 8.18: A line diagramme to indicate the intensity of the negative experience of the self as regards coping with RBL
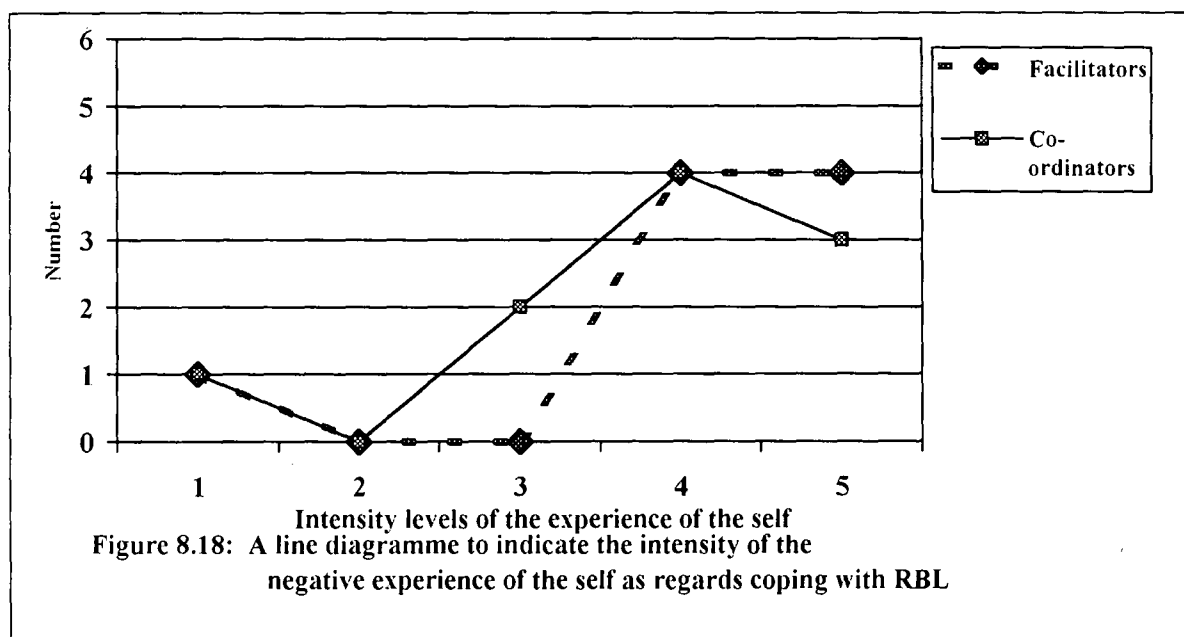
Discussion of results: It appears that a prominent negative feeling that the majority of both the facilitators (80%) and the co-ordinators (70%) have experienced after 6

months/6 months-2 years in the RBLCPP is the negative experience of the self as regards coping with RBL as a new delivery mode.

Comment: It appears that the presence of frustration amongst the majority of both facilitators and co-ordinators makes them feel disempowered and unsure towards the innovation, which may contribute to the negative experience of the self in terms of RBL.

Implication: The presence of the negative experience of the self in terms of coping with RBL is an important area that needs to be investigated.

According to the responses of the facilitators and co-ordinators on 8.2.8 it can be deducted that the negative experience of the self in terms of coping with and frustrations of RBL as delivery mode are the most prominent negative feelings identified by the majority of the facilitators and co-ordinators.

8.2.9   Perception of resource-based learning in practice

The aim of this question is to determine the facilitators' and co-ordinators' perception and experience of the RBL in practice.   This may also give an indication of their attitudes, commitment and motivation towards RBL.

Discussion of results: Perceptions of the RBL practice seem to cover a wide area and the responses range from positive through neutral to negative (see 4.5).   In this study the responses from some of both the facilitators and the co-ordinators indicated the following common characteristics:

- contact sessions represent an informal atmosphere and are structured informally;
- group interaction and feedback are vital aspects;
- the contact sessions may appear as being chaotic when compared with traditional classes;
- learning is fun and enjoyable;
- RBL requires much preparation and is time-consuming;

□ requires high quality facilitation skills in order to deal with masses, diversity, second language medium speakers and lack of background knowledge.

Comment: It is evident from the above-mentioned characteristics that RBL is a new delivery mode, which represents a different approach in comparison with the traditional teaching methodology. It is also an indication of active learning and that feedback is vital. The complexity of RBL is also implied.

With regard to the responses of facilitators and co-ordinators on 8.2.9, it can be concluded that the majority of both the facilitators and co-ordinators have experienced RBL practice as different and complex. Active learning and feedback are also regarded as vital.

8.2.10 Responses on the usage of resource-based learning by academic colleagues who are not involved in resource-based learning

The aim of this question was to investigate the reactions of colleagues who are non-RBL-users and how the facilitators and co-ordinators handle these reactions.

Table 8.5 Frequency distribution of non-RBL academic colleagues' responses with regard to RBL

Responses from work colleagues who are not familiar with RBL	Facilitators	Percentage	Co-ordinators	Percentage
Positive	8	80%	6	60%
Negative	2	20%	4	40%

Discussion of results: The majority of both the facilitators (80%) and the co-ordinators (60%) have experienced the academic colleague's responses on the usage of RBL as positive. The minority of both the facilitators (20%) and the co-ordinators (40%) who were negative also indicated that the negative responses of academic colleagues were usually due to unfamiliarity with the RBL concept.

It can be deducted from the responses of facilitators and co-ordinators on 8.2.10 that the majority of the academic colleagues, who were unfamiliar with RBL, provided positive feedback, while the negative feedback of the minority of the academic colleagues towards RBL could possibly be due to their unfamiliarity with the RBL concept.

8.2.11 Personal changes of staff due to higher educational change

By asking this question, the aim was to identify the personal changes that facilitators and co-ordinators have experienced due to the new RBL delivery mode.

Table 8.6 Frequency distribution of personal change categories for facilitators (n_1 =10) and co-ordinators (n_2 =10) due to the paradigm shift to RBL

Change categories	Facilitators	Percentage	Co-ordinators	Percentage
1. Work				
◻ More work satisfaction	5	50%	6	60%
◻ Financial benefit	1	10%	1	10%
2. Self				
***Cognition**				
◻ Positive perception of Students' abilities and Results	4	40%	4	40%
◻ New perspective as regards learning	5	50%	6	60%
◻ More open-minded	4	40%	6	60%
◻ Positive attitude as regards RBL	7	70%	7	70%
***Affect**				
◻ Learn to be more patient	4	40%	0	0%
◻ Higher motivation levels	7	70%	7	70%
◻ Be more confident	5	50%	5	50%
***Behaviour**				
Better inter-personal relationships	6	60%	3	30%

Discussion of results:

- With regard to the **work category**, both facilitators (50%) and co-ordinators (60%) experienced more work satisfaction due to the shift to the RBL methodology. The latter also correlates with the positive attitudes and feelings towards RBL (see also 8.2.3.e and 8.2.3.g). Thus, it seem that facilitators (50%) and co-ordinators (60%) have experienced the RBLCPP as positive, but the negative experiences of these facilitators and co-ordinators as regards their selves towards RBL are due to their frustrations. It seemed that to only a minority of facilitators (10%) and co-ordinators (10%) the shift to RBL implied a financial benefit.

- With regard to the **cognition category**, it was evident that the poor responses on the positive perception of students' abilities and results seem to correlate with the concern regarding non-traditional students (see 8.2.6). Some of the facilitators (50%) and some of the co-ordinators (60%) viewed RBL as a new perspective as regards learning. Some of the facilitators (40%) and some of the co-ordinators (60%) appear to be more open minded as regards RBL. The majority of both the facilitators (70%) and the co-ordinators (70%) indicated positive attitudes towards RBL.

- With regard to the **affect category**, an aspect which was mainly mentioned by facilitators (40%) is that they have learnt to be more patient towards the non-traditional students with regard to their poor background knowledge. The majority of both the facilitators (70%) and the co-ordinators (70%) seem to be more motivated towards RBL, while half of both the facilitators (50%) and the co-ordinators (50%) seemed to be more confident regarding RBL.

- With regard to the **bahaviour category**, the majority of the facilitators (60%) experience more changes within inter-personal relationships than the minority of the co-ordinators (30%).

Comment: The fact that for only 10% of the facilitators and the co-ordinators the shift to RBL is regarded as a financial benefit, could be an indication that the majority of both the facilitators and the co-ordinators are satisfied with the financial compensation related to their respective job positions. The responses with reference to the perception of the students' abilities and results emphasise the difficulties

encountered (as a result of the South African context) for the implementation of RBL (e.g. lack of background knowledge of mathematics and science, receive education in their second language, etc.). The fact that some of the facilitators (40%) have been open-minded towards RBL may possibly be due to the fact that the majority of the facilitators were more positive towards RBL from the beginning. The fact that the majority of the facilitators responses indicated better inter-personal relationships and more patience, might be ascribed to their more direct involvement with the students than the minority of the co-ordinators (see Appendix D).

Implication: The positive responses from the majority of both the facilitators and the co-ordinators as regards their work satisfaction contribute to their commitment to the RBLCPP and the students. Additionally, high motivation and confidence levels by some of the facilitators and some of the co-ordinators should be utilised by the developers of the programme to market and improve the RBLCPP.

As regards the responses of facilitators and co-ordinators on 8.2.11, it can be concluded that although RBL provides more work satisfaction to the majority of both the facilitators and the co-ordinators, their negative perception of students' abilities and results may serve as a factor that may hamper successful implementation of RBL. Although only the minority of the facilitators indicated that they are open-minded towards RBL, it may be due to the fact that they were more positive from the beginning. Positive personal changes that have been demonstrated by some of the facilitators and some of the co-ordinators were more patience and confidence, higher motivation and better inter-personal relationships.

8.2.12 <u>Problem areas</u>

The following responses with regard to problem areas were included because it was specifically highlighted by the facilitators and co-ordinators.

Table 8.7 Frequency distribution according to the specific problem areas indicated by facilitators (n_1 =10) and co-ordinators (n_2 =10)

Problem area	Facilitators	Percentage	Co-ordinators	Percentage
Language problem	8	80%	7	70%
Support system problems	4	40%	4	40%
Background problems	6	60%	6	60%

Discussion of results: The majority of facilitators (80%) and co-ordinators (70%) feel that language problems are present which makes lateral thinking difficult and causes communication problems which are vital aspects for successful learning. With regard to support systems, a few facilitators (40%) and co-ordinators (40%) mentioned the lack of a general support system, although they experience support from colleagues and the Strategic Service. The majority of facilitators and co-ordinators indicated that the students' lack of background knowledge regarding mathematics, science and English is a big frustration and appears to be an obstacle to successful RBL.

Comment: It appears from the results that both facilitators and co-ordinators consider the language problem and its negative effect for facilitators, co-ordinators and students as the most serious problem.

Implication: The current language problem for facilitators, co-ordinators and students as well as the lack of background knowledge regarding mathematics, science and English for students seem to be big obstacles towards successful facilitating which is an important area that requires attention by the developers of the programme. Therefore problems should also receive attention at school levels. As regards the need for a general support system, developers of the programme should investigate the matter.

As regards the responses of facilitators and co-ordinators on 8.2.12, it can be concluded that the current language problem for facilitators, co-ordinators and students as well as the lack of background knowledge of mathematics, science and English are primarily responsible for preventing successful implementation of RBL. The lack of a general support system for the RBLCPP seems to be problematic.

8.2.13 Recommendations by respondents

Facilitators and co-ordinators proposed the following recommendations for the RBLCPP:

- the majority of facilitators (80%) and co-ordinators (80%) indicated that an additional African language and English course should be a requirement of the training package of the facilitators and co-ordinators;
- more and regular follow-up workshops would be beneficial as regards the orientation of their role (50% facilitators and 50% co-ordinators);
- the majority of facilitators (70%) and co-ordinators (60%) indicated that an emotional support system would be beneficial to them as regards the change process they have to go through as well as to assist/advise them with the increased emotional support they have to provide the students with.

Implication: The above-mentioned responses indicated that the developers of the programme should consider the inclusion of an African language and English course for facilitators and co-ordinators (see also 1.1 & 1.2), more and regular workshops and an emotional support system as vital aspects for the staff development in general. Taking into account the lack of scientific development of the African languages, and the considerable time and effort needed to master an additional language, an additional African course seemed not to be a solution (Morrow & King, 1998).

With question 12 the researcher wanted to determine how facilitators and co-ordinators work within a group situation of the RBLCPP. All facilitators and co-ordinators indicated that they were satisfied with working in a group set-up within the RBLCPP.

8.3   SUMMARY OF THE STRUCTURED INTERVIEWS

Open-ended questions asked in the structured interviews were developed and structured in a way to demonstrate the shift from teaching to learning as well as to indicate the psychological experiences within or as a result of the higher educational change process.   The facilitators' and co-ordinators' responses to these structured interviews indicated that they appreciated the opportunity to air their opinions. They also pointed out that this opportunity made them feel that the developers of the programme cared, which once again emphasised the importance of personal monitoring and evaluation.

8.3.1   Traditional learning mode

It was identified during the structured interviews that co-ordinators seem to have a longer traditional learning experience, as well as to be more positive and to believe more in the traditional learning mode than was the case with the facilitators

8.3.2   Resource-based learning

The analysis of the results indicated that the departments played a vital role initially in transferring the RBL concept to facilitators and co-ordinators. Although it appeared that it was an easy decision to take part in the RBLCPP, it was also evident that the majority of the facilitators and co-ordinators were nominated, which refers to an obliged change, with which they were confronted.   There is still room for improvement as regards some of the facilitators' and some of the co-ordinators' RBL knowledge and skills due to their short involvement period (e.g. 6 months/18 months). The short involvement period may also be the reason for not knowing all the rationale for introducing RBL in the higher education context.   The majority of both the facilitators and the co-ordinators also indicated that they in general comprehend the RBL concept as regards the usage of RBL, which seems to correlate with their respective roles as specified in their job descriptions.

8.3.2.1 Preference regarding resource-based learning

Both facilitators and co-ordinators seem to prefer RBL and their positive feelings may contribute to their motivational level.

8.3.2.2 Reactions towards higher educational change

Concerning the facilitators' and co-ordinators' involvement in higher educational change, the following:

- higher levels of motivation, competence, confidence indicate that some of the facilitators and some of the co-ordinators experience RBL as positive. The fact that some of the facilitators have experienced a decrease in excitement levels, while some of the co-ordinators' excitement levels remained unchanged may be due to the facilitators' more direct involvement with the RBL practice and the problems thereof in comparison with the co-ordinators (see Appendix D);

- high frustration levels among facilitators and co-ordinators appear to be due to certain South African contextual aspects such as poor background knowledge of mathematics and science as well as the language problem of students. This seems to cause disempowerment within the facilitators and co-ordinators that frustrated them and which made them unsure and caused negative experiences of the self in terms of coping ability with RBL;

- the presence of negative experiences of the self in terms of coping ability with RBL needs to be investigated;

- stress is also present.

8.3.2.3 Training

The majority of the facilitators and co-ordinators suggest that more regular follow-up workshops should be conducted as well as the need to be more subject specific (e.g. Sciences). It is also vital to create a more all-encompassing guidance system for the future.

8.3.2.4 Problems

The responses of the facilitators and co-ordinators confirm the language problem which should be addressed at school level for the students' sake and also suggest the requirement of learning an additional African language and an English course for the staff. The facilitators and co-ordinators also indicated the need for a more all-encompassing guidance/emotional support system.

8.4   CONCLUSION

The qualitative research results have been reflected on and therefore this chapter has met partly the first two empirical research aims (see 1.3.2).

In the next chapter data and method triangulation will be discussed.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2

THE CONCEPTUAL ORIENTATION OF CHANGE

Chapter 3

RESOURCE-BASED LEARNING AS A NEW LEARNING MODE

Chapter 4

FACILITATORS AND CO-ORDINATORS IN A RBL COURSE

PART 2

Chapter 5

THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY

Chapter 6

RESEARCH METHODS AND PROCEDURES

Chapter 7

QUANTITATIVE RESEARCH RESULTS

Chapter 8

QUALITATIVE RESEARCH RESULTS

Chapter 9

TRIANGULATION RESEARCH RESULTS

Chapter 10

CONCLUSION AND RECOMMENDATIONS

TRIANGULATION OF
RESEARCH RESULTS

9.1   INTRODUCTION

*J*he focus of this chapter is on the triangulation of the quantitative (Chapter 7) and qualitative (Chapter 8) research results. **Triangulation involves the conscious combination of quantitative and qualitative methodologies, as a powerful solution to strengthen a research design where the logic is based on the fact that a single method can never adequately solve the problem of rival causal factors** (Denzin, 1978; Patton, 1990; De Vos, 1998). The purposes of this chapter are to:

❑   present an overview of the quantitative and qualitative results;

❑   provide the data-and method-triangulation results;   ·

❑   indicate, which results either confirmed by the quantitative or the qualitative triangulation processes.

9.2   TRIANGULATION PROCESS

The two relevant forms of triangulation of this study will now be discussed.

9.2.1   Quantitative and qualitative data triangulation

The definition of data triangulation has already been discussed (see 5.3.1.1). In this study data triangulation would entail the comparison of qualitative data received from structured interviews with facilitators and co-ordinators with quantitative data from the Stages of Concern Questionnaire and the Demographic and relevant information questionnaire of facilitators and co-ordinators. Using this dual approach does not result in a single, clear-cut, consistent picture, but rather presents a challenge to improve comprehension of the various reasons for the existence of inconsistencies between the two sets of data (Patton, 1990).

9.2.2   Quantitative and qualitative methodological triangulation

As stated in 5.3.1.2, methodological triangulation entails the dual approach of combining both quantitative and qualitative data collection methods (Banister *et al.*, 1994). This is based on the rationale that a single data collection method is insufficient to provide adequate and accurate research results. It is vital to remember that the above-mentioned method is also a form of comparative analysis where the interpretation of the results is complicated when the convergence of data leads to inconsistencies and contradictions. This study aims to combine the quantitative data triangulation results with the qualitative triangulation results.

9.3   A REVIEW OF THE TRIANGULATION RESULTS

According to Miles and Huberman (1994) and De Vos (1998), data management is an integral part of data analysis. Managing such a database is viewed as a challenge, due to the need to comprehend the data and to locate a description to illustrate a concept (Morse & Field, 1996). In this study the researcher decided to handle data management as a display of the triangulation process results in a matrix. This provides a summary of what the results were and identifies common themes in various sets of data in order to generate the triangulated results. A review of the triangulation results of this study is illustrated in Tables 9.1-9.7. In Tables 9.1-9.7 the horizontal rows represent the broad stages of concern dimensions. Column 1 consists of the seven stages of concern. The summary of the quantitative data triangulation results is found in Column 2. Column 3

reflects the data of the qualitative data triangulation results, while the fourth column consists of themes, confirmed by either the quantitative or the qualitative data triangulation results. In column 5 the methodological triangulation results are provided which consists of the quantitative (column 2) and qualitative (column 3) results.

Tables 9.1-9.7 only provide a cryptic display of results in the matrixes, and therefore require elaboration and discussion of the methodological triangulation results, which are the core findings of the triangulation process. This are stated as conclusions, where the issues not confirmed by the methodological triangulation will be used to contextualise the conclusions in greater detail. Subsequently each stage of concern will first be displayed by a table and thereafter be discussed. The reason for discussing each stage of concern separately is to follow the illustration of data easier.

The first stage of concern (Awareness) will first be displayed in Table 9.1 and thereupon will follow the discussion.

Table 9.1 A summary of data- and methodological triangulation results of the first stage of concern

Stages of Concern	Quantitative (Quan.) Data ▲ results (Method 1)	Qualitative (Qual.) Data ▲ results (Method 2)	Issues either confirmed by Quan. or Qual. data ▲	Results of Method ▲ (Methods 1 + 2)
0 (Awareness)	*Facilitators are more intensively concerned with RBL as a delivery mode than the co-ordinators.	*Both facilitators and co-ordinators indicated their concerns as regards RBL as a delivery mode.		*Data concerns as regards RBL have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards RBL concerns, have not been confirmed by the Qualitative data set.
	*Facilitators are more involved with RBL as a delivery mode than co-ordinators	*Both facilitators and co-ordinators indicated that they are now more involved with RBL, because of the indication by them that they are more motivated, excited and confident towards RBL. *Higher frustration levels accompany a higher involvement in the RBLCPP by facilitators and co-ordinators.		*Data involvement in RBL has been confirmed by both the data sets. *The differences between facilitators and co-ordinator, as regards RBL involvement, have not been confirmed by the Qualitative data set.
	*Facilitators seem to be more concerned about the application of RBL as a delivery mode than co-ordinators.	*Both facilitators and co-ordinators appear to be concerned about the application of RBL as a delivery mode (e.g. with reference to their own in-abilities and uncertainties as regards RBL).		*Data as regards the experience of the self, due to the application of RBL, have been confirmed. *The differences between facilitators and co-ordinators, as regards the experience of the self, due to the application of RBL, have not been confirmed
			*The reasons why RBL was introduced within the higher education context (Qual. Data ▲).	

9.3.1 <u>Awareness</u>

The qualitative data triangulation results indicated that facilitators and co-ordinators are not totally aware of the reasons on why RBL was introduced in the higher education context (see 8.2.3.f). Therefore, it appears that there is a lack of understanding of the reasons why RBL was introduced and it seems that the hearts and the minds of staff (e.g. facilitators and co-ordinators) and management are not on the same level. It also demonstrates a lack of two-way communication. Facilitators and co-ordinators appear to be still uncertain on how to apply RBL within a diverse/multicultural student population. The above-mentioned highlights the need for more clarification, knowledge and skills of RBL.

Facilitators' and co-ordinators' responses indicated that they are concerned about the limited time available to transfer knowledge in the application of RBL. They also indicated that they required more skills and knowledge to implement RBL successfully (see 8.2.3.b). Other concerns are the appropriateness of RBL for non-traditional students, access to limited resources and the misconception of RBL with distance education (see 8.2.3). These concerns expressed by facilitators and co-ordinators caused difficulty in the adaptation process to RBL and also high frustration levels (see 8.2.5.c). The results from the Stages of Concern questionnaire (see 7.4) and the structured interviews (see 8.3) justify and pertain the need for more and regular training and staff development opportunities when taking into account the level and amount of training (see 8.2.5).

Despite of the above-mentioned concerns, both facilitators and co-ordinators indicated positive feelings towards RBL such as motivation and confidence that have demonstrated an increase in the past six months of 1998. The facilitators appear to demonstrate a decrease in excitement levels due to RBL, while the co-ordinators' excitement levels remain equal (see 8.2.7.a & 8.2.7.b). A possible reason for the decrease in excitement levels by facilitators can be due to the direct confrontation of facilitators by problems and frustrations during application of RBL.

Having discussed the first stage of concern, attention will now shift to the display of the informational/second stage of concern (Table 9.2) and will then be discussed.

Table 9.2 A summary of data- and methodological triangulation results of the second stage of concern

Stages of Concern	Quantitative (Quan.) Data ▲ results (Method 1)	Qualitative (Qual.) Data ▲ results (Method 2)	Issues either confirmed by Quan. or Qual. data ▲	Results of Method ▲ (Methods 1 + 2)
1 (Informational)	*Facilitators appear to want more information about RBL than co-ordinators	*Both facilitators and co-ordinators appear globally to understand the RBL concept, but seem to require more knowledge and skills.		*Data of more RBL information have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards more information, have not been confirmed by the Qualitative data set.
	*Facilitators are more interested in general characteristics, effects and requirements of RBL than co-ordinators.	*Both facilitators and co-ordinators are interested are interested in the effects and requirements of RBL.		*Data of RBL interests have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards interests in RBL, have not been confirmed by the Qualitative data set.
	*Facilitators appear to want more information about RBL resources than co-ordinators.	*Both facilitators and co-ordinators indicated the presence of limited RBL resources.	*Limited information resources prevent successful implementation of RBL (Qual. Data ▲).	*Data of RBL resources have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards limited RBL resources, have not been confirmed by either the Quantitative nor the Qualitative data sets.

9.3.2 <u>Informational</u>

Facilitators and co-ordinators expressed the need for more information as regards RBL, which appears to be due to the following:

❑   the majority of facilitators and co-ordinators were nominated, which refers to an obliged change that they were confronted with;

❑   limited knowledge and skills due to short involvement period of facilitators (6 months) and co-ordinators (18 months).

It seems that facilitators and co-ordinators have only partly internalised the information as regards the RBL concept, because there are some misconceptions with distance education.

Information as regards the usage of RBL seems to correlate with the respective roles as specified in their job descriptions (see Appendix D). While it appears that the presence of limited information resources within the South African context could prevent successful implementation of RBL.

Both facilitators and co-ordinators seem to be interested in the effects and requirements of the RBL practice. As stated in 8.2.9 the effects of RBL in the RBLCPP were for example the presence of a more informal learning atmosphere and that learning is fun and enjoyable. According to facilitators and co-ordinators the following adjustments in the shift to RBL were experienced:

❑   more preparation time is needed;

❑   to transfer knowledge was time consuming; and

❑   high quality facilitation skills, feedback and group interaction were required.

The third stage of concern (Personal) will now be displayed and then discussed (see Table 9.3.

Table 9.3 A summary of data- and methodological triangulation results of the third stage of concern

Stages of Concern	Quantitative (Quan.) Data ▲ results (Method 1)	Qualitative (Qual.) Data ▲ results (Method 2)	Issues either confirmed by Quan. or Qual. data ▲	Results of Method ▲ (Methods 1 + 2)
2 (Personal)	*Facilitators seem to be more uncertain about the demands and the experience of their inadequacies to meet demands of RBL than co-ordinators	*Both facilitators and co-ordinators indicated their uncertainties as regards limited knowledge and skills of RBL.		*Data uncertainties as regards limited knowledge and skills have been confirmed by both the data sets *The differences between facilitators and co-ordinators, as regards uncertainties as regards RBL skills and knowledge, have not been confirmed by the Qualitative data set
	*Facilitators appear to be more concerned about their role changes in RBL than co-ordinators.	*Both facilitators and co-ordinators are concerned about the fulfilment of their respective roles in RBL.		*Data concerns as regards role changes due to RBL have been confirmed by both the data sets *The differences between facilitators and co-ordinators, as regards role changes due to RBL, have not been confirmed by the Qualitative data set
	*Facilitators seem to be more uncertain about the demands and the experience of their inadequacies to meet demands of presenting RBL in their second language than co-ordinators.	*Most of the facilitators and co-ordinators indicated the difficulty of facilitating in their second language. *Facilitators and co-ordinators seem to experience frustration and an inability and uncertainty as regards RBL.		*Data uncertainties as regards second language proficiency have been confirmed by both data sets. *The differences between facilitators and co-ordinators, as regards uncertainties of providing RBL in their second language, have not been confirmed by the Qualitative data set
	*Status differences seem to be more intense for facilitators than co-ordinators.	*The majority of the facilitators (80%) feel there are not status differences between a facilitator versus a lecturer, while the majority of the co-ordinators (60%) feel there is a status difference between co-ordinators versus a lecturer.		*Data as regards the presence of status differences have been confirmed *The differences between facilitators and co-ordinators, as regards status differences are contradictory
			*Financial implications of facilitators and co-ordinators (Quan. Data ▲).	
			*Both facilitators and co-ordinators indicated that personal goals as regard RBL are not a priority (Qual. Data ▲)	

9.3.3 <u>Personal</u>

Facilitators and co-ordinators appear to recognise the enormity of the language problem, where for both facilitators/co-ordinators and students English is their second language (see 7.2.1.2 & 8.2.12) and the medium of education. Facilitators and co-ordinators also recognise their own limited English proficiency and feel powerless due to the fact that they have no knowledge nor skills in an African language, which is the mother tongue of the students. The latter also causes stress within the staff member when these limitations have a negative effect on communication.

Facilitators and co-ordinators seem to have high frustration levels due to prominent contextual problems that inhibit successful implementation of RBL and cause a feeling of disempowerment among the facilitators and co-ordinators (see 1.1, 1.2 & 8.2.8).

Facilitators and co-ordinators also appear to have negative experiences of the self in terms of RBL demands (see 8.2.8.e). This could be due to their limited skills and knowledge of RBL as well as the short involvement period as regards the RBL innovation. No reasons were mentioned to clarify the above-mentioned and it therefore needs further investigation for clarification.

It was indicated by the different data sets that facilitators and co-ordinators appear to have contradictory perceptions with regard to status differences between own position versus that of a lecturer. The co-ordinators who feel there is a status difference between himself/herself versus a lecturer, is a concern. This perception by the majority of co-ordinators could possibly cause inferiority within own position, which could influence their own commitment towards the RBLCPP negatively.

According to the qualitative interviews facilitators and co-ordinators indicated that personal goals as regards RBL are not a priority (see 8.2.11).

The results of facilitators and co-ordinators that could not be confirmed were the fact that they were effected by financial implications with regards to RBL.

Facilitators and co-ordinators were mainly orientated towards their respective roles via workshops. Taking into account the small number of workshops and the negative experience of workshops by co-ordinators, demonstrates a concern which need further investigation.

Table 9.4 A summary of data- and methodological triangulation results of the fourth stage of concern

Stages of Concern	Quantitative (Quan.) Data ▲ results (Method 1)	Qualitative (Qual.) Data ▲ results (Method 2)	Issues either confirmed by Quan. or Qual. data ▲	Results of Method ▲ (Methods 1 + 2)
3 (Management)	*Co-ordinators seem to be more focused on the RBL tasks and processes as well as the use of information and resources than facilitators.	*Facilitators indicated that they spent most of their time facilitating, while the co-ordinators spent most of their time writing material and doing preparation.		*Data of the RBL tasks and processes have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards the tasks and processes of RBL have not been confirmed by the Qualitative data set.
	*Co-ordinators seem to be more responsible for the efficiency, organising, managing, scheduling and time demands of RBL than facilitators are.	*Co-ordinators seemed to be more involved with logistic and management concerns due to their job descriptions.		*Data efficiency and managing demands of RBL have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards the efficiency and managing demands of RBL have been confirmed.

Having displayed the fourth stage of concern (Management), attention will shift to the discussion on the results of Table 9.4.

9.3.4 Management

Taking into account the amount and level of training as well as the presence of concerns and high frustration levels, it is vital for effective management of RBL and RBLCPP to have a co-ordinating system. Both facilitators and co-ordinators indicated the need for an all-encompassing guidance and support system (see 8.2.12). It is also evident that facilitators and co-ordinators need guidance as regards time management within the RBL framework, due to the fact that they still demonstrate feelings of uncertainty and inabilities in this regard. According to the responses of facilitators and co-ordinators it seems that their actions and devotion of time towards certain job aspects are in line with the job descriptions.

Facilitators' prime devotion appears to be facilitation. Owing to the respective roles of the facilitators and co-ordinators, facilitators are more responsible for the application of RBL and co-operation with students, while co-ordinators are more responsible for writing RBL material as well as for the co-ordination and co-operation with people to whom RBL is unknown and for example external to the RBLCPP.

Attention will now shift to the fifth stage of concern (Consequence), which first will be displayed in Table 9.5 and then be discussed.

Table 9.5 A summary of data- and methodological triangulation results of the fifth stage of concern

Stages of Concern	Quantitative (Quan.) Data ▲ results (Method 1)	Qualitative (Qual.) Data ▲ results (Method 2)	Issues either confirmed by Quan. or Qual. data ▲	Results of Method ▲ (Methods 1 + 2)
4 (Consequence)	*Facilitators seem to be more focused on the impact of RBL as regards the relevance of student outcomes, and evaluation than co-ordinators.	*Both facilitators and co-ordinators appear to be concerned and frustrated about the students' poor language proficiency, the lack of background knowledge and also appear to be sceptical about the students' ability to be independent learners due to above-mentioned problems.		*Data of student concerns as regards RBL have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards student outcomes in RBL, have not been confirmed by the Qualitative data set.
	*Facilitators seem more concerned about the students' attitudes towards RBL than co-ordinators.	*Both facilitators and co-ordinators appear to be concerned about the students' attitudes towards RBL.		*Data concerns of students' attitudes towards RBL have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards students' attitudes towards RBL, have not been confirmed by the Qualitative data set.

9.3.5 <u>Consequence</u>

The results from the quantitative (i.e. demographical and relevant information questionnaire) and qualitative (i.e. structured interviews) indicated that facilitators and co-ordinators are more concerned about the consequences of RBL for the students. According to the above-mentioned, facilitators are more involved with the facilitation process and with the students. It is also evident that facilitators and co-ordinators are more focused on the students and therefore RBL as a personal goal is not a priority (see 7.2.1.8). Facilitators and co-ordinators also appear to be uncertain on whether all the relevant knowledge is transferred by the RBL, and appear to be sceptical about the students' ability to be independent learners. This data could suggest that facilitators and co-ordinators are still in the process of adopting the paradigm of RBL, due to the need for additional training opportunities.

The attitudes of students are important to facilitators and are gathered via feedback, in order to adapt own RBL strategies accordingly.

Stage six (Collaboration) will be discussed and visually illustrated in Table 9.6.

Table 9.6 A summary of data- and methodological triangulation results of the sixth stage of concern

Stages of Concern	Quantitative (Quan.) Data ▲ results (Method 1)	Qualitative (Qual.) Data ▲ results (Method 2)	Issues either confirmed by Quan. or Qual. data ▲	Results of Method ▲ (Methods 1 + 2)
5 (Collaboration)	*Co-ordinators are more concerned about the co-ordination and co-operation with others as regards RBL than facilitators.	*Both facilitators and co-ordinators are satisfied with the co-ordination and co-operation with others as regards RBL.		*Data of co-ordination and co-operation with others as regards RBL have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards co-ordination and co-operation in RBL, have not been confirmed by the Qualitative data set.
			*The majority of facilitators and co-ordinators appear to receive positive responses from academic colleagues to whom the RBL concept is unknown (Qual. Data ▲).	

9.3.6 <u>Collaboration</u>

According to the qualitative results (i.e. structured interviews) facilitators and co-ordinators indicated that the majority of the academic colleagues' responses, as regards RBL, were positive (see 8.2.7a & 8.2.7b). It also appears that there exist good and satisfied inter-personal relationships between facilitators and co-ordinators, which are vital for support as well as making them feel comfortable to reach out when needed. Not only are collaboration between facilitators and co-ordinators satisfied, but also between the RBLCPP staff (e.g. administration, director, etc.).

Stage 7 (Refocussing) is visually demonstrated in Table 9.7 and followed by a discussion of the stage.

Table 9.7 A summary of data- and methodological triangulation results of the seventh stage of concern

Stages of Concern	Quantitative (Quan.) Data ▲ results (Method 1)	Qualitative (Qual.) Data ▲ results (Method 2)	Issues either confirmed by Quan. or Qual. data ▲	Results of Method ▲ (Methods 1 + 2)
6 (Refocussing)	*Facilitators appear to have more ideas on how to improve the programme and RBL strategies.	*Both facilitators and co-ordinators seem to be positive towards the future and implementation of RBL.		*Data of improvement and implementation as regards RBL have been confirmed by both the data sets. *The differences between facilitators and co-ordinators, as regards the improvement and implementation of RBL, have not been confirmed by the Qualitative data set.

9.3.7 Refocussing

Facilitators and co-ordinators appear to be still uncertain on how to apply RBL within a diverse/multicultural student population as well as how to implement RBL successfully within the South African context. Despite all these uncertainties, both facilitators and co-ordinators are convinced that RBL is the learning mode for the future.

Both facilitators' and co-ordinators' responses indicated a positive attitude towards RBL (see 8.2.3, 8.2.7.a & 8.2.7b). These responses refer to the competencies of the co-ordinators with regard to the general picture, while the facilitators are more competent in applying RBL strategies.

9.4 CONCLUSION

This chapter has focused on the results of the triangulation process. Thus, this chapter has met the first two specific empirical research aims (see 1.3.2) and the presence of some contradictory results confirmed the need of using both quantitative and qualitative methods.

In the next chapter the focus will be shifted to the interpretation of these results in terms of the psychological experiences of higher educational change by facilitators and co-ordinators.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2	**Chapter 3**	**Chapter 4**
THE CONCEPTUAL ORIENTATION OF CHANGE	**RESOURCE-BASED LEARNING AS A NEW LEARNING MODE**	**FACILITATORS AND CO-ORDINATORS IN A RBL COURSE**

PART 2

Chapter 5	**Chapter 6**
THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY	**RESEARCH METHODS AND PROCEDURES**

Chapter 7	**Chapter 8**	**Chapter 9**
QUANTITATIVE RESEARCH RESULTS	**QUALITATIVE RESEARCH RESULTS**	**TRIANGULATION RESEARCH RESULTS**

Chapter 10

CONCLUSION AND RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

10.1   INTRODUCTION

*T*he results of this study indicated the psychological experiences that facilitators and co-ordinators experienced due to higher educational change in a RBL course.   According to this study, it appeares that differences exist in the psychological experiences of facilitators and co-ordinators due to higher educational change.   The presence of psychological experiences seems to have a distinct influence on the individual and it will therefore also have distinct implications for the development and improvement of the RBLCPP.

In this chapter the research results will be interpreted and be compared with the literature review findings.   Recommendations will be made on how to accommodate psychological experiences within the individual staff member, as well as recommendations for the development/improvement of the RBLCPP.

10.2   CONCLUSIONS OF RESEARCH RESULTS

This section will be focussing on the conclusion of the research results.   This entails the comparison of the research results with international findings with regard to the psychological experiences of staff due to higher educational change such as the paradigm shift to the RBL (Chapter 4).   Underlying factors which have an influence on the research results will also be discussed.

10.2.1 <u>Facilitators' and co-ordinators' experience of the teaching learning mode</u>

From the quantitative and qualitative results it was evident that co-ordinators appear to have more experience in the teaching learning mode. Co-ordinators also appeared to be more positive towards and believe more in the teaching learning mode than the facilitators.

It also indicated that facilitators and co-ordinators experience the higher educational change to RBL as an evoke reaction (see 2.2.2) and have already affected the human experiences as stated by Mahoney (1991) on the cognition, affect and behaviour domains (see 4.1). The fact that the decision to take part in the RBLCPP was an evoke reaction by facilitators and co-ordinators also implies that additional motivation and persuasion of staff would be required to remain committed to the RBLCPP.

10.2.2 <u>Facilitators' and co-ordinators' experience of the resource-based learning mode</u>

In order to demonstrate the paradigm shift to RBL, it is vital for RBLCPP staff and staff of RBL programmes world-wide to understand the definition of RBL, the origin of RBL, where RBL fits into the higher education context, advantages and disadvantages of RBL, as well as the institutional strategies for implementation of RBL (Beswick, 1977; Bitzer & Pretorius, 1996; Brown & Smith, 1996; Gibbs *et al.*, 1994; Radloff *et al.*, 1997).

The quantitative and qualitative research results indicated that facilitators and co-ordinators have limited RBL knowledge and skills, due to their short involvement period (e.g. 1997/1998), which could confirm the need for more, regular follow-up training opportunities (see 8.2.13). A possible reason for not being totally aware of the reasons for introducing RBL into the higher education context, might be that the people who initiated the shift to RBL, do not always have the knowledge of the above-mentioned themselves.

It also appears that the facilitators and co-ordinators understand RBL as a whole, but the misconceptions with distance education and also viewing it as a bridging programme, have to be addressed (see 8.2.3.d).

Perceptions as regards the expectations of a RBL programme and the outcomes thereof correlate with the respective roles of the facilitators and co-ordinators in accordance with the specified job descriptions (see Appendix D).

10.2.3 Facilitators' and co-ordinators' feelings as a response to the shift to resource-based learning

The research results provided a deeper insight into the effects that facilitators and co-ordinators experience due to higher educational change (i.e. the shift to RBL).

The motivation, competency, and confidence levels of facilitators and co-ordinators demonstrated an increase. A possible reason to clarify the above-mentioned is the fact that facilitators and co-ordinators experience RBL as positive and effective (see 8.2.3.g).

The tendency of high frustration levels among facilitators and co-ordinators are not confirmed by literature (see 8.2.8.c), but appears to be due to certain South African contextual aspects such as the poor background knowledge of students, the lack of adequate resources, limited time available to transfer knowledge and the presence of language problems and cultural differences (see 1.1, 1.2, 3.5 & 8.2.12). Another reason might be that the high frustration levels are created by introducing a first world concept in a third world country and therefore the context figure acts as a buffer in the adaptation process (see 1.1, 1.2 & 3.5).

The presence of anxiety amongst co-ordinators have been confirmed by this study, as suggested by Taylor (1997). These contextual-based problem areas seem to cause disempowerment within the facilitators and co-ordinators which could be a possible reason for the presence of negative experiences of the self with regard to the coping with RBL, but the latter needs further investigation. These contextual aspects seem to

interfere/meddle with the adaptation of staff, which clarify the adaptation problems as indicated in the quantitative and qualitative research results. Facilitators and co-ordinators also indicated being sceptical as regards the suitability of RBL for non-traditional students, which confirms one of the disadvantages of RBL (i.e. unsuitable for immature students) as suggested by Keller (1974); Gibbs *et al.* (1994) and Radloff *et al.* (1997).

There exist differences in the intensity of stress levels between the minority of facilitators and co-ordinators.

From the above-mentioned, it appears that facilitators and co-ordinators requested the following:

□ more, regular, follow-up training/staff development opportunities, which cover the science field as well as;

□ more knowledge of multiculturality issues;

□ more knowledge and skills in English and an African language;

□ create an all-encompassing support/guidance system as suggested by Taylor (1997). This will make the facilitators and co-ordinators feel supportive and valued and enable them to provide critical feedback within a supportive learning climate to improve the future RBLCPP.

The above-mentioned requests may possibly resolve some of the problems experienced, which currently have an affect on the psychological functioning of facilitators and co-ordinators in the RBLCPP.

Having formulated these conclusions, a facilitator and co-ordinator profile was completed, which could be valuable to improve the staff development and training for current and future RBLCPP staff.

10.3   FACILITATORS' AND CO-ORIDNATORS' PROFILE

The researcher decided to include this section, in order to provide an image of the RBLCPP facilitators and co-ordinators. Due to the small sample size, this profile runs the risk that it is not justified to generalise, but mainly worthwhile to the RBLCPP developers to identify staff development areas or to identify future research areas.

10.3.1   Demographical and relevant information profile aspects

10.3.1.1 Age

The population of facilitators and co-ordinators included both genders with ages ranging from 23 and 57. The median age of the facilitator population was 32 years and the median age of the co-ordinator population was 29 years. Therefore, the mean facilitator and co-ordinator will be included in the early adulthood stage of development (see 7.2.1.1). If the tasks of the self during the early adult phase are taken into account, it is evident that the self is not yet established (Louw, 1990). The same author stated that the mean facilitator/co-ordinator, which is still struggling with changes in himself/herself, has a higher risk to be more influenced by higher educational change, which could trigger various psychological experiences.

10.3.1.2 Home language

It also appears that 70% of the facilitators and 80% of the co-ordinators are Afrikaans-speaking, while the medium of education is English, which appears to be the second language of the majority of facilitators and co-ordinators (see 7.2.1.2). The fact that facilitators and co-ordinators have to provide education through a second language, can have a negative influence on the quality and effectiveness of their facilitation, and also has a negative influence on the facilitator/co-ordinator (e.g. unsure, uncertain and less confident to present a new innovation in their second language).

10.3.1.3 Attitudes towards resource-based learning

The majority of the facilitators and co-ordinators seem to be positive towards education and its benefits (see 7.2.1.3 & 7.3). No reasons have been requested in the demographical and relevant information questionnaire. The positive attitudes of facilitators and co-ordinators of RBL appear to contribute to their motivation as regards RBL.

10.3.1.4 Years of teaching experience

As regards teaching experience, facilitators and co-ordinators indicated that 50% have between 0 to 4 years of experience (see 7.2.1.6.). According to the results of the mean years involved in the traditional learning mode, facilitators pointed out a mean of 5 years being involved in the traditional learning mode, while co-ordinators demonstrate a mean of 10 years being involved in the traditional learning mode. There appears to exist differences among the average years of teaching experience between facilitators and co-ordinators. This study did not investigate whether the amount of teaching experience has an effect on the adoption process of the new RBL methodology.

10.3.1.5 Devoting time to certain job aspects

There appears to be differences between facilitators and co-ordinators in devoting their time (e.g. facilitators spend most of their time facilitating during contact sessions, while co-ordinators devote their time to writing learning material and for preparation). The latter seems to correlate with their job descriptions.

10.3.1.6 Personal goals

It is evident that facilitators and co-ordinators strive towards the same positive future goals, which are mainly focused on the benefits for the students, personal goals seem not to be a priority. This suggests that facilitators and co-ordinators are captured in the paradigm shift process, which has not been finalised and internalised (i.e. to view RBL as a personal goal).

10.3.1.7 Facilities and infrastructure

The majority of facilitators and co-ordinators experience high levels of frustration as regards the lack of resources (e.g. access to a wider range of learning resources and appropriate class rooms) and the poor background knowledge of students. This would have had an effect on their psychological and social well-being, since they are constantly being disempowered due to the above-mentioned South African contextual aspects. This also possibly causes the negative experiences of the self with regard to the coping with RBL among facilitators and co-ordinators. Facilitators and co-ordinators are most likely to experience pressure from the developers of the programme and the respective departments to perform well (i.e. pass rate of students). It appears form the research results that co-ordinators and facilitators experience stress.

10.3.1.8 Mental needs

Facilitators and co-ordinators would be more motivated, competent, confident, and excited, when they have more experience of RBL, because currently they are only pioneers with limited experience. The fact that the majority of facilitators and co-ordinators provide education in their second language, which suggests their limited language proficiency can have a negative influence on their functioning and performance (e.g. confidence). These facilitators and co-ordinators would also be uncertain of their future, due to the fact that their job is not permanent.

10.3.1.9 Social-emotional needs

The minority of facilitators and co-ordinators indicated that they experience personal, social and emotional, health and adaptation problems. Due to the small sample size, the above-mentioned problems cannot explain the presence of negative experiences of the self as regards coping with RBL among facilitators and co-ordinators. The latter is an important future research area.

10.4   RECOMMENDATIONS

In this study the focus was on the psychological experience of higher educational change of facilitators and co-ordinators in a RBL course. This section will include recommendations, which directly strive towards the improvement of the functioning of the staff (i.e. facilitators/co-ordinators) and indirectly the development and improvement of the RBLCPP as regards the psychological experience by facilitators and co-ordinators of higher educational change (i.e. shift to RBL methodology). International perspectives will be used to support and complement these recommendations:

1. More, regular, follow-up staff development training opportunities

Facilitators and the co-ordinators indicated negative experiences of the self with regard to the coping with RBL. This could possibly be due to their limited knowledge and skills of the new RBL innovation and short involvement period with this innovation (see 8.2.2.b), but needs further investigation.

The developers of the RBLCPP should be aware of this need of facilitators and co-ordinators, as suggested by Brown and Smith (1996) that staff and educational developers have a key role in the successful implementation of RBL.

2. Training should equally cover all subject areas

The majority of both the facilitators and the co-ordinators indicated that they felt frustrated and excluded when their subject area was not covered during workshops. This made them feel unsure about RBL strategies, which would be suitable for their subject area (see 8.3.2.3).

The RBLCPP developers should be aware of this need by facilitators and co-ordinators. These staff might feel uncomfortable about their RBL skills, which could have a negative influence on the successful implementation of RBL, as suggested by Brown and Smith (1996).

3. An English course should be introduced

To present RBL in a second language appears to have a negative influence on the confidence of facilitators and co-ordinators (8.2.12). The fact that facilitators and co-ordinators had limited skills, made them nervous and uneasy (especially in the beginning).

The developers of the RBLCPP have to take notice of this need and can improve the problem (e.g. language proficiency of staff) and the programme by exposing facilitators and co-ordinators to an English course, before starting with the programme.

The fact that both staff and students are second language speakers, with regard to the medium of education, confirms the enormity of the language problem. Although the recommendation of introducing an African language course seems partly as a solution by the RBLCPP staff, because it could partly improve the situation and also create positive attitudes from students when staff makes an attempt to accommodate them and possibly lower their own frustration levels, the researcher does not believe that it is a solution (see 8.2.13).

4. Adequate resources, facilities and infrastructure

Both facilitators and co-ordinators indicated that the limited access of RBLCPP students to resources (e.g. library and computer facilities) and the use of inappropriate facilities for the RBLCPP do not only inhibit the students, but prevent successful implementation of RBL and cause frustration within facilitators and co-ordinators.

This is a vital factor that the developers of the RBLCPP have to be aware of.

5. Address the poor schooling of students

The developers of the RBLCPP have to be aware of the fact that this is causing high frustration levels amongst facilitators and co-ordinators. It is also an important area which needs attention by policy makers and managers. This is also mentioned in the literature by Brown and Smith (1996), that by raising awareness about the key RBL

issues at a number of levels and influencing policy at senior management level are vital for successful implementation of RBL.

6. An all-encompassing support guidance system

Facilitators and co-ordinators indicated negative experiences of the self with regard to RBL which stresses the need for guidance and support. Currently they received support from colleagues, departments, SAIDE and the Strategic Services, but felt an all-encompassing and co-ordinated support and guidance system would be valuable. Especially, due to the fact that they are pioneers and therefore need more guidance and support.

10.5   SHORTCOMINGS OF RESEARCH

The following research shortcomings have to be taken into account:

- the quality of the research could be improved and generalisations could be justified by using a larger research group;
- the fact that the research design includes both quantitative and qualitative evaluation methods makes it quite difficult, because there exists no clear-cut guideline on how to apply it in practice;
- the difficulty as regards the use of an interdisciplinary study is that it is very problematic to accommodate the Higher Education field and the Psychology field equally.

10.6   FUTURE RESEARCH

- Considering the research findings of this study, it appears important that more research is required on why facilitators and co-ordinators appear to have negative experiences of the self with regard to the coping with RBL. Higher educational change affects all higher education staff in South Africa holistically. Research on staff development materials and programmes to improve the negative experiences

of the self as regards coping with RBL would help staff to be better functioning individuals.

❑ Research is also required on how RBL can be introduced in an institution, to ensure a smooth transition from a teaching mode towards a learning mode.

❑ The researcher is also of the opinion that to obtain deeper insight into the psychological processes further research is required on the psychological impact of higher educational change on staff.

❑ Research is also required on why the majority of co-ordinators (60%) believed that the lecturer position enjoyed higher status. This is an important area, because this belief can have a negative influence on co-ordinators' motivation and commitment towards the RBL mode and the RBLCPP.

10.7   CLOSING

The researcher is convinced that higher educational change (i.e. the shift to RBL) does trigger psychological experiences within facilitators and co-ordinators. It appears that there exist differences in the psychological experiences of facilitators and co-ordinators, due to higher educational change and also their role therein. In order to ensure successful RBL implementation in the RBLCPP, developers and policy makers/managers need to address the unique South African contextual problem areas. The above-mentioned confirmed that the three specific empirical research aims have been met.

The results of the triangulation (see Chapter 9) also confirm the value of using both quantitative and qualitative research methods.

Outline of study:

Chapter 1

INTRODUCTION

PART 1

Chapter 2

THE CONCEPTUAL ORIENTATION OF CHANGE

Chapter 3

RESOURCE-BASED LEARNING AS A NEW LEARNING MODE

Chapter 4

FACILITATORS AND CO-ORDINATORS IN A RBL COURSE

PART 2

Chapter 5

THEORETICAL FOUNDATION OF RESEARCH DESIGN AND METHODOLOGY

Chapter 6

RESEARCH METHODS AND PROCEDURES

Chapter 7

QUANTITATIVE RESEARCH RESULTS

Chapter 8

QUALITATIVE RESEARCH RESULTS

Chapter 9

TRIANGULATION RESEARCH RESULTS

Chapter 10

CONCLUSION AND RECOMMENDATIONS

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♦ *Key words:* *Resource-based learning, paradigm shift, facilitator, co-ordinator, higher educational change, and psychological experience.*

Higher Education in South Africa is currently being characterised by massification, globalisation, more non-traditional students entering the system, striving towards quality and cost-effective educational programmes, as well as a **paradigm shift** from lecture-based to **resource-based learning (RBL) education** (which is a learning methodology where the learning content is made accessible to students and the emphasis is shifted to the facilitator as the manager of knowledge and not the main source of knowledge).

During the transformation of the South African higher education system, the ministry as well as various policy documents propose **RBL** as an appropriate delivery mode and a key principle to meet challenges (e.g. **the expectations of the learners**, the **realities of the work place**, and to **maintain high standard graduates**) posed to the university system.

A profound understanding of the dynamics of a nation's higher educational change process is only possible when taking international developments into account. The evaluation of the experience of change is difficult, due to the complexity and pace of change in most higher education institutions. Change is affecting all facets of human experience. In this study attention is focused on the psychological experiences of facilitators and co-ordinators due to higher educational change in a RBL course.

A quantitative and qualitative investigation was done to identify the presence of as well as the differences between the specific psychological experiences by facilitators and co-ordinators due to higher educational change (e.g. the paradigm shift to the RBL methodology).

In this comparative study facilitators seem to be more concerned about the awareness, informational, personal, consequence and refocusing stages of concern, while the co-ordinators are more concerned about the management and collaboration stages of concern. These results correlate with the respective job descriptions of the facilitators and co-ordinators.

In this study it is evident that both facilitators and co-ordinators have limited RBL knowledge and skills, due to their short involvement period in this delivery mode. The latter may be one of the reasons to clarify the presence of negative experiences of the self as regard coping with RBL by facilitators and co-ordinators.

The facilitators' and co-ordinators' involvement in RBL was due to an obliged change, because they were nominated instead of volunteering. Therefore, this may implicate that the shift to RBL implies hard and difficult work for the developers, in order to equip staff with the necessary knowledge and skills of RBL.

The majority of facilitators indicated that they are in favour of workshops. Only half of the co-ordinators were positive towards workshops, which indicates an important concern, if one takes into account that co-ordinators have to be subject experts who are responsible for the training and orientation of the facilitators and therefore need workshops/training opportunities to keep up with the latest developments regarding RBL.

Both facilitators and co-ordinators demonstrated an increase in motivation, competency, and confidence levels, because they experience RBL as positive and effective.

After six months there appears to be a difference between facilitators whose excitement levels were decreasing, while co-ordinators' excitement levels remained equal. The latter could be due to the fact that facilitators are more directly confronted with the RBL practice.

There is also the tendency of high frustration levels amongst facilitators and co-ordinators which appear to be caused by the prominent problems in the South African context and the complexity of the Western culture of the students.

A unique factor that complicates the implementation of RBL in the Resource-based Learning Career Preparation Programme is that staff are presenting and students are receiving education through a second-language medium.

The above-mentioned perspectives and insights gained from the comparative study could guide both the developers and managers of the Resource-based Learning Career Preparation Programme to improve directly the psychological functioning of staff, and indirectly to improve the whole programme.

Opsomming

♦ _Sleutelwoorde:_ _Brongebaseerde onderrig, paradigmaskuif, fasiliteerder, koördineerder, verandering in höer onderwys, sielkundige belewenis._

Die Suid-Afrikaanse Hoër Onderwys word tans gekenmerk deur massifikasie, globalisering, die toename in toelating van nie-tradisionele studente, die strewe na kwaliteit en koste-effektiewe programme, asook die **paradigmaskuif** van lesing-gebaseerde na **brongebaseerde onderrig.** Brongebaseerde onderrig verwys na 'n leermetodologie waar die leerinhoud aan die studente beskikbaar gestel word en beklemtoon die skuif na 'n fasiliteerder as bestuurder van kennis en nie die primêre bron van kennis nie.

Gedurende die transformasie proses van die Suid-Afrikaanse hoër onderwyssisteem, het die ministerie asook verskeie beleidsdokumente **brongebaseerde onderrig** aanbeveel as 'n toepaslike metode om te voldoen aan die uitdagings (byvoorbeeld **die verwagtings van die leerders,** die **realiteit van die werkplek,** en om 'n **hoë standaard gegradueerde studente te handhaaf)** wat aan die hoër onderwyssisteem gestel word.

Om 'n diepgaande begrip van die dinamika van 'n nasie se hoër onderwys-veranderingsproses te verkry, is slegs moontlik wanneer internasionale ontwikkeling in ag geneem word. Die ervaring van verandering is moeilik, as gevolg van die kompleksiteit en tempo van verandering in die meeste hoër onderwysinrigtings. Verandering beïnvloed alle fasette van die menslike ervaringswêreld. In hierdie studie is gefokus op die psigologiese ervarings van fasiliteerders en koördineerders as gevolg van hoër onderwysverandering in 'n brongebaseerde kursus.

'n Kwantitatiewe en kwalitatiewe ondersoek is geloods om die teenwoordigheid van en die verskille tussen spesifieke psigologiese ervarings van fasiliteerders and koördineerders as gevolg van verandering in hoër onderwys (byvoorbeeld die paradigmaskuif na brongebaseerde onderrigmetodologie) te identifiseer.

In hierdie vergelykende studie is fasiliteerders meer besorgd oor die bewuswording, inligting, persoonlike, gevolge, en herfokus fases van besorgdhede, teenoor die koördineerders wat meer besorg is oor die bestuur- en samewerkingsfases van besorgdheid. Hierdie resultate korreleer met die onderskeie werksbeskrywings van die fasiliteerders en koördineerders.

In hierdie studie blyk dit dat beide die fasiliteerders en koördineerders oor beperkte brongebaseerde leerkennis en vaardighede beskik, as gevolg van die kort tydsperiode wat hulle betrokke is by hierdie metode. Laasgenoemde kan ook een van die moontlike verklarings wees vir die teenwoordigheid van negatiewe ervarings van die self in terme van brongebaseerde onderrig by fasiliteerders en koördineerders.

Die fasiliteerders en koördineerders se betrokkenheid by brongebaseerde onderrig blyk 'n verpligte verandering te wees, omdat hulle genomineer is en nie vrywillig aangebied het nie. Dus mag bogenoemde skuif na brongebaseerde onderrig moeilike take vir die programontwikkelaars impliseer ten einde die personeel met die nodige kennis en vaardighede ten opsigte van brongebaseerde leer toe te rus.

Die meerderheid van die fasiliteerders het aangedui dat hulle ten gunste van werkswinkels is. Slegs die helfte van die koördineerders is positief ten opsigte van werkswinkels, wat 'n groot bekommernis is wanneer in ag geneem word dat koördineerders vakdeskundiges moet wees en verantwoordelik is vir die oriëntering en opleiding van fasiliteerders. Hulle benodig dus werkswinkels/opleidingsgeleenthede om op hoogte te bly van die nuutste ontwikkelinge aangaande brongebaseerde onderrig.

Beide fasiliteerders en koördineerders het 'n toename in die motivering, bekwaamhede, en selfvertrouevlakke getoon omdat hulle brongebaseerde leer positief en effektief ervaar het.
Na 'n tydperk van ses maande blyk daar 'n verskil te wees tussen die fasiliteerders, wie se vlakke van entoesiame gedaal het, teenoor die koördineerders wie se vlakke van

entoesiasme konstant gebly het. Laasgenoemde kan toegskryf word aan die feit dat die fasiliteerders meer direk gekonfronteer word deur die brongebaseerde leerpraktyk.

Daar blyk ook 'n geneigdheid tot hoë frustrasievlakke by fasiliteerders en koördineerders aanwesig te wees, wat moontlik toegeskryf kan word aan prominente probleme binne die Suid-Afrikaanse konteks, en die kompleksiteit van die Westerse kultuur van die studente.

'n Unieke faktor wat die implementering van brongebaseerde onderrig in die Brongebaseerde Onderrigprogram meer kompleks maak, is die feit dat die personeel se aanbieding asook die studente se verkryging van opleiding deur middel van 'n tweede taalmedium geskied.

Bogenoemde perspektiewe en insigte wat by wyse van die vergelykende studie bekom is, kan die ontwikkelaars en bestuurders van die program lei om op 'n direkte wyse die psigologiese funksionering van personeel en op 'n indirekte wyse die totale program te verbeter.

APPENDIX A

DEMOGRAPHIC AND RELEVANT INFORMATION
QUESTIONNAIRE FOR FACILITATORS/
CO-ORDINATORS IN THE RBLCPP

CONFIDENTIAL

DEMOGRAPHIC AND RELEVANT DETAILS OF A FACILITATOR/CO-ORDINATOR IN THE RBLCPP

———◆———

- You <u>must</u> answer each question and only provide one answer, except where you are requested to give more than one answer.
- All your answers are strictly confidential and therefore it is important to answer the questions truthfully and to the best of your ability.

<u>PLEASE COMPLETE THE FOLLOWING</u>:

1. **TITLE:**   --
   SURNAME: --
   NAME: --

2. **Age:**   --

3. **What is your gender?**   **Male**   ☐

                                              Female   ☐

4. **What is your home language?**

Afrikaans ☐

English ☐

South Sotho (the African language mainly spoken in the Free

State region) ☐

Another language (Specify)--- ☐

5. **How was your health over the last couple of years?**

Excellent ☐

Good ☐

Fairly good ☐

Quite bad ☐

Very bad ☐

6. **In your opinion, do you think there are any other problems that could have a definite negative effect on your facilitating? For example:**

Personal problems ☐

Domestic problems ☐

Health problems ☐

Difficulties to adapt to RBL ☐

Other (Specify)------------------------- ☐

You do not have problems that influence your facilitating ☐

7. **What kind of school did you attend?**

City or urban school ☐

Town school ☐

Farm school ☐

8. **Under which authority did you obtain your matric certificate?**

Department of Education and Training ☐
Joint Matriculation Board ☐
Transvaal Education Department ☐
Cape Education Department ☐
Natal Education Department ☐
National Senior Certificate ☐
Other (Please specify) ------------------------- ☐

9. **Highest degree obtained:**

Associate ☐
Bachelor's ☐
Master's ☐
Doctorate ☐

10. **Year degree earned:** --

11. What is your attitude with regard to education? Mark only one item on the following scale:

Agree 1	Neutral 2	Disagree 3

Education is a valuable asset, because you can earn more money.　1 2 3
Education enables you to be in a powerful position.　1 2 3
Education has a formative function which fullfils and enriches
your life.　1 2 3
Through education you earn other people's respect.　1 2 3
Education is a necessity for advancement in life.　1 2 3

12. What percentage of your job is:

teaching/lecturing?　---------%
administration?　---------%
facilitating?　---------%
other?　---------%

13. How were you appointed?

Temporary/Part-time　☐
Temporary/Full-time　☐

14. Total years of teaching/lecturing--

School　☐
College　☐
University　☐

15. Number of months involved in the new RBLCPP:

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16. **Apart from your involvement as a resource-based learning facilitator/co-ordinator, are you also responsible for lecturing a subject?**

    Yes ☐

    No ☐

17. **In your use of resource-based learning, do you consider yourself to be:**

    A non-user? ☐

    A novice? ☐

    An intermediate? ☐

    An old hand? ☐

    A past user? ☐

18. **What goal do you set for yourself as a facilitator/co-ordinator?**

    ----

19. **Did you receive formal training in resource-based learning (workshops, courses)?**

    Yes ☐

    No ☐

20. **How many resource-based learning courses/workshops have you attended?**

    ----

21. **How would you rate the resource-based learning courses/workshops with regard to equipping you as a facilitator/co-ordinator?**

Excellent 5	Good 4	Average 3	Poor 2	Very poor 1

Thank you for your co-operation!

APPENDIX B

STAGES OF CONCERN (SoC) QUESTIONNAIRE

Stages of Concern Questionnaire

Name: -----------------------------------

Date: -----------------------------------

Introductory Page

The purpose of this questionnaire is to determine what people, who are using or thinking about resource-based learning, are concerned about at various times during the resource-based learning adoption process. The items were developed from typical responses of people who ranged from no knowledge at all about resource-based learning to many years of experience in using it. Therefore, <u>a good part of the items may appear to be of little relevance or irrelevant to you at this time.</u> For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale, according to the explanation at the top of each of the following pages.

For example:

0	1	2	3	4	5	6	⑦	This statement is very true of me at this time.
0	•1	2	3	④	5	6	7	This statement is somewhat true of me now.
0	①	2	3	4	5	6	7	This statement is not at all true of me at this time.
⓪	1	2	3	4	5	6	7	This statement seems irrelevant to me.

Please respond to the items in terms of your concerns when you have just started with resource-based learning. Remember to answer all the questions.

Thank you for taking time to complete this task!

Stages of Concern Questionnaire Items

Please use the following scale to complete all the questions.

0 1	2 3 4	5 6 7
Not true of me now	Somewhat true of me now	Very true of me now

0 1 2 3 4 5 6 7   I am concerned about students' attitudes towards resource-based learning.

0 1 2 3 4 5 6 7   I now know of some other approaches that might work better.

0 1 2 3 4 5 6 7   I do not even know what resource-based learning is.

0 1 2 3 4 5 6 7   I am concerned about not having enough time to organise myself each day.

0 1 2 3 4 5 6 7   I would like to help other faculties in their use of resource-based learning.

0 1 2 3 4 5 6 7   I have a very limited knowledge of resource-based learning.

0 1 2 3 4 5 6 7   I would like to know the effect of resource-based learning on my professional status.

0 1 2 3 4 5 6 7   I am concerned about conflict between my interests and responsibilities.

0 1 2 3 4 5 6 7   I am concerned about revising my use of resource-based learning.

0 1 2 3 4 5 6 7   I would like to develop working relationships with both our faculty and outside faculties which use resource-based learning.

0 1 2 3 4 5 6 7   I am concerned about how resource-based learning affects students.

0 1 2 3 4 5 6 7   I am not concerned about resource-based learning.

0	1	2	3	4	5	6	7
Not true of me now		Somewhat true of me now			Very true of me now		

0 1 2 3 4 5 6 7   I would like to know who will make the decisions in the new system.

0 1 2 3 4 5 6 7   I would like to discuss the possibility of using resource-based learning.

0 1 2 3 4 5 6 7   I would like to know which resources are available if we decide to adopt resource-based learning.

0 1 2 3 4 5 6 7   I am concerned about my inability to manage all the resource-based learning requirements.

0 1 2 3 4 5 6 7   I would like to know how my teaching or administration is supposed to change.

0 1 2 3 4 5 6 7   I would like to familiarise other departments or persons with the progress of this resource-based learning approach.

0 1 2 3 4 5 6 7   I am concerned about evaluating my impact on students.

0 1 2 3 4 5 6 7   I would like to revise the instructional approach of resource-based learning.

0 1 2 3 4 5 6 7   I am completely occupied with other things.

0 1 2 3 4 5 6 7   I would like to modify our use of resource-based learning based on the experiences of our students.

0 1 2 3 4 5 6 7   Although I do not know about resource-based learning, I am concerned about things in this area.

0 1 2 3 4 5 6 7   I would like to excite my students about their part in this approach.

0	1	2	3	4	5	6	7
Not true of me now		Somewhat true of me now			Very true of me now		

0 1 2 3 4 5 6 7   I am concerned about time spent dealing with non-academic problems related to resource-based learning.

0 1 2 3 4 5 6 7   I would like to know what the use of resource-based learning will require in the immediate future.

0 1 2 3 4 5 6 7   I would like to co-ordinate my effort with others to maximise the effects of resource-based learning.

0 1 2 3 4 5 6 7   I would like to have more information on time and energy commitments required by resource-based learning.

0 1 2 3 4 5 6 7   I would like to know what other faculties are doing in this area.

0 1 2 3 4 5 6 7   At this time, I am not interested in learning about resource-based learning.

0 1 2 3 4 5 6 7   I would like to determine how to supplement, enhance or replace resource-based learning.

0 1 2 3 4 5 6 7   I would like to use feedback from students to change the programme.

0 1 2 3 4 5 6 7   I would like to know how my role will change when I am using resource-based learning.

0 1 2 3 4 5 6 7   Co-ordination of tasks and people is taking too much of my time.

0 1 2 3 4 5 6 7   I would like to know how resource-based learning is better than what we have now.

Thank you for your co-operation!

APPENDIX C

STRUCTURED INTERVIEW

STRUCUTRED INTERVIEW

CHANGE IN HIGHER EDUCATION: THE PSYCHOLOGICAL EXPERIENCDE OF FACILITATORS AND CO-ORDINATORS IN A RBL COURSE

This interview will be conducted during April-May 1998 as part of the research investigation of the above-mentioned theme. The interview will be recorded.

1.   Introduction

- **Firstly, sit back and relax.**
- **In today's interview we are going to talk primarily about the experience of resource-based learning on you as a facilitator/co-ordinator.**
- **Literature already demonstrated that the success of any programme primarily depends on the staff (e.g. facilitators/co-ordinators).**
- **Therefore, the longterm aim is to ease the adoption process for future facilitators/co-ordinators.**
- **Please remember that there are no correct/incorrect answers for these quetions, but please answer all the questions in full detail.**
- **All the information will be kept confidential.**
- **Any questions before we begin?**

---------------◆---------------
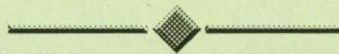
2.   **Describe to me how you feel/what is your opinion of the teaching/lecturing mode? (We refer to the teaching/lecturing mode as the traditional method of given lectures.)**

   a.)   How many years have you been involved in the teaching/lecturing mode?

   b.)   How effective is the teaching/lecturing mode?

   c.)   Did you believe in the teaching/lecturing mode?

211

3. **I am also interested in knowing how you became involved in the new Resource-based Learning Career Preparation Programme**

a.) How did you find out about it?

b.) When did you hear about the RBL concept for the first time?

c.) Did you volunteer or were you nominated to take part in RBL?

  *If you volunteered, what were your reasons?

  *If you were nominated, how did you feel?

d.) What previous experiences have you had in RBL?

e.) What do you understand under the RBL concept?

f.) Did the RBL course appealed to you?

  *If Yes, what about RBL appeal to you?

  *If No, what did not appeal to you in the RBL course?

g.) Did you ever wonder why RBL was introduced?

  *If Yes, tell me more about it?

h.) How do you feel about the way that RBL was introduced in the university?

i.) In your opinion, which is the most efficient educational method to prepare students for a career?

  *Probe: Why do you regard the ---------- method as the most efficient?

j.) Do you think that the student would prefer a lecture/facilitating?

k.) How would it make you feel when you are being forced to do a lecture?

l.) Please react to the following statement? As regards the teaching mode, I am always in control/or in a power position, whereas in RBL I am transferring my control/power to the students.

  *Do you think RBL implicates that you have to give up your control/power? How do you experience it?

4. **Now that you are a facilitator/co-ordinator in the new RBLCPP, how do feel about it?**

    a.) How would you describe your feelings right now?

    b.) If there are any lingering doubts or concerns, please tell me about it.

    c.) Describe to me what would I see/experience if I walk through the doors of your RBL class.

    d.) Can you tell me how other people responded to your are involvement in RBL?

    e.) Describe to me what do you see as the strengths (if any) of RBL in your situation.

    f.) Describe to me what do you see as the weaknesses (if any) of RBL in your situation.

    g.) Can you please summarise for me where you see yourself right now in relation to the use of RBL?

5. **Describe to me the difference in status between the job title as a facilitator/co-ordinator versus a lecturer.**

    a.) Which of the above-mentioned job titles would you prefer? (Why?)

6. As regards your involvement as a facilitator/co-ordinator with resource-based learning, I am interested in understanding your feelings that you experience when using resource-based learning. When you first became involved in RBL, which (if any) of the following feelings did you experience? (Prioritise, by starting with the most relevant feeling you have experienced.)

You feel:

1. as if you were coming against a wall and simply could not make progress with RBL;

2. afraid, unsure, uncertain due to the fact that you did not know exactly what to do;

3. worried;

4. as if you have no confidence in yourself;

5. just to merely accepted things like they are;

6. motivated and positive about RBL.

7. What are your expectations about how the RBL course will affect you personally?

   a.) What changes in yourself do you expect will result from the experience?

   b.) What do you expect to get out of the experience?

   c.) How does your decision affect your life right now?

   d.) What are the things (if any), as regards RBL, that you do not do that you wish you could do?

   e.) What are the things (if any) as regards RBL, that you are glad that you do not have to do?

8.　When looking back retrospectively, what was it like when you first became involved in the new RBLCPP?

　a.)　How did you feel?

　b.)　How do you feel about it now?

　c.)　Has it had any effect on your work performance?

　d.)　How did you feel about the impact that it had on you?

　e.)　When you look retrospectively at the day's activities, how do you feel about yourself?

　f.)　Does RBL affect any of the activities you are engaged in?

9.　This next question may be particularly difficult to answer with certainty, but I would like to get your thoughts on it. Have you noticed any changes over the last three months?

　a.)　How much (if any) has RBL caused those changes compared with other influences in your life at this time?

　b.)　Could you describe to me if you are currently considering to make changes as regards the use of RBL?

　c.)　How much (if any) has RBL caused those changes compared with other influences in your life at this time?

10.　Describe to me if you have any other support systems as regards RBL?

　a.)　Do you ever talk to others about RBL?

　b.)　What do you tell them when you talk about RBL?

11. **During the RBL course you will be working with the same co-ordinators and facilitators for an extended period. What feelings do you have being part of a group like that?**

a.) Based on your past experience with groups (if any), how do you see yourself fitting into the new RBLCPP group?

b.) How would you describe your attitude and actions towards co-ordinators/facilitators if he/she differs from you regarding the best strategy for RBL?

12. **Regarding the psychological impact of resource-based learning on you, where would you place yourself on the scale? For example 5 would for instance indicate you were extremely stressed or not stressed. Please indicate the intensity of your feeling by marking the appropriate number as well as underlining the feeling of your choice.**

```
5 = To a great extent
4 = To some extent
3 = To an average extent
2 = To a lesser extent
1 = To no extent
```

12.1	**Stress**	5	4	3	2	1	**No stress**
12.2	**Aggression**	5	4	3	2	1	**No aggression**
12.3	**Frustration**	5	4	3	2	1	**No frustration**
12.4	**Incompetence**	5	4	3	2	1	**Competence**
12.5	**Negative experience of the self as regards coping with RBL**	5	4	3	2	1	**Positive experience of the self as regards coping with RBL**

Name: ....   Date: ....

12.   **Regarding the psychological experience of resource-based learning on you, where would you place yourself on the scale? For example 5 would for instance indicate you were extremely stressed or not stressed. Please indicate the intensity of your feeling by marking the appropriate number as well as underlining the feeling of your choice.**

> 5 = To a great extent
>
> 4 = To some extent
>
> 3 = To an average extent
>
> 2 = To a lesser extent
>
> 1 = To no extent

12.1	**Stress**	versus		**No stress**
12.2	**Aggression**	versus		**No aggression**
12.3	**Frustration**	versus		**No frustration**
12.4	**Incompetence**	versus		**Competence**
12.5	**Negative self-esteem**	versus		**Positive self-esteem**

12.1	------------------------------	1	2	3	4	5
12.2	------------------------------	1	2	3	4	5
12.3	------------------------------	1	2	3	4	5
12.4	------------------------------	1	2	3	4	5
12.5	------------------------------	1	2	3	4	5

*If you feel that I left out emotions that you think are important, please write them in the following spaces:

----

13. Another thing that I am interested in is to understand the effect of workshops on the facilitator/co-ordinator in his/her everyday experience. What effect has it on you?

a.) How do you feel after you attended a workshop?

b.) What benefits (if any) do workshops have?

c.) Could you name any negatives about workshops?

14. You have been very helpful. Are there other thoughts or feelings you would like to share with me on how you are seeing the RBL course right now? Anything at all you would like to add?

Name: ....   Date.................................

You feel:

1. as if you were coming against a wall and simply could not make progress with RBL;

2. afraid, unsure, uncertain due to the fact that you did not know exactly what to do;

3. worried;

4. as if you have no confidence in yourself;

5. just to merely accepted things like they are;

6. motivated and positive about RBL.

Prioritise:

1. ---
2. ---
3. ---
4. ---
5. ---
6. ---

APPENDIX D

PROPOSED JOB DESCRIPTIONS FOR LEARNING FACILITATION IN A RESOURCE-BASED LEARNING CAREER PREPARATION PROGRAMME

A   SUBJECT CO-ORDINATOR

1.   Job requirements

A subject co-ordinator is preferably a person with a post-graduate qualification and is an expert in his/her subject field, which is his/her responsibility. Furthermore, the subject co-ordinator has to be familiar with the principles of resource-based learning.

2.   Role description

The role description of the subject co-ordinator is as follows:

i.)   As a subject expert, he/she has to be familiar with the latest appropriate course material and learning goals, as well as with the various facilitation methods.

ii.)   He/she is responsible for the orientation and training of learning facilitators and must be familiar with the course content, facilitation methods and job descriptions of the learning facilitators.

iii.)   Under the head of the department he/she must serve as an intermediate between a.) the Strategic Service and b.) the learning facilitator.

iv.)   He/she is responsible for the management of the programme in a specific department (academic, administrative and organisational).

v.)   He/she is responsible for the development/redevelopment of appropriate course material, where necessary.

vi.)   He/she has to monitor the progress/growth of the programme.

vii.)   He/she must attend the contact sessions of the learners and provide learning facilitators with advice and assistance.

viii.) He/she is responsible for the contact sessions when the learning facilitator is unavailable.

3. Job arrangements and compensation

The level of appointment is determined by the qualifications, experience and working time attached to a certain job. The compensation is calculated according to a lecture post at the UOFS on a contract basis. The selection and appointment of subject co-ordinators are done by the head of the department of a specific department in consultation with the dean of the specific faculty and the Strategic Service.

B   LEARNING FACILITATORS

1.   Job requirements

A learning facilitator is a person with preferably a degree qualification and is an expert in his/her specific subject field, which he/she is responsible for. Furthermore, the learning facilitator should be trained and fully familiar with the principles of resource-based learning.

2.   Role description

The learning facilitator:

i.)   has to be willing and available for appropriate training;

ii.)   as subject expert, has to be familiar with the latest course material and learning goals, as well as with the various facilitation methods;

iii.)   under the guidance of the subject co-ordinator, is responsible for the facilitation and has to handle problems in consideration with the subject co-ordinator;

iv.)   has to be prepared so that the learning needs are met effectively, despite the stage of progress;

221

v.)   has to be flexible and must be able to fulfil the specific roles. (The role of a facilitator implies for example a leader, an assistant, a facilitator, a questioner, a challenger, a provider of answers, a problem-solver, an observer, a participant and a consultant. The senior facilitator has to be able to change roles according to the changes in the needs of the learners and the learning goals.);

vi.)   has to motivate the learners constantly and is responsible for the completion and handing in of assignments;

vii.)   is responsible for marking the assignments and must provide effective feedback to learners which will enable them to comprehend when certain areas have to be repeated or when to continue with the following part of the course;

viii.) has to construct contact sessions to create active learning opportunities in order to improve independence, self-motivation and responsibility;

ix.)   has to provide satisfactory opportunities for learner feedback;

x.)   has to inform the subject co-ordinator in time that he/she will be unable to be at the scheduled contact session.

3.   Job arrangements and compensation

A facilitator is appointed on a contract basis for between two and four hours per week at the current compensation of R73 an hour for between forty and forty-four weeks per year. The selection and appointment of a learning facilitator are done by a specific head of department and co-ordinators in consideration with the Strategic Service.

APPENDIX E

LETTER OF CONSENT

Dear Facilitator/Co-ordinator

I would like you to participate in a research study entitled "Change in higher education: The psychological experiences of facilitators and co-ordinators in a resource-based learning course". The purpose of this study is to gain a better understanding of your experiences and thoughts about the Resource-based Learning Career Preparation Programme. This will enable the staff to improve the programme.

Your involvement will include the completion of a demographic data sheet and the Stages of Concern Questionnaire, as well as a structured interview that will take up approximately one hour of your time.

All the information gathered is strictly confidential. The reason for using your name is only for the controlling purposes of the researcher and therefore your identity will be kept anonymous.

If you have any questions, please feel free to contact me:

> Somarié Holtzhausen
> Strategic Service
> Tel. 4013276 (w) or 4463396 (h).

Please read the following paragraph and, if you agree to participate, sign below:

I understand that any information about me obtained from this research will be kept strictly confidential. I do understand that the results of this research project will not affect my position as a facilitator.

Signature: --   Date: ------------------------
Researcher: --   Date: ------------------------

Please place your initials here to acknowledge your receipt of a copy of the consent form: ------------------------

APPENDIX F

REFERENCE METHOD EXAMPLES

GUIDE TO AUTHORS

SOUTH AFRICAN JOURNAL OF PSYCHOLOGY
(SECOND EDITION)

Cornelis Plug

(Associate Editor, 1984–1992)

English. Similarly, reference may be made to tables and illustrations in the main text, although it is necessary to indicate clearly what the table or figure represents, and perhaps to translate some column headings.

6.5 Acknowledgements

The Acknowledgements section follows the discussion (and the summary, if there is one), but precedes the references. In this section the author indicates whether the article is based on a thesis or conference paper, acknowledges financial support for the research, and thanks persons or institutions for their assistance. Thanks should be brief and courteous, indicating specifically what each person contributed. For example:

> This article is based on a doctoral thesis, and is published with the permission of the University of the Witwatersrand. The research reported here was financially supported by the Human Sciences Research Council. I gratefully thank Anne Jones for helping me to test the subjects, Basil Buthelezi for assisting me to analyze the results, and Chris Coetzee for commenting on a draft manuscript.

The approval of persons named in the acknowledgement should preferrably be obtained, as they may object to its wording.

6.6 Appendix

Authors occasionally wish to include material such as a newly developed questionnaire in a journal article. This should be included in an appendix, which is placed after the reference list.

6.7 Permission to reproduce material under copyright

There is usually no need to obtain PASA's permission if you wish to reproduce a single table, figure, or paragraph of text from the SAJP, provided that the author has given permission, that the reproduced material forms a small portion of the total work, and that the rights and privileges of the copyright holder are not affected. If there is any doubt about these conditions, or if more material is involved, written permission by the copyright holder should be obtained. Always give full credit to both the author and the copyright holder, in a table note or in the caption to the figure. For example:

> Note. Reprinted/Adapted by permission from Ross (1991, Fig. 3.2, p. 56). Copyright 1991 by George Allen & Unwin, Ltd.

A complete reference to the work in question should appear in the list of references at the end of the paper.

Reproduction of previously published material (except brief quotations) in a journal article is warranted only in very exceptional cases.

6.8 Literature citations

A reference in the text constitutes a declaration by the author that he or she has studied the cited work. Do not cite works that you have not read.

The SAJP uses the author-date method of citation: A publication is cited by inserting the author's name and the year of publication in the text. The reader then finds the full reference in the alphabetical reference list at the end of the paper. The author-date method is widely accepted as the most convenient citation

method in psychology (and many other disciplines) and is used, with minor variations, by the British Psychological Society [BPS] (1979) and the American Psychological Association [APA] (1983).

A citation is usually incorporated into the narrative in one of two ways:

> The hypothesis was investigated by Pillay (1990)...
> ...supported in a later investigation (Botha, 1992).

If the same publication is cited more than once in the same paragraph, the date may be omitted in the second and subsequent citations, unless this is confusing.

> Smith (1989) rejected the hypothesis, whereas Hall (1990) found some support for it. The test used by Smith was later used in an investigation...

If a publication has two authors, cite both names every time. Link the names by the word and if they form an integral part of a sentence, but by an ampersand (&) if the citation appears in parentheses, in a table, or in the reference list.

> Green and Brown (1992) studied...
> ... were found (Green & Brown, 1992)

If a publication has three to six authors, cite all authors the first time, and only the first name followed by et al. in subsequent citations. An article by Hall, Motaung and Naidoo, published in 1988, is initially cited as Hall, Motaung and Naidoo (1988), and thereafter as Hall et al. (1988), or (Hall et al. 1988). Note that the Latin term is not underlined, and that there is a full stop after the last part, which is abbreviated.

If there are more than six authors, cite only the first name followed by et al. throughout. If two or more of your references reduce to identical et al. forms, cite as many authors as are necessary to distinguish between them, followed by et al. to indicate remaining authors.

Works by the same author(s) published during the same year, which would lead to identical citations, are identified by the letters a, b, c, and so forth, after the year (e.g., Carr, 1986a, 1986b). The letters are assigned after arranging the references in alphabetical order by title (see 6.9.1).

If you cite publications by different authors with the same surname, include their initials in the citation to distinguish them:

> A.B. Nel (1986) and C.D. Nel (1987) both used the test developed by C.D. Nel and Parker (1982).

Two or more citations within the same parentheses are separated by semicolons if the works are by different authors. If works by the same author are cited, give the surname only once and separate the years by commas. Arrange the citations within parentheses in the order in which they appear in the reference list.

> (Able, 1993; Baldwin, 1989, 1990a, 1990b)

Specific parts of a publication may be cited if useful to readers, although this should be done sparingly.

> (Carter, 1991, ch. 2; Downey, 1987, Figure 1; Elim, 1989, pp. 7-8)

Always cite page numbers for quotations (see 7.10).

Personal communications, whether oral or written, may be cited in the text if strictly necessary, but as readers cannot obtain them they should not be included in the reference list. Identify the person and date of the communication clearly, and obtain the person's permission for the citation (preferably in the form of his or her signature on a copy of the relevant manuscript page).

(E.F. Fick, personal communication, 1 January 1993)

In rare instances it might be necessary to cite an unobtainable work discussed in a secondary source, for example, an unpublished study by C. Carter, discussed in a book by Davis (1986). This may be done as follows:

In an unpublished study by C. Carter (cited in Davis, 1986, p. 88), ...

Further examples of citations are given in sections 6.9.1 to 6.9.5.

6.9 The reference list
The purpose of the reference list is to allow readers and librarians to locate works to which your article refers. Sufficient information should be provided for this purpose. Ensure that the information is correct in all particulars, and that the names and dates in citations correspond to those in the reference list. All the sources cited in your paper (except personal communications; see 6.8) must be listed as references. However, the reference list is not a bibliography and should not contain references to works other than those cited in the paper. Ideally, the reference list should contain only scientific works already published (or accepted for publication) and accessible to most readers.
The referencing style of the SAJP is similar to those used by the BPS (1979) and the APA (1983). These styles are adequate for journal articles and for most books, reports, and theses in psychology, but might be too cryptic to be used in bibliographies, historical studies, and works aimed at a wide readership.
The reference list is compiled under the heading REFERENCES. The first line of each reference starts at the left margin; subsequent lines are indented two spaces (see 6.9.2 to 6.9.5).

6.9.1 Alphabetical order of references
References are arranged in alphabetical order according to the surname of the first author. Problem cases are handled as follows:
- Where necessary, apply the rule 'nothing precedes something'. For example, Smit precedes Smith.
- If a prefix is part of the surname, take it into account: Du Plooy and Du Plessis appear under D, and Van der Merwe under V. Use the actual spelling of the prefixes M', Mc, and Mac: MacGuire precedes McAllister. If a prefix is not considered part of the name in the cited author's language, add it after the initials. Thus Helmholtz, H. von, is entered under H.
- Authors with the same surname are arranged by their first (and if necessary, subsequent) initials: Jones, A.Z. precedes Jones, B.
- Works with the same first author but different co-authors are arranged according to the surnames of the second (and, if necessary, subsequent) authors: Hall, P. precedes Hall, P., Koster, F.G., and Lang, N.O., which in turn precedes Hall, P. and Meyer, H.I.

- Works by the same author, or sequence of authors, are arranged chronologically: Motaung, R. and Naidoo, P. (1991) precedes Motaung, R. and Naidoo, P. (1992). If two or more works by the same sequence of authors were published in the same year, they are arranged alphabetically by the first significant word of the title (i.e., not taking A or The into account), unless a chronological order is evident from the titles. Once ordered, the letters a, b, c, and so forth are placed after the year.

Olcroft, D.F. (1987a). Intelligence and...
Olcroft, D.F. (1987b). A new test for...

These works will be cited in the text as Olcroft (1987a, 1987b).
- Works published under the name of an institution are placed according to the first significant word in the institution's full name (not according to its abbreviation).

6.9.2 References to journal articles
Information required: Author(s), year of publication, title of article, full title of journal, journal volume number, journal issue number (if issues are individually paginated), and page numbers.

Example 1: Multiple authors, journal volume continuously paginated

Schlebusch, L., Pillay, B.J. & Louw, J. (1992). Body-image differences in live-related and cadaver renal transplant recipients. South African Journal of Psychology, 22, 70-75.

- First citation: Schlebusch, Pillay and Louw (1992); subsequent citations: Schlebusch et al. (1992).
- Authors' names are typed in lower case letters, following the first letter. The surname comes first, followed by a comma, and then the initial(s). Each initial is followed by a full stop, and the next initial of the same author, with no space between them. The names of co-authors are separated by commas, except for the last two, which are separated by an ampersand only. If an author's first names appear in full in the cited source, use only the initials in your reference.
- The year of publication is placed in parentheses, followed by a full stop.
- The title of the article should be exactly the same as in the source publication; for example, do not change the spelling of words in American titles.
- Use capital letters in the title only for the first letter of the first word, proper names, etc. End the title with a full stop.
- Journal titles are written in full, underlined, and followed by a comma. Every significant word in a journal title starts with a capital letter.
- Volume numbers are written in arabic numerals, underlined, and followed by a comma.
- Finally, supply the first and last page numbers (which enable readers to order a photocopy without first having to locate the journal), followed by a full stop.

Example 2: Journal issues individually paginated

Hoffman, D.D. (1983). The interpretation of visual illusions. Scientific American, 249(6), 137-144.

The issue number, in parentheses and not underlined, follows the volume number with no space or comma in between. Although only required for journals in which each issue starts with page 1, its inclusion in references to journals with continuously paginated issues is left to the author's discretion. The issue number might be useful when seeking recent issues that have not yet been bound in a volume; it may also be included if the author is uncertain whether issues are individually or continuously paginated.

Example 3: Journal article in press

Rauch, W.B. (in press). Differential diagnosis of autism and childhood schizophrenia in a third-world setting. Journal of Mental Health, 78.

- Citation: Rauch (in press).
- An article in press has been accepted for publication in its final form, but page numbers (and often the volume number) cannot yet be supplied. Articles submitted for publication, but not yet finally accepted, are unpublished manuscripts (see Example 21).

Example 4: Journal article in a foreign language

Berger, C. (1992). Perception analytique et globale. L'Année Psychologique, 92, 105-136.

- Give the title in the original language. If many readers will be unable to understand the title, supply an English translation in brackets. This should be placed immediately after the title in the original language.

6.9.3 References to books
Information required: Author(s) or editor(s), year of publication, title of book, place of publication and publisher's name. The following abbreviations are commonly used in references to books:

ch.	chapter
ed.	edition
Ed.	Editor
Eds	Editors
p.	page
pp.	pages
Pt.	Part.
rev. ed.	revised edition.
2nd ed.	second edition
Trans.	Translator(s)
Vol.	Volume (e.g., Vol. 3)
vols	volumes (e.g., 5 vols)

Note that Eds and vols are contractions (not abbreviations) and therefore do not take a full stop.

Example 5: First edition of a book

Mann, J.W. (1986). Oversight. Pretoria: Academica.

- Author and year of publication: See notes under Example 1.
- Use capital letters in the title as you would in an ordinary sentence. Underline the title and end it with a full stop.
- Specify the city where the book was published. If the publisher has branches in different cities, give only the first named city. The place of publication is followed by a colon. If the name of the city forms part of the publisher's name (e.g., Oxford University Press), it appears only once and the colon is omitted.
- Give the publisher's name in a brief but intelligible form. For example, John Wiley and Sons, Inc. may be reduced to Wiley.

Example 6: Two editors: second edition of a multivolume work

James, P.H. & Knoble, U.M. (Eds) (1977). Introduction to the psychology of education (2nd ed., 5 vols). New York: Educational Books.

- Citation: James and Knoble (1957).
- Books containing separate contributions by different authors are usually compiled by an editor or editors. If the reference is to the book as a whole, list the editors in the author position, followed by (Ed.) for one editor, or (Eds) for more than one. The last parenthesis is not followed by a full stop. (If the reference is to a single contribution in an edited book, see Example 12.)
- Additional information about the work, such as the specific edition cited, or the number of volumes in a multivolume work, is enclosed in parentheses immediately after the title.

Example 7: Book or major report authored and published by an institution

Psychological Association of South Africa (PASA) (1989). Mental Health in South Africa (Report by the Council Committee: Mental Health). Pretoria: PASA.

- First citation: Psychological Association of South Africa (PASA) (1989); subsequent citations: PASA (1989).
- If an institution is both author and publisher, its name is either spelled out in both positions, or a well known abbreviation is introduced in the author position and used in place of the publisher's name.

Example 8: Book with no indication of the identity of the author(s) or editor(s)

Graduate studies (1981/1982). Cambridge: Hobsons

- Citation: Graduate studies (1981/1982). If the name is longer than about three words, cite only the first few words in the text.
- The title of a book with no author or editor is placed in the author position, followed immediately by the year of publication in parentheses.

Example 9: Book in a foreign language

Freud, S. (1961). Die Traumdeutung (The interpretation of dreams). Frankfurt: Fisher.

- Give the title in the original language, to prevent readers from requesting a book that they might be unable to read. If many readers will be unable to understand

the title, an English translation of the title may be supplied in brackets as above.

Example 10: English translation of a book

Ching, I. (1985). Counselling in rural communities (translated from the Chinese by Y. Fang). Tokyo: Avon. (Original work published 1980).

- The publication date of the original should be supplied in parentheses at the end of the reference if it is important that the reader recognize the historical or chronological position of the author's contribution. In that case the work is cited in the text as Ching (1980/1985). If the work is cited only for the present-day relevance of its content and the priority of the author's ideas is not at stake, the additional information need not be supplied, and the work may be cited as Ching (1985).

Example 11: English translation of a book edited by the translator

Southall, J.P.C. (Ed. and Trans.) (1962). Helmholtz's treatise on physiological optics (based on the 3rd German edition, 1909).New York: Dover.

- Citation: Southall (1962).

6.9.4 References to articles or chapters in books
Information required: Author(s), year of publication, title of article, editor(s), title of book, page numbers of article, place of publication, and publisher's name.

Example 12: Article in an edited book

Stones, C.R. (1980) Authoritarianism and the garrison society. In P.C.L. Heaven (Ed.), Authoritarianism: South African studies (pp. 1-8). Bloemfontein: de Villiers.

- Citation: Stones (1980).
- Author's name, year of publication and article title: See notes under Example 1.
- The names of the editor(s) are preceded by the word In. The editor's initials are placed before the surname, and the information on editors ends with a comma.
- The reference to the book is similar to those in Examples 5 to 11. The first and last page numbers of the article or chapter, preceded by the abbreviation pp. are placed in parentheses directly after the title.

Example 13: Paper in published conference proceedings

Bosch, B.A. & Schlebusch, L. (1985). Preliminary findings of brain-behaviour correlates in patients presenting with an uraemic syndrome. In K.W. Grieve & R.D. Griesel (Eds), Neuropsychology II: Proceedings of the Second South African Neuropsychology Conference (pp. 87-95). Pretoria: SA Brain & Behaviour Society.

- If no editors are named, give the title Proceedings of... directly after the title of the contribution, without the word In.
- Each significant word in the name of a conference or congress starts with a capital letter.

6.9.5 Less common references

Example 14: Doctoral thesis or master's dissertation

Ochse, R.A. (1985). A theoretical study of the determinants of creativity. Unpublished doctoral thesis, University of South Africa, Pretoria.

- The name of the city is given only if it is not part of the name of the university.

Example 15: Monograph in a titled series

Burger, L. (1992). Coping with repetitive natural disasters: A study of the Ladysmith floods. Reports from the Psychology Department, No. 26. Pretoria: University of South Africa.

Example 16: Book review

Straker, G. (1992). Review of 'Political violence and the struggle in South Africa' by C. Manganyi and A. du Toit (Eds). South African Journal of Psychology, 22, 33-35.

Example 17: Article in an encyclopaedia

Encyclopaedia Britannica (1974). Article on Hypnosis, Vol. 9 pp. 133-140.

- Citation: Encyclopaedia Britannica (1974).
- The example above is for an unsigned article in an encyclopaedia widely known by its title. In this case no information on the city and publisher is required. If the encyclopaedia is not well known, cite it as you would a book, that is, by the names of the editor(s).
- A signed article in an encyclopaedia is treated like an article in a book (see Example 12).

Example 18: Article in a periodical without volume numbers

Galbraith, A. (1985, September). Migraine. Psychotherapeia and psychiatry in practice, No. 39, pp. 6, 8.

- Citation: Galbraith (1985).
- Give the year and month for monthly periodicals and the full publication date of daily or weekly publications.
- Give all page numbers of discontinuously paginated articles.
- If the author is not identified, place the title of the article in the author position.

Example 19: Research report available from an institution

Taylor, T.R. (1979). A multivariate approach to the prediction of behaviour towards attitude objects: I. Literature survey (Pers 287). Johannesburg: National Institute for Personnel Research.

- Identify the report by its series number in parentheses after the title.

- Example 20: Unpublished paper presented at a meeting

Liddell, C. (1986, October). Issues related to the provision of cognitive enrichment programmes for black South African pre-schoolers. Paper presented at the Fourth National Psychology Conference, Johannesburg.

- Citation: Liddell (1986).
- Give the year and month of the meeting immediately after the author's name.

Example 21: Unpublished manuscript

Ulbricht, H.W. (1993). Personality and selective migration. Unpublished manuscript, Human Resources Laboratory, Chamber of Mines Research Organization, Johannesburg.

- The key issue is to indicate where the unpublished manuscript can be obtained.
- If the manuscript has been submitted for publication, but not yet accepted, the last sentence of the reference is replaced by "Manuscript submitted for publication".

Example 22: Dissertation abstract

Mordhoff, J.T. (1992). A unified model of visual attention. (Doctoral dissertation, The Johns Hopkins University, 1991). Dissertation Abstracts International, 53B(1), 590.

- Citation: Mordhoff (1992).
- The year cited is that of the abstract; the year during which the thesis was submitted follows the name of the university, in parentheses after the title.
- Dissertation Abstracts International is paginated in series A (humanities and social sciences) and B (sciences and engineering). Include the appropriate letter directly after the volume number. The issue number is useful as issues are too thick to be bound in volumes.

Example 23: Abstract of journal article

Saling, M. & Tyson, G.A. (1982). Lateral cradling preferences in nulliparous females. Psychological Abstracts, 67, No. 7651.

- Give the number of the abstract rather than the page number.

Example 24: Court case

State v. Jones (1986). South African Law Reports, (4), 34-42.

- Citation: State v. Jones (1986).
- The cryptic form in which references to court cases are stated in law journals conveys little information to readers with no legal background. The example above is more in line with referencing in the social sciences.
- A reference to a court case not included in the South African Law Reports should name the specific court in which the case was heard, and the date(s) of the hearing.

Example 25: Non-print work

Yuley, C.J. (1993). Training counselling psychologists (Set of 12 video recordings). Institute for Counselling Psychology, University of Manchester.

- Put the name(s) of the principal contributor(s) in the author position.
- Specify the kind of work (film, cassette recording, slide programme, computer programme on disc, electronic data file, etc.) in parentheses after the title.
- If the work has not been published, indicate where it can be obtained; otherwise state the name of the city and publisher.

7 EDITORIAL STYLE

7.1 The title page
The following information should appear on the title page:
- The title of the paper.
- The senior author's name. Use one full first name (not a nickname), followed by further initial(s) and surname, unless you have sound reasons for preferring initials and surname only. Do not add titles or degrees to your name. An author who has changed her name should indicate in a footnote to the title page the name under which her earlier publications appeared. If the name of an author of different articles is not identical readers might not recognize that the articles were written by the same person.
- The senior author's affiliation and address. The affiliation indicates where the author was employed when the manuscript was submitted. If you are self-employed, give only your full address. If your affiliation has changed since the research was conducted, indicate the change in a footnote (see Example 1 in 7.20).
- Further authors, with their affiliations and addresses. If two authors have the same affiliation it is stated only once, after the second name.
- Indicate by an asterisk and a footnote to which author correspondence from the editor and interested readers should be addressed (see Example 1 in 7.20).

7.2 Headings
The SAJP's headings all start at the left margin, and should not be numbered. The introduction to the paper does not require a heading. Most articles require only two or three levels of headings:

MAIN HEADING
In ordinary (not bold) capital letters, not followed by a full stop.

Secondary heading
In ordinary (not bold) lower case letters, underlined, not followed by a full stop.

Paragraph heading. In lower case letters, underlined, followed by a full stop, and continuing on with the text.

If one level of headings is sufficient, use only main headings. If two levels are required, use main and secondary headings.
The headings METHOD, RESULTS, DISCUSSION, SUMMARY, ACKNOWLEDGEMENTS, REFERENCES, and APPENDIX are main headings. If the appendix has a title, type this in the form of a secondary heading below the main heading.

7.3 Paragraphs
Indicate the beginning of a new paragraph by indenting its first line two spaces, except when the paragraph follows a main or secondary heading, or a blank line.

7.4 Series of items
To indicate the order of a series of items within a sentence, lower case letters in parentheses may be used:

The test provides scores for (a) verbal IQ, (b) performance IQ, and (c) total IQ.

If each item is described in a separate paragraph:
(a) Start each paragraph with a lower case letter in parentheses, without a full stop, followed by one space.
(b) Indent the first line of each paragraph two spaces, but begin subsequent lines at the left margin.

7.5 Spelling
Many spelling problems in South African psychology arise as a result of differences between standard (British) and American English. Manuscripts for the SAJP must be written in standard English, and the Shorter Oxford Dictionary is the recommended authority for the spelling and abbreviation of non-technical words. If psychological terms are spelled differently in British and American literature, British usage should be followed (except in quotations from an American source). For example:
Write behaviour, not behavior
counselling, not counseling
If alternative forms of a word end in -ize and -ise (e.g., familiarize / familiarise) the -ize form is preferred.

7.6 Hyphenation
Avoid word breaks at the end of lines, as hyphens are sometimes ambiguous to the copy editor.

7.7 Capital letters
In addition to the first word in a sentence, and proper names, begin the following words with a capital letter:
- Significant words in the names of specific institutions, but not generic names:

The training took place in the Psychology Department, University of Cape Town; most psychology departments at other universities provide similar facilities.

- Significant words in the titles of specific tests, but not generic test names; also the names of subscales of tests, but not the word scale that follows the name:

We applied the Timbre scale of the Senior Music Aptitude Test, as well as the items of a newly constructed music appreciation test

- Proper names forming part of terms denoting laws, theories, statistical techniques, syndromes, and the like (e.g., Fechner's law, Korsakoff's syndrome, Wilks' lambda, Weber fraction, Yates correction, organ of Corti, Greco-Latin square).
- References to specific tables, figures, or the titles of sections in the same paper; but not references to chapters or pages:

Read the Results section and see Table 2 and Figure 1; the other tables and figures... In chapter 3 of this book, on page 55, the author...

- Nouns followed by a symbol that denotes a specific item in a series or group:

In the regression analysis, Variable 7 was the best predictor. During Experiment 2, Group A was the experimental group.