

**FACTORS RELATING TO THE EFFECTIVE IMPLEMENTATION OF WORK
INTEGRATED LEARNING IN SOUTH AFRICAN HIGHER LEARNING INSTITUTIONS**

by

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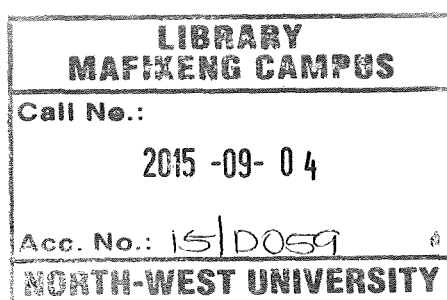
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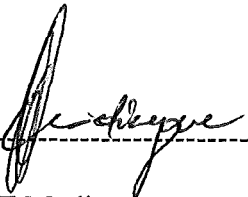
November 2014



DECLARATION

DECLARATION

I, Abel Thatayaone Modisenyane, declare that this research work for the Degree of Master of Administration in Human Resource Management in the School of Management Sciences, Faculty of Commerce and Administration, North West University, hereby declare that the submission of this paper has never been submitted before for Degree at any other university. That is my own work and the materials consulted have been properly acknowledged.



AT Modisenyane

Date

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Abstract

The university sector is increasingly adopting work-integrated learning method as a valid pedagogy and as a means to respond to the demands by employers for work-ready graduates and demands by students for employable knowledge and skills. The term work-integrated learning is used to encompass a range of activities and experiences that draw together formal coursework with industry or workplace learning. It could be important that the implementation of work-integrated learning would be developed through supported policy and coordinated practices. This study focuses on the factors relating to the implementation of work integrated learning in South African Higher Learning Institutions.

Work-integrated learning policy is a guide to quality enhancement and fostering a continuous improvement that focuses on the outcomes of student learning guided by quality inputs, process and impact. The policies assist institutions in making informed decisions on operational procedures, staffing and resource allocation in co-operation with external partners. The purpose of policies is to set out the definition, guidelines and framework for the strategic operational management of work-integrated learning. This researched aimed to evaluate the factors relating to the effective implementation of work integrated learning in South African higher education institutions.

A qualitative research approach was taken with data gathered from interviews form five academics involved in work integrated learning (N=5). Content (theme) analyses were applied to analyse the data.

The findings showed that higher education institutions do not prepare students adequately for the workplace. As a result there is a growing need for higher education institutions to implement work integrated learning programmes to enhance student employability. The findings also revealed several factors that that are crucial to ensure effective processes for the implementation of work integrated learning. The participants in particular highlighted the need for a clear framework for

ABSTRACT

cooperative education. Finally the participants also highlighted important factors such as government support that can enhance the policy implementation for work integrated learning.

Keywords: E-learning, Work-integrated learning, Work-based learning, Implementation processes, Policy implications.

Chapter 1:INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

Looking back on the last decades of development within the field of distance education, e-learning reveals a rich spectrum of initiatives that has been implemented and evaluated in education as well as organisational settings. For student engaging in work-integrated learning, it is imperative to encourage capacity to connect university coursework with the field settings and encourage deep learning through this integration to allow opportunity to learn in context to introduce student to workplace culture and assist in transition to work and develop ability to reflect on practices. E-learning is often used interchangeably with distance learning, virtual learning and online learning or web-based learning. There is courage for learning outcomes to be integrated into work processes in order to contribute to increased efficiency and quality of the organization. In this chapter, the researcher explains what the research is about and the research processes to be conducted. The research topic focuses on the factors relating to the implementation of work-integrated learning in South African Higher Learning Institutions.

1.2 BACKGROUND OF THE STUDY

At the end of the 1990's e-learning was an idea on the journey through learning into work. Perceived as "the support of learning using network technology" (Collis & de Boer, 2002, p.88), the e-learning idea spread rapidly into large business enterprises as well as into parts of academia. Especially within the field of in-house training, the new learning technology was quickly adopted. It was mostly used as a new approach to staff development, first and foremost in the form of online education (transfer of knowledge) and online training (development of skills) (van Dam, 2004), and often in combination with work. Nearly ten years after the concept first appeared, e-learning is still a frequently used term when referring to web-based training and learning in the workplace.

Fry (2000) defines e-learning as “delivery of training and education via networked interactivity and a range of other knowledge collection and distribution of technologies. E-learning enables the delivery of high-quality, up to date, standardized or customised learning throughout the world, with estimates of cost savings as much as 50 to 70 percent (Burrows, 2002, p.1). E-Learning aimed at achieving set learning goals, which direct interaction between teachers and students as well as among student groups is facilitated by information and communication technology. In consideration to that, e-learning policy and its implementation are increasingly affecting how higher education institutions operate, structured and organised (DfES, 2003a). This assumes that there is a relationship between e-learning policies, organisational change and the implementation of e-learning.

Furthermore, e-learning as a strategic approach is used as part of an organisations change management strategy. The recent governmental consultation report (DfES, 2003a) has demonstrated that the broad-based employment of e-learning within higher education institutions will be let by government. This is because the deployment of e-learning may not have cost savings, unless scalability can be provided, and it has been identified as a useful tool for change management within the institutions. Though reviews have been undertaken for policies within this area, there has been a relatively little attention paid to how these have influenced practice (Conole, 2002).

In a natural reaction to a learning delivery system that promises so much, it appears that the providers of education and training forgot one important component; the learner. Humans tend to need to adapt to new learning situations; e-learning is no different. The lack of experience in taking responsibility for one’s own learning, the lack of technical skills and a simple human resistance to change that happens rapidly without transition time or transitional structures have all contributed to the problem. If learners are truly ready for e-learning, it is an efficient, effective, and economical approachable. If they are not, the attempt to use e-learning may lead to frustration, battered egos, wasted time, incomplete learning, and programme failures (Piskurich, 2003, p. 20).

As training and e-learning work as a good practice, a well-designed e-learning can be extraordinarily effective, can be efficient with time, and pay for itself regularly. It can put the organisation in a more competitive position by Improving customer service, Getting new processes up and running faster, Reducing employee turnover, Improving morale, Increasing production, Decreasing errors, Improving product quality, and Improving efficiency. The study has demonstrated the potential effectiveness of e-learning. An extensive list of studies appears in Horton (2000). But, e-learning is not more effective than other forms of instruction just because it is delivered via computer. The quality of e-learning is specific to each application, just as the quality of books, television, and films varies with the particular content, program, or movie.

In addition, learners who are not ready for e-learning but are pushed into it, are likely to have a negative experience, which will make them even more resistant to future e-learning opportunities. E-learning providers can take time to determine learner readiness for e-learning before pushing wholesale into e-learning by allowing adequate time and attention for e-learning design that respects a variety of learning styles, developing transition structures and support structures for e-learners and ensuring that time for learning and rewards for learning are commensurate with those of other delivery systems (Piskurich, 2003, p. 20).

Of importance to e-learning is the difference between work-based learning and work-integrated learning. Hamilton & Hamilton (1997) identify a number of work-based learning approaches including visits to workplaces, work-like experience, apprenticeships and co-operative education. Co-operative education is typically a compulsory element in most tertiary education courses. The expectation of students in such a programme is to identify and where possible, apply relevant theory, acquire knowledge of the organisation or industry in which they are working and recognize the role of ethics in business. The emphasis here is generally on the individual development of a student. In work-integrated learning, there is a dual emphasis on the development of both the learner and the organisation.

The learner is not only required to demonstrate an understanding of new knowledge, which is the movement in Simmonds and Pedersen's (2006) Orchestra model, but should also apply dynamics, harmony and unity of the Orchestra model. This type of contextual learning is found on the theory of constructivism because learners make meaning by contextualizing the content in the workplace. As an authentic learning experience, the workplace provides a context for learners to transform and construct vocationally and socially meaningful knowledge and skills (Billett & Bound, 2001; Brown, 1998).

Workplace learning is a cultural practice (Solomon, 2001). According to Lave and Wenger (1991), learning at work can take part into communities of practice. Individuals are socialised into the community of practice by learning how to behave within the norms of that community. But there could also be a tendency to prevent, protect, and recycle the knowledge in a community of practice, and not to critically challenge and extend it. The meaning of work and the work identity to the individuals are closely connected to the community of practice. In large organisations, similar communities of practice could be linked together in networks, amongst which knowledge is developed and distributed. Learning is what transpires among these connections.

Learning at work is more multidimensional compared with educational institutions (Goud & Garrick, 1999). According to Lave and Wenger (1991), learning is always affected by its context. The context of learning in an organisation is varies from the university context. The new knowledge acquired from a course to an organisation is usually supported to be applied to the work situation of the individual after the completion of course and also to increase the efficiency and quality of work. There is an increasing recognition that the capacity of an organisation depends on the learning potential of its workforce. Workplace learning can be defined as a cultural practice constructed by contemporary discursive practices of work (Solomon, 2001).

The cultural practice of the workplace could affect the motivation to attend a course and to apply new knowledge to the work routine. If there is a big difference between the cultural

practices of workplace and the content of educational course, the results could be that, the workers could not be interested in taking part of the course, or not being motivated to use their new knowledge to change the work practices. It is also important for an individual to be supported by a relevant educational institution (Svensson & Aberg, 2001).

Work integrated e-learning (eWIL) is a relatively new research field focusing on learning processes concerning both employees and organisations using e-learning as a way of gaining new knowledge relevant for the process. Individual learning is integrated with the organisational learning (ibid). Work-integrated learning (WIL) is deliberate and intentional learning in work supported by appropriate induction of student and supervisors and imaginatively embedded assessment. Although Alderman and Milne (2005) observe that work-based learning is now a significant part of numerous higher education qualification, the monitoring thereof is subject to much debate; “Work-based learning is undertaken in a wide variety of higher education contexts and is increasingly viewed as a valuable and increasingly essential component of both the undergraduate and postgraduate learning experience. However the development of vigorous pedagogies to underpin work-based learning and its assessment is still embryonic (Brodie & Irving 2008, p. 11).

1.3 PROBLEM STATEMENT

The development of e-learning is one of the challenges for higher education institution providers. New pedagogical solutions and new teaching, learning and communication methods should be developed to make e-learning attractive, open and beneficial. It is a learning strategy that is increasingly being used as part of an organisational change management strategy. The purpose is to contribute to the understanding of integration mechanisms facilitating the application of e-learning outcomes into work processes. This study focuses on the evaluation of effectiveness of work-integrated learning policies at South African Higher Learning Institutions.

The intention is to achieve guidelines and intensive framework of work-integrated learning policies that will assist in facilitation of theory and incorporate it into practice. The implementation of e-learning policy is increasingly affecting how higher education institution operate, structure and organise (DFES, 2003a). However, although review has been undertaken of policies within this area, there has been relatively little attention paid to how these have influenced practice (Conole, 2002).

The discussion of the integration hopefully can inspire and encourage further design and implementation effort of e-learning education at work contributing to increased quality and efficiency of the organisation.

1.4 RESEARCH QUESTIONS

1.4.1 Main research question

- What are the factors affecting the effective implementation of work integrated learning in South African Higher Education Institutions?

1.4.2 Specific research questions

- What is work integrated (e) Learning?
- To what extent do higher education institutions prepare students for the workplace?
- What are the implementation processes of work-integrated learning?
- What are policy implications of work-integrated learning?

1.5 EXPECTED CONTRIBUTION OF THE STUDY

The investigation intends to measure the gaps and add new knowledge on the existing theoretical framework to the study. It aims to contribute to the new knowledge and assist the reader to understand, as it adds an advantage to the other scholars who could pursue research based on the topic studied.

The addition of new knowledge to the study contributes to accurate practice that enables the reader to have more understanding of the study topic interest in pursuing and applying the study context in the field of practice. The purpose of study is to present a variety of ways by which both business organisations and educational institutions can prepare learners to succeed at e-learning.

1.6 RESEARCH OBJECTIVES

1.6.1 General objective

- To determine the factors affecting the effective implementation of work integrated learning in South African Higher Education Institutions.

1.6.2 Specific objectives

- To conceptualise work integrated (e) Learning from literature
- To determine the extent to which higher education institutions prepare students for the workplace
- To evaluate the implementation processes of work-integrated learning
- To determine the policy implications of work-integrated learning

1.7 RESEARCH DESIGN

According to Bless and Higson-Smith (1995, p. 48), research design is the planning of any scientific research from the first step to the last. It is a guideline for the researcher in collecting, analysing and interpreting data. The first step in constructing a good research design requires that the researcher answer several questions about the research to be conducted and reasons for the research, the type of research it would be and why. Research design relates directly to the testing of hypotheses. It is a specification of the most adequate operations to be performed in order to test specific hypothesis under given conditions. It is not however, to be confused with research management which is a plan to guide the researcher through the research process (Bless & Higson-Smith, 2000).

1.7.1 Research approach

Qualitative research method is a method of inquiry employed in many different academic disciplines traditionally in the social sciences but also in market research and other contexts. There are a number of situations in which the interview is the most logical research technique. For example, if the objective of the research is largely exploratory involving the examination of feeling or attitudes, interviews may be the best approach. The use of semi-structured interviews also allows the researcher to 'probe' for more detailed responses where the respondent is asked to clarify what they have said. This phenomenological approach, then, is concerned with the meaning that people ascribe to phenomena. According to Arskey and Knight (1999, p. 32) interview is a powerful way of helping people to make explicit things that have hitherto been implicit to articulate tacit perceptions, feelings and understandings.

Interviews are also useful where it is likely that people may enjoy talking about their work rather than filling in questionnaires. An interview allows them an opportunity to reflect on events without having to commit them in writing, often because they feel the information may be confidential. They may never have met the researcher and may feel concerned about some of the uses to which the information may be put. Also, with questionnaires the concise meaning of a question may not always be clear, whereas with an interview, meanings can be immediately clarified. Potentially at least, interviews can produce a greater response rate for these reasons.

The focused interview is considered to be based upon the respondent's subjective responses to a known situation in which they have been involved. The interviewer has prior knowledge of this situation and is thus able to re-focus respondents if they drift away from the theme. An analogy would be the celebrity television interview in which the interviewer has already analysed the interviewee's autobiography and wishes to probe certain issues in more depth.

As Cohen and Manion (1997) point out, the interview can serve a number of distinct purposes. First, it can be used as a means of gathering information about a person's

knowledge, values, preferences and attitudes. Secondly, it can be used to test out a hypothesis or to identify variables and their relationships. Thirdly, it can be used in conjunction with other research techniques, such as survey, to follow up issues. For example, a survey by a clothing company might find a relationship between age and the tendency to purchase certain kinds of clothes. The company might often follow this up with structured interviews among a sample of people from the original survey to explore in more depth the values and motivation behind these buying patterns.

Gray (2004) states that interviews are also preferable to questionnaires where questions are either open-ended or complex, or where the logical order of questions is difficult to predetermine. But whether an interview is successful in eliciting the range and depth of answers required will depend largely on the skills of the interviewer.

1.7.2 Research Method

A Qualitative research method was used which is a method of inquiry employed in many different academic disciplines traditionally in the social sciences but also in market research and other contexts. Qualitative research aims to gather an in-depth understanding of the study. Qualitative method investigate why and how of decision making, not what, where, when. Hence, smaller but focused samples are needed more often than large samples.

Qualitative research also referred to the meaning of concepts, definitions, characteristics, metaphors, symbols and description of phenomenon. Qualitative research is collecting, analysing, and interpreting data by observing what people do and say (Foxcroft & Roodt 2005, p. 68). The study utilized two sources of research; primary and secondary.

The secondary research data will be obtained from previous studies on the same topic. Primary data is considered the closest to the actual study (Leedy & Ormrod, 2005). Secondary data provides background information and direction for a research (Cooper and

Schindler, 2001). This study employed both primary and secondary data; this is to ensure that it retains its validity and accuracy in terms of interpretation of the findings.

In order to conceive the research topic in a way that permits a clear formulation of the problem and the hypothesis, some background information of the study is necessary. This is obtained mainly by reading any source published that appears relevantly to the research topic. That process is called literature review. In conducting a literature review, the following three broad issues should be kept in mind: the purpose of the review, the literature sources and the review techniques. Literature sources to be reviewed are:

- **Primary source:** is primary data a where researcher usually collects data using questionnaires and interviews as techniques.
- **Secondary source:** secondary source is data collected by other scholars or researchers (called secondary data) and published in reports, newspaper articles, journals and books.

1.7.3 Research participants

Although a subset of the population, the sample must have properties which make it representative of the whole. Research participants are a group of people which the study focuses on, and are identified with the problem under study. Participants are interviewed to share knowledge and experience that needs to be obtained by the researcher with regard to the study. The research participants in this study involved academics involved in work integrated learning in a South African higher education institution.

1.7.4 Data collection

According to O'Neil (2009, p. 5), qualitative data collection methods typically include interviews and observations. Other methods are participant observation, direct observation, in-depth interviewing (one person), focus groups, document reviews, narrative enquiry, life histories, open ended questionnaires, projective techniques and psychological testing and enabling techniques.

For the purpose of this study, a combination of semi-structured and in-depth interviews will be used. According to Saunders et al., (2007, p. 321), these categories are described as follows:

- Semi-structured interviews. In these interviews, the researcher prepares a list of themes and questions to be covered during the interview. The number, order and nature of questions may vary from one interview to the next, and is dependent on the context and situation within which the interview takes place. The researcher leads the interview and uses opportunities to explore certain issues as they arise. The interview is recorded using an audio device or by means of note taking.
- In-depth interviews are to be used to explore, in detail, the general themes in which the researcher is interested. Although there should be a predetermined list of questions these should be very broadly structured.

In this study, the intention was to use a combination of the two types of interviews, by having a basic list of broad questions that would allow participants to respond to leading questions that arose from issues raised. According to Saunders et al. (2007, p. 313), both forms of interviews, i.e. semi-structured and in-depth, are appropriate for exploratory studies. The aim of this study was to gather information concerning business and leadership challenges as well as their views on required leadership competencies within the given context. For this reason, the interview was deemed an appropriate method for gathering such data.

1.7.5 Research procedure

A letter of request (Research covering letter) for conducting the study is handed to the Institution and a letter of approval is issued. The research topic is indicated in the letter of request, and assurance is given that information gathered would be treated with the strictest confidence it deserves. The assistance of the institution is highly appreciated as it enables the researcher to continue pursuit for academic excellence. An interview as a method of data collection was used in the study.

1.8 DEFINITION OF CONCEPTS

From the overview, we know that e-learning is becoming popular all over the world. What do we understand about e-learning and why has it become so popular? This section explains e-learning concepts in detail.

- **E-learning:** Schank (2002), Roffe (2002), Sambrook (2003) and Tsai and Machado (2002) refer to e-learning as “communication and learning activities through computers and networks (or via electronic means)”. To be more specific, Fry (2000) defines e-learning as “delivery of training and education via networked interactivity and a range of other knowledge collection and distribution of technologies.” Wild, Griggs & Downing (2002) also have the same definition as Frys – they define e-learning as the creation and delivery of knowledge via online services in the form of information, communication, and education and training.
- **In-service training:** Engelbrecht (2003, p. 14) defines in-service training as “non-formal transfer of knowledge and the acquisition of skills with the objective of producing a more useful employee who may be utilized in a particular practice/profession for broader applications than his/her present knowledge/experience of a particular occupation permits; also training for a specific placement within the organization, systematically planned and provided by a trainer on the staff internally, or by acting on behalf of the organization externally”.
- **Experiential learning:** Garavan and Murphy (2001, p. 282) defines experiential learning as “learning that occurs when changes in judgment, feelings, knowledge or skills results, for a particular person from living through an event”. Experiential learning (EL) may be defined as the work based component of the co-op model, Taylor (2005, p. 83).
- **Work-integrated learning (WIL)** refers to “specific skills acquired through work and directly related to classroom teaching. It implies a concurrent process. It may be defined as a form of education that integrates periods of academic study with periods of work experience in positions relating to the students studies. The most common form of WIL is cooperative education or coop (experiential learning)”, Engelbrecht, (2003, p. 24).
- **Work-based learning:** according to the CHE (2004, p. 37) work based learning refers to “a component of a learning programme that focuses on the application of theory in an

authentic, work based context. It addresses specific competencies identified for the acquisition of a qualification, which relate to the development of skills that will make the learner employable and will assist in developing his/her personal skills. Employer and professional bodies are involved in the assessment of experiential learning, together with academic staff”

- **Service learning:** service learning is applied learning which is directed at specific community needs and is integrated into an academic programme and curriculum. It could be credit-bearing and assessed and may or may not take place in a work environment (CHE, 2004)
- **Learnership:** learnership is defined as the new professional and vocational education and training programme. It combines theory and practice and culminates in a qualification that is registered on the NQF. (SAQA, 2005).
- **Job shadowing;** which allows the student to spend one half to one day (even up to three days) with a worker in a specific occupation (2000: Policies & procedures for Ontario Secondary Schools).
- **Job Twinning;** which provides opportunities for the student to accompany a cooperative education student to his or her placement for half to one day, (2000: Policies & procedures for Ontario Secondary Schools).
- **Cooperative education:** cooperative education, also known as “co-op”, is a broad concept used globally which includes components such as experiential learning, advisory committees, curriculum development, and exposure of staff to industry, international exchange of students, research, and skills development such as learnerships, service learning, marketing and quality management (SASCE, 2003).

1.9 ETHICAL CONSIDERATIONS

The main ethical concerns are whether the research will place the participants at undue risk, and whether the subject is fully informed about the nature of the study, or what will occur during the experimental session, or whether any risk is involved. It is assumed that all data collected would be coded to protect the researcher and the respondent. Ethical considerations

are ethical issues in research that must be taken into account scientifically in the design and execution of research. According to Babbie (1995, p. 448), ethical considerations that should be considered in research are as follows:

- **Voluntary participation:** Voluntary participation in research often requires that people reveal personal information about themselves and information that may be unknown to their friends and associates. It represents an intrusion into people live; people must participate voluntarily in research conducted by the researcher.
- **Harm to the participants:** Research should never injure the people being studied, regardless of whether they volunteer for the study.
- **Anonymity and confidentiality:** The clearest concern in the protection of the subject's interests and well-being are the protection of the identity for the participants in the survey research. When revealing a survey responses could injure participants in any way and adherence to this norm will become more important. Two techniques which are anonymity and confidentiality could assist in this regard.
- **Anonymity:** A respondent may be considered anonymous when the researcher cannot identify a given response with a given respondent. That means an interview respondent can never be considered anonymous since an interviewer collects the information to an identified respondent.
- **Confidentiality:** The researcher is able to identify a given person's responses but essentially promises not to do so publicly. In an interview survey, the researcher would be in a position to make public the income reported by a given respondent and the respondent assumes that this will not be done.
- **Deceiving subjects:** Handling of subject's identities is an important ethical consideration because handing an identity as a researcher can be tricky. Sometimes it is useful and even necessary to identify yourself as a researcher to those you want to study.
- **Analysis and Reporting:** As a researcher having ethical obligations to the subject of study, there is an ethical obligations to the colleagues in the scientific research and a few comments on those obligations are in order which is that the researcher should be more familiar than anyone else with the technical shortcomings and failures of the study, and this should be known to the readers.

- **Professional code of ethics:** Because ethical issues in research are both important and ambiguous, most of the professions have formal codes of conduct describing what is considered acceptable and unacceptable professional behaviour.

1.10 CHAPTER DIVISIONS

Chapter 1: Introduction; the study topic is presented to give the overview of the study and all relevant steps of the research process is given, that is, introduction or background of the study, problem statement, literature review, research method, results of the study, discussion of results, conclusions, limitations and recommendations.

Chapter 2: Literature review; literature survey is discussed i.e. all relevant sources will be explored to give other views of researchers related to the study i.e. text books, journal articles, the internet, government gazettes, policy statements and newspapers

Chapter 3: Research methods; the focus will be on research methodology and design where the researcher will explain in detail the method intended to be used and why in his opinion that is the most suitable method to be used. Also data gathering instruments and techniques are explained in this chapter and how are they going to be used in order to collect data. Research design is the planning of scientific research from the first to the last step. It is the step in research which guides the researcher in collecting, analysing and interpreting observed and collected facts. It relates directly to the testing of hypotheses and is a specification of the most adequate operations to be performed in order to test specific hypotheses under given conditions. Research design describes the population and the sampling technique that will assist the researcher to collect relevant data needed in the study.

Chapter 4: Results; the research results that are found are outlined in this chapter in relation to both the research questions and existing knowledge that assist in addressing the research objectives. This is the opportunity to highlight how the research reflects, differs from and extends current knowledge of the area of the study.

Chapter 5: Discussion of results; the research results are discussed and interpretations of the findings is presented in relation to the study. This part gives the researcher a chance to demonstrate exactly the knowledge acquired about the topic by interpreting the findings and outlining what they mean.

Chapter 6: Conclusions, Limitations and Recommendations; in this chapter the findings of the present study are discussed and the results are then used to formulate conclusions of the study in the context of theoretical and empirical research. Thereafter the study is evaluated in terms of some limitations, and the chapter concludes with recommendations for further research.

1.11 CONCLUSIONS

In conclusion, it is indicated that efficient learning and e-learning processes are crucial for modern knowledge organisations. E-learning is a method that uses information and communication technology (ICT) in order to transform and support teaching and learning process subsequently. Efficient integration of learning outcomes into work situations is a key to success for e-learning at work from management point of view. Work-integrated learning has been promoted in higher education to encourage opportunities for students to apply the conceptual knowledge they gain from on campus learning to the real world or industry. In this chapter, a brief overview was given with relevant theoretical framework that contributes mainly to the research topic investigated and a guide of the research processes followed in conducting this study.

Chapter 2:LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 2 explores the framework of work-integrated learning policy implications. It provides discussion of various authors in regards to the study topic. The study aims at evaluating the implementation of work integrated learning policies in South African Institutions of Higher Learning.

2.2 BACKGROUND OF THE STUDY

Due to the heightened competition introduced by the potential global market and the need for structural changes within organisations delivering e-content, e-learning policy is beginning to take on a more significant role within the context of educational policy. E-learning policy (and its implementation) is increasingly affecting how higher education institutions operate, being structured and organised (DfES, 2003a). For this reason, it is becoming increasingly important to establish what effect such policies have and how they are achieved. E-learning could be defined as “interactive individual computer supported learning” (Svensson & Åberg 2001). In this chapter, the theoretical frameworks of various authors are explored to evaluate the policy implementation of work-integrated learning at South African Higher Institutions of Learning.

Work integrated e-learning (eWIL) is a relatively new research field, focussing on learning processes concerning both employees and organisations, using e-learning as a way of gaining new knowledge relevant for the work process. Individual learning is integrated with the organisational learning (ibid.). Work integrated e-learning (eWIL) courses can be designed and used in more flexible ways than traditional courses, in order to adapt to different work situations and to different individual learning. Different learners can work with courses at different times, and at different geographical locations, at different paces of learning, with different support from tutors, and different social interaction with the other learners.

This could facilitate a development-oriented view of knowledge, where knowledge is related to the situation, according to Hedin and Svensson (1997). The learning process could then be experience based. The individual learners at work can apply their new knowledge to their daily work, which could increase a sense of meaning (Svensson & von Otter, 2000). Work integrated e-learning (WEIL) is basically intended to enhance student learning, and to this end several innovative curricular, pedagogical and assessment forms have been developed in

2.3 WORK-INTEGRATED LEARNING

According to Saunder and Machell (2000), within the higher education sector internationally and in South Africa (Department of Education, 1997; 2002a, 2002b), there have been calls for increased graduate employability. The United Kingdom-based Dearing report, (1997) recommended that all students obtain work-experience associated with their qualifications, and that the UK government should seek ways of encouraging employers to offer more opportunities for such work experience.

Innovative curricular, pedagogical and assessment forms have developed in response to concerns about graduate employability and the enhancement of student learning. A number of terms have been coined to describe these different forms of teaching and learning. In the South African University of Technologies (UoT) context the term 'Cooperative Education' has been used to describe the placement of students in appropriate workplaces for the purpose of gaining work experience in their chosen fields or disciplines, with the cooperation of potential employers. Cooperative Education is an international movement with its own approaches to work-integrated learning (see the World Association of Cooperative Education website, 2008). Broader than the particular form taken by Cooperative Education, work-integrated learning has been termed 'workplace learning', (Boud & Garrick, 1999; Billett, 2001).

The term 'experiential learning' (in South Africa sometimes used synonymously with Cooperative Education) is used with a great variety of meanings in international literature and, the emergence of work integrated learning has attempt to define it more accurately particularly in its associations with workplace learning (e.g Illeris, 2007). More broadly it may refer to learning that has meaningful

learner involvement (e.g., Zemelman Daniels and Hyde 1998). The term ‘work-based learning’ (WBL) has been defined as ‘learning for, at, or through work’ (Brennan and Little, 1996). Work-based learning involves the acquisition of work-related knowledge and skills both in the university and in the workplace including the formal or non-formal involvement of employers, Boud and Solomon (2001).

The Work-Integrated Learning Research Unit based at the Cape Peninsula University of Technology has preferred to use the term ‘Work-Integrated Learning’ to describe an approach to career-focussed education that has much in common with Work-Based Learning in that it includes theoretical forms of learning that are appropriate for technical or professional qualifications, problem-based learning, project-based learning and workplace learning. What distinguishes work-integrated learning from work based learning is the emphasis on the integrative aspects of such learning. Work-integrated learning could thus be described as an educational approach that aligns academic and workplace practices for the mutual benefit of students and workplaces. Work-integrated learning is based on the principle that learning should be demonstrated to be appropriate for a qualification and should be assessed wherever it takes place or provided (Boud & Solomon, 2000).

It is worth emphasising that the alignment between work and education implied in Work-Integrated Learning is not restricted to workplace learning (it seems as if the Higher Education Qualification Framework has conflated Work-integrated Learning with Work Place Learning) (Engel-Hills et al. 2005). There are a wide range of work-integrated learning practices along a continuum from more theoretical to more practical forms. Work-integrated learning includes but is not limited to, learning from experience. When Work-Integrated Learning includes experiential learning it intends to encourage students to reflect on their experiences and develop and refine their own conceptual models. These capabilities are just as necessary for career-focused education as they are for general education. Work-integrated Learning can be understood to include four main curricular types, with possibilities for many hybrid combinations. The four basic types are described below.

2.3.1 Work-Integrated Learning Practices

2.3.1.1 Work-directed theoretical learning

Most technical and professional programmes comprise theoretical and practical elements and work-integrated learning does not exclude theoretical knowledge. In work-directed theoretical learning there would be an attempt to ensure that theoretical forms of knowledge (such as mathematics and physics in engineering programmes) are introduced and sequenced in ways which meet both academic criteria and are applicable and relevant to the career specific components (Barnett, 2006). An example would be a subject called “Mathematical Foundations of Engineering” in contrast to the more traditional “Mathematics I”.

2.3.1.2 Problem-based learning

Problem-Based Learning is a term used within higher education for a range of pedagogic approaches that encourage students to learn through the structured exploration of a research or practice-based problem (Savin-Baden and Major, 2004). In problem-based learning, students work in small self-directed groups to define, carry out and reflect upon a task, which is usually a ‘real-life’ problem (Breslow et al. 2005). An inter-disciplinary team designs carefully structured and sequenced ‘problems’ that will direct the students’ learning towards the determined outcomes and objectives of the curriculum. The lecturer acts as a curriculum coordinator and ensures that students have access to a variety of resources for information gathering.

The lecturer must also be able to guide and advise students. Facilitators are appointed for each small group. This person is not necessarily an expert in the discipline but is a good learning facilitator, skilled in group dynamics and able to direct students to persons or resources that will advise and guide them. Problem-Based Learning began in the health sciences, but since has been used in a variety of disciplines and teaching situations whether within one course unit or to deliver a whole degree curriculum, and with undergraduates just as much as postgraduates, Boud and Feletti (1997).

2.3.1.3 Project-based learning

Project-based learning combines Problem-based learning and experiential learning, in that it brings together intellectual inquiry, real-world problems and student engagement in relevant and meaningful work (Barron et al. 1998). Project work is generally understood to facilitate student understanding of essential concepts and practical skills (Blumenfeld et al. 1991). Well-crafted projects should engage students, provide a meaningful and authentic context for learning and immerse students in complex, real-world problems that do not have a predetermined solution (Ayas & Neniuk, 2001). Good practice in project-based learning requires students to develop and demonstrate essential skills and knowledge and to draw on multiple disciplines to solve problems and deepen their conceptual understanding.

2.4 WORKPLACE LEARNING

Many higher education programmes consider workplace learning to be a valid learning experience for students. Most professional training programmes include a practicum which can vary from a few weeks to a few years of practical experience at a site of professional practices. Students as early as the first year are brought into the workplace and are simultaneously acculturated into academic and workplace knowledge systems. More recently the clinical learning environment of health science students has expanded to include the full range of the health care services. The principles however remain the same as primary health care facilities, regional hospitals and private health care units take on the trans-disciplinary identity of integrated workplace learning (Winberg, 2006a).

Difficulties arise in contexts where the site of practice does not have appropriate structures and systems to support student learning. The lack of structural support for learning and assessment has caused many well-intentioned workplace learning interventions not to be successful. In traditional universities, the engineering disciplines have intended to separate theory and practice. There are several reasons for this, in commercial and industrial contexts there are few structures in place (or resources) to support student learning or to supervise and assess pre-entry practitioners. Where such structures are lacking, work-place learning is not always appropriate in an undergraduate programme because learning conditions are too varied (i.e., dependent on the individual workplaces) resulting in potentially good learning in some contexts and very poor learning in others. In the case of

engineering, problem-based learning and project-based learning have generally been more effective than work-based learning (Savin-Badin & Major (2004).

Another reason why workplace learning has not always served the purpose that it was originally designed to meet, has to do with the changing nature of workplaces. Many employers require entry-level employees with high level technical skills and this make a first or second year student 'apprentice' not particularly useful to a modern technology-based workplace, or does provide the student with appropriate learning experiences (Young, 1998). An additional reason has to do with differences between theoretical academic knowledge and contextualised workplace knowledge and the difficulties of creating meaningful articulation between them particularly when the difference between the knowledge forms and structures are poorly understood by both educators and workplaces.

Workplace Learning curricula tend to be based on Kolb's (1984) learning cycle or versions thereof. The learning cycle proposes an iterative series of processes which underlies learning in different stages. The four stages are indicated below as follow:

- Concrete Experience: One cannot learn something simply by watching or reading about it. Active involvement is necessary.
- Reflective Observation: Student attention should be focused on particular elements of the experience. This means taking time out of doing and pausing to consider what has just taken place.
- Abstract Conceptualisation: Through the process of inductive reasoning, students analyse observations, explain and integrate them into logically sound theories.
- Active Experiment: Students consider how they would put what they have learnt into practice, Gosling and Moon (2001).

Learning becomes less efficient when one or more of the learning cycle stages is missing or where a student lack skills or opportunity to deal with one of them (Moon, 2004). The use of work-integrated theoretical learning, problem-based learning or project-based learning and related pedagogies prior to work placement are helpful in preparing students for successful workplace learning (Harvey, Geall &

Moon, 1998). Where academic staff is unfamiliar with the demands of workplace learning and the assessment of learning through practice, staff development or industry collaboration would be required.

Students, particularly if they are normally full-time students at the university, need to be adequately prepared in order to learn in a work environment. Students need to understand the expectations on them as employees (even if unpaid); such expectations could include language proficiency and completion of all subjects at specified levels. In some professional areas of work, employers require the university to certify students' fitness to practise (Harvey & Knight 2003).

These expectations, as well as practical arrangements made, should be provided to students in the form of guidance documentation. Student induction in the placement environment has been found to be helpful (Gosling & Moon, 2001). Information should be provided to students regarding how to record their progress and achievements and fulfil the assessment of learning outcomes, particularly in those activities with which they might be less familiar, such as the production of portfolios or reflective journals. Students will need guidance on what to do if there are work problems which might affect their ability to achieve the learning outcomes.

Academics and workplace representatives need to ensure that the work experience provides appropriate learning opportunities. Where experiential learning is planned, this will necessitate strategies and procedures for finding suitable employers or partners and some form of risk analysis in workplaces. In establishing 'trans-disciplinary' partnerships, the problem is usually constructed as one for the university, its structures and traditions (Boud & Tennant, 2006), but there are equal challenges for workplaces and their practices. These involve workplaces becoming more 'academic' and 'educational' in the sense of providing opportunities for learning, support, guidance, and reflection all of which require an understanding of the constraints of contextual embedding and local practice on student development (Winberg, 2007b). The learning time associated with a module can be more difficult to determine when (paid) work is part of the learning experience.

2.5 CONCEPTUAL FRAMEWORK FOR WORK-INTEGRATED LEARNING

Cognitive knowledge learned at the university does not transfer itself into practice in the workplace in a straightforward way. One reason for this is the fundamental differences in the way knowledge is organised in university courses largely in the form of separate academic subjects in contrast to the more interdisciplinary way that knowledge is drawn on in the context of application (Layton *et al.*, 1993).

The problems which people construct from their experiences do not easily map on to existing scientific and pedagogical organisations of knowledge. What needed in solving a technological problem could be drawn from diverse areas of academic science at different levels of abstraction, then synthesised into an effective instrumentality for the task at hand. Solving technological problems means building back into the situation of all complexities of real life, reversing the process of reductionism by re-contextualising knowledge (Layton *et al.*, 1993, pp. 58-59).

According to Engestrom, (2001), the activity theorists of Northern Europe provide us with an approach to understand how different work and academic knowledge may be integrated as a platform for work-integrated learning. Activity theorists view differences between knowledge from different contexts not as an impediment to development but as a resource which can enhance development. Based on empirical evidence, they describe how difference serves to accentuate the essence of what those at work and in the academy are doing and provides a platform from which each may better understand critique and importantly stand in the position of the other. This develops the possibility of mutuality rather than one sided re-contextualisation resulting in new knowledge which is a novel combination of the previous context bound knowledge presented. A similar perspective on mutuality is that of mutual enhancement, Eraut (2002). Here knowledge learned in the academy is used as a tool to enhance learning at work. More specifically, abstract conceptual know how is used to interrogate and critique work experiences and practices.

2.5.1 Planning and Implementing Work-Integrated Learning

Work-integrated learning involves pedagogical curricular and assessment considerations that differ in certain respects from general education programmes. These considerations are discussed below in terms of the four basic curricular types with reference to published or reported case studies (Eraut, 2002).

- **Work-directed theoretical learning:** All career-focused programmes will include theoretical subjects or components. These should be aligned with the practical or practice-based components in ways which bring theory and practice together in meaningful ways.
- **Curriculum:** The theoretical components of work-integrated curricula need to take into account the dual nature of career focused education, that is, the curriculum needs to meet the demands of the discipline and professional practice, Barnett (2006). This is likely to involve curriculum development that aligns disciplinary demands with workplace relevance (and thereby enhances rather than compromises the academic quality of the programme).
- **Pedagogy:** In work-integrated theoretical learning the acquisition of discipline-based content knowledge should include active forms of learning such as group learning, demonstrations, tutorials, practical, and experiential (in the sense of “hands-on”) learning opportunities (Brock bank and McGill, 1998). Formal lectures (which could include guest lectures by workplace representatives) are not excluded, but should be balanced with more active forms of learning.
- **Student learning:** Group learning and autonomous learning should be promoted (e.g., through research projects, reading assignments and seminars) in order to align theoretical learning with workplace demands (Bennett, Dunne and Carre, 2000). Expectations similar to those of related workplaces (e.g., attendance and deadlines) should be placed on students, Saunders and Machell (2000).
- **Assessment:** Assessment should simulate workplace models where these are appropriate. For example, technical reports might replace academic essays as academic practices that are aligned with appropriate workplace ones (Dias et al, 1995).

2.5.2 Workplace involvement

According to Gibbs (1995), external workplace-based examiners are likely to be involved in the curriculum planning and assessment where the demands of work-integrated theoretical learning will impact on the selection, appointment, role, training and guidance provided to workplace representatives.

- Problem-based learning: The main objective of problem-based learning is the acquisition of an extensive integrated knowledge that is readily recalled and applied to the analysis and solution of problems, Boud and Feletti (1997). This involves the development of effectiveness and efficient problem-solving skills, self-directed learning skills and team skills.
- Curriculum: Based on the problems in the real world, problem-based learning should be structured to solve those problems with the initial presentation situation that stimulate learners to generate multiple hypotheses about the cause and possible solution (Heywood, 2006). These structured problems solution should allow students to observe, interview, review records or documents in order to obtain information needed to support or verify their hypotheses. It should be noted that the processes by which disciplinary knowledge is selectively restructured to address real-world technological problems are extremely complex and has implications for staff development. Learning should be integrated from a wide range of disciplines or subjects. Problem-based learning is ineffective within a single discipline or subject (Barron et al. 1998). Information should be integrated from all the disciplines that are core to the educational programmes and relevant to the problems presented. The knowledge and skills gained from work experience should not be gained in a passive way, which means that critical cross field outcomes (CCFOs) also known as ‘generic outcomes’ will have an improved role in the learning outcomes of work-based learning programmes (Brennan and Little, 1996). Critical Cross Field Outcomes (CCFOs) can be developed at different levels and can be tailored to particular areas of work. It should be noted that problem-based learning is not appropriate as a method for teaching certain basic skills such as reading and computation; however, it does an environment for the application of those skills, Boud and Feletti (1997).

- **Pedagogy:** Problem-based learning pedagogy aims for an active form of learning. In problem-based learning sequenced problems direct students in an active learning cycle. Facilitators do not direct what students should learn or what resources they should use. Interdisciplinary teams design and provide the problem simulations and problem experiences that challenge the students to achieve curricular outcomes. Facilitators guide students in their work with the problem as they develop problem-solving skills and identify what they need to learn and develop self-directed learning skills. Problem-based learning is considered by some as ineffective when it is episodic added on to or mixed in with more traditional didactic, teacher-directed, passive, memorisation and lecture-based educational methods (Heywood, 2006). However modifications of Problem-based learning have been successfully incorporated into other types of Work-integrated curricular. Problem-based learning requires that students be active learners and responsible for their own learning and have adequate time for self-directed learning.
- **Student Learning:** Problem-based learning is student-directed. During self-directed learning, students should access study and integrate information from all the disciplines that might be related to understanding and resolving the particular problem they are working on just as people in the real world must recall and apply information integrated from diverse sources in their work. The problem allows being the organising focus for student learning helps to ensure that the application of information from various relevant fields enhances meaning making. Collaboration (with peers, tutors and facilitators) is essential in problem-based learning and it tends to occur naturally. Before completing their work on a problem, the students should reflect on what has been learned and determine if there are concepts missing in their overall understanding or whether additional skills are required. This important step helps convert procedural knowledge gained through problem solving into declarative knowledge for use and recall with other problems in the future (Moon 1999a, 1999b).
- **Assessment:** The assessment of students must be aligned with the goals of problem-based learning. Student's problem-solving skills, self-directed learning skills and the ability to apply an integrated knowledge in working environment should be formally assessed. A component of the assessment of student's progress should come self and peer assessment that occurs at the end of every problem. Students need to be proficient in assessing their individual learning progress and their peers. The ability to accurately monitor the adequacy of personal performance is essential

for developing life-long learning and self-directed study skills as the ability to provide colleagues with accurate feedback, Longworth and Davies (1996).

2.6 WORK-INTEGRATED E-LEARNING

E-learning is defined as “interactive individual computer supported learning”, Svensson and Åberg (2001). Work integrated e-learning is a relatively new research field focussing on learning processes concerning both employees and organisations using e-learning as a way of gaining new knowledge relevant for the work process in which individual learning is integrated with the organisational learning (ibid.). Work integrated e-learning courses could be designed and used in more flexible ways than traditional courses in order to adapt to different work situations and to different individual learning. It allows different learners to work with courses at different times, at different geographical locations, with different paces of learning, with different support of tutors and different social interaction with the other learners.

Most research in the field of e-learning has focussed on different e-learning systems in school or at universities. Some differences can be identified comparing learning at universities with learning at work. In universities the teaching should be on a scientific basis and in learning at work there is no such demand and the new knowledge is not always certified either. In-house developed Work integrated e-learning (EWIL) courses could use practical examples from actual work situations in order to integrate the contents of the course with the context for the learner. This could facilitate a development oriented view of knowledge where it related to the situation, Hedin and Svensson (1997). That promotes the learning processes that are experience based. An individual learner at work can apply new knowledge to daily work which could increase a sense of meaning, Svensson and von Otter, (2000). The context of learning in an organisation is rather different from the university context. A new knowledge course in an organisation is usually supposed to be applied to the work situation of the individual after the course is finished and to increase the efficiency and quality of the work.

There is increasing recognition that the capacity of an organisation depends on the learning potential of its workforce. Workplace learning can be understood as a cultural practice constructed by contemporary discursive practices of work (Solomon 2001). But there could also be an attempt to conserve, protect and recycle the knowledge in a community of practice and not to critically challenge and extend it. The meaning of work and the work identity of the individual are closely connected to the community of practice. In large organisations several similar communities of practices can be linked together in networks among which knowledge is developed and distributed.

According to Solomon (2001), workplace learning is a cultural practice. The cultural practice of the workplace could affect the motivation to attend a course and to apply the new knowledge to the work routines. If there are big discrepancies between the cultural practices of the workplace and the contents of an educational course, the consequences could be that workers are not interested in taking part in the course or not motivated to use their new knowledge to change the work practice. It is also important that an individual be supported by a relevant educational institution, Svensson and Åberg (2001).

2.6.1 Defining work integrated e-learning

In order to define work integrated e-learning, one must first look at the definitions of e-learning and work-integrated learning. E-learning refers to the utilisation of information communication technology (ICT) to enhance and support teaching and learning processes. It is an instructional content or learning experiences delivered through electronically and incorporates a wide variety of learning strategies and technology. E-learning ranges from the way students use e-mail and accessing course work online while following a course on campus to programmes offered electronically (Commission on Technology and Adult Learning, 2001; OECD, 2005). It is an alternative solution which enlarges accessibility to training and becomes essential to complement the traditional way of teaching (i.e. face-to-face).

E-learning entails a continuum of integrated educational technology. At one hand are applications like PowerPoint which have an impact on learning and teaching strategies or in the organization. At the other hand are virtual learning environments (VLEs) and managed learning environments

(MLEs) which have significant impact upon learning and teaching strategies and upon the organization (OSU, 2003; Julian et al, 2004). Broadly, OSU (2003) views the continuum of e-learning as the educational technology from the supplemental use of technology in the classroom through blended or hybrid usage comprising a mix of face-to-face and fully online instruction, and a fully online synchronous and asynchronous distance learning environments delivered to remote learners.

Through the supplemental use of information communication technologies (ICTs) to complement traditional learning experience, the instructor teach all sessions with occasional use of technology such as multimedia simulations, virtual labs and online testing (Arabasz and Baker, 2003). Blended learning indicates a solution that combined several different delivery methods like collaborated software, web-based courses and computer communication practices, Mortera-Gutierrez (2005). On the other side distance learning is conducted solely online where interaction is synchronous or asynchronous (OSU, 2007). Synchronous learning requires the teachers and students to interact at the same time though they may be dispersed geographically and on the other hand asynchronous learning allows teachers and students to interact and participate in the educational process at different times regardless of their locations (Chen et al., 2004). Graziadei et al., (1997), actually the use of synchronous with asynchronous activities is determined by the availability of technology, cost and maintenance that is adjusted to complement each course, instructor and audience.

The term e-learning is widely used in workplace learning settings and comprises a variety of formal and informal learning programs. Formal learning programs are defined as those which objectives and outcomes are defined by the facilitator. In contrast, informal learning programs are ones which objectives and outcomes are defined by the learner (Driscoll and Carliner, 2005). In addition to encompassing two categories of learning programs, e-learning also encompasses two categories of delivery, that is, synchronous and asynchronous learning programmes. According to Carliner (2004), asynchronous learning delivery refers to situations in which instructors and learners are separated by both time and distance while synchronous delivery is best characterized tutorial learning delivery which dominates in corporate environments (Sugrue, 2004).

The popularity of e-learning is not only limited to working adults who are seeking higher qualifications without leaving their jobs and losing their earning power (Lau, 2003). This trend seems ever increasing as the Internet and computer technology become widespread as a daily necessity of the younger generation. According to Lau (2003), research revealed that 16-18 year old teenagers are really enthusiastic about on-line learning or e-learning. Despite e-learning's current popularity, does it have any limitations? Evan and Hasse (2001) found out that learners are moderately lacking in computer proficiency and since e-learning is centred on computer technology, it is a barrier to learners without good computer skills. In addition that, studies by Evan and Hasse (2001), O'Regan (2003) and Rovai and Jordan (2004) found that learners face limited physical interactions among themselves in e-learning.

2.7 POLICIES RELATING TO WORK INTEGRATED LEARNING

According to the Southern African Society for Co-operation (SASCE, 2007), many universities have centralised support for work-integrated learning, through a work-integrated learning centre or unit, that provides both practical assistance (such as helping departments with work placements, finding appropriate workplace sites, or partners) and with assistance for the development of work-integrated learning curricula, pedagogy and assessment tasks. Many institutions have a work-integrated learning Senate committee, work-integrated learning and service learning policy to guide departments in their practices. The next section provides examples of policy content for work integrated learning (University of Johannesburg, 2008).

The main purpose of this Co-operative Education policy document is to set out the definition, guidelines and framework for the strategic and operational management of Work-Integrated Learning programmes, in line with Higher Education Qualification Committee (HEQC), South African Qualification Authority and Higher Education Qualification Framework statutory compliance and audit review criteria for on-going review and improvement.

2.7.1 Programme Structure

All academic programmes containing Work-Integrated Learning (WIL) and Service Learning (SL) modules are subject to the same programme design and development principles, with due regard to national and professional requirements as promulgated. The University's Academic Programme Policy and Guidelines for the Approval, Accreditation, Registration and Amendment of Subsidised and Non-subsidised Academic Programmes are in accordance with the standards stipulated by the higher education qualification committee (HEQC).

2.7.2 Work-integrated Learning (WIL) and Service Learning (SL) Module Structures

Work-integrated learning and Service learning (including Work-Integrated Learning or Service Learning that takes place within University established structures) are integral parts of an academic programme adhering to the principles of curriculum development. Each module provides specific learning outcomes and assessment criteria that are aligned with the purpose and exit-level outcome of the programme concerned. Work-Integrated Learning or Service Learning modules may be structured in one of three ways: A separate Work-Integrated Learning or Service Learning module/s in which curriculum coherence is clearly demonstrated; Overarching/floating module/s in which Work-Integrated Learning or Service Learning is integrated across a number of modules in the programme in which curriculum coherence is clearly demonstrated and Work-Integrated Learning or Service Learning is coherently integrated into one or more of the modules of the academic programme and contributes to the credit value of the module/programme concerned.

2.7.3 Work-Integrated Learning (WIL) Opportunities and Service learning (SL) Experiences

Work-integrated learning opportunities and Service learning experiences are appropriate to the module outcomes and assessment criteria, aligned with the purpose of the programme and in accordance with the provisions of the Teaching and Learning Policy. The number of hours spent on work-integrated learning and Service learning is determined by the relevant professional body, academic department or programme, managed and assessed by the academic department in collaboration with the partners concerned, approved by Senate and contained in the Faculty Rules and Regulations. A learning guide is available as a hard copy and/or electronically for every work-

integrated learning and Service learning module taking into account the module outcomes and assessment criteria in addition to other documentation required to facilitate and record the learning experience, e.g. log books and monitoring guidelines.

2.8 ACADEMIC MANAGEMENT OF WORK INTEGRATED LEARNING (WIL) AND SERVICE LEARNING (SL)

In the context of work-integrated learning and Service learning, joint partnerships are established between the University and the workplace (e.g. industry, commerce, public sector) or community organisation (as represented by its leaders) with a view to collaborate closely in the planning, organisation, implementation, assessment and review of work-integrated learning and Service learning programmes. The faculty and academic department concerned take ownership of the learning opportunities and experiences they provide in respect of work-integrated learning and Service learning, as well as the core activities of teaching, mentoring, learning and assessment, and is accountable for the quality of the work-integrated learning and Service learning module/s and its/their integration within the academic programme. A formal agreement outlining the responsibilities of all parties engaged in the collaborative work-integrated learning venture is drawn up and signed, e.g. as in a memorandum of understanding or learning agreement.

2.9 PROCEDURES FOR THE MANAGEMENT OF WORK INTEGRATED LEARNING (WIL)

Various activities need to take place in terms of implementing work integrated learning. The role of the lecturer/facilitator/coordinator is specified per department in accordance with the responsibilities identified, e.g. registration, preparation for the WIL experience, site visits, monitoring, assessment, management of assessment results, student learning materials and contracts, site supervisor/mentor support, record keeping. Monitoring of students in the work-based learning environment is conducted for all students involved in work-integrated learning. The parties concerned complete an agreement specifically relating to the WIL placement. The agreement clarifies the learning outcomes relating to the placement, the responsibilities of all concerned (i.e. the student, the academic department and the workplace/community supervisor/mentor), the lines of authority and mechanisms

for handling any problems that may arise. Visits to the workplace/community are planned timeously and by appointment.

Assessment is conducted in accordance with the requirements of the relevant industry, or professional board (if applicable), the provisions of the University's Undergraduate Assessment Policy, relevant faculty and departmental rules and regulations approved by Senate and contained in the Faculty Rules and Regulations. Assessments are conducted by the supervisor/mentor and/or jointly by the supervisor/mentor and the lecturer/facilitator/coordinator with at least two of the assessments carried out jointly. External assessors are appointed in accordance with set prescribed requirements, e.g. exit-level module, professional body requirements, faculty /academic department requirements. Structured and recorded feedback to and from students, the lecturer/facilitator/coordinator and the supervisor/mentor serve as a mechanism for promoting self-learning in students and quality assurance for programme review.

All components (e.g. student placement, student and workplace orientation, student and workplace support materials, monitoring, assessment, reciprocal feedback to students and workplace, administrative processes) of the WIL programme/module/s are quality assured in accordance with the provisions of the academic programme regulations and Faculty Policy as approved by Senate.

2.10 WORK INTEGRATED E-LEARNING POSSIBILITIES AND LIMITATIONS

There are much available content for literature that concentrate on the advantages of e-learning. E-learning tends to be presented with little discussion of possible disadvantages or problems under the banner of urging trainers and organisations to join the bandwagon (Rana, 2001; Sloman, 2001; Wilson, 1999). These are based around two main themes:

- (1) The cost advantages; and
- (2) Flexibility in delivery.

Sora (2001) actually refers to e-learning (distance learning) as a force for profit and efficiency although the term used in the context of the traditional university is perhaps even more appropriate in the context of corporate university. There are cost advantages on reduced training time and costs saved in travel time away from the job, and also the ability of e-learning to serve large numbers at time with relatively little additional cost (Schriver & Giles, 1999; Warner, 1999; Koprowski, 2000). In addition to that, the relationship of e-learning and knowledge management is increasingly seen as contributing to the competitive edge of the organisation, Swanson (2001). This raises expectations in organisations that introduce e-learning in terms of both the extent of the return on investment (ROI), and the period over which the payback will take place. A study of United States businesses by Swanson (2001) indicates that 46 per cent of those surveyed are already seeing a return on their investment, whilst 94 per cent are expecting to see returns or further returns within two years. Hammond (2001) also notes that 80 per cent of Fortune 500 companies are using or intending to use e-learning with the expectations of a significant return on investment.

The discussions of flexibility tend to focus on two main issues below:

- (1) flexibility in delivery; and
- (2) flexibility of pace and distribution of learning.

The flexibility of delivery offer organisations the ability to deliver consistent learning experiences and independent of time and place. This offers great advantages to a geographical dispersed workforce, those working non-standard hours and employees who work from a home base. It enables learning to be offered easily to those beyond the formal boundaries of the organisation at relatively low cost, and this would include customers, suppliers and contractors (Galagan, 2000). Flexibility in the pace of learning is presented largely as an advantage to the learner in a way that they can learn at a time and pace that suit their own capability and life circumstances, and also enable their continued marketability through lifelong learning (Sandelands & Wills, 1996; Caudron, 1999). However it is noted that, the issues of flexibility and learner-centeredness fail to address issues of learner styles identified by Honey and Mumford (1992), although it is questionable that any training delivery method could provide the flexibility to address this issue. It raised the questions about the suitability

of e-learning with its reliance on self-instruction and self-motivation for a broad organisational constituency.

The dearth of academic literature available on this subject means that a reasoned debate is lacking particularly in the areas of quality of content, problems with the technology, learner support and evaluation. There are however, some authors who do sound a note of caution. Emurian (2001) questions what might be effectively delivered via e-learning, and Angel (2000) suggests that while e-learning is good for communicating facts in areas of complexity, feedback might be better left to human trainers. Dobbs (2000) maintains that, much of the “off the shelf material” available is poor and lacking in creativity, whilst Warner (1999) emphasises the importance of tailor-made materials and online help but acknowledges their cost. This is a significant point that needs to be addressed in the payback debate and the balance of quality versus the true cost of materials and their support, and this would benefit from further research. It is however an area of great complexity as the range of options and capabilities available does not lend itself easily to definition and this complexity is only likely to increase as technology advances (Barron, 1999). McLennon (2000) provides a clear exposition of the technological complexity of e-learning and the areas in which problems can occur.

Dringus (2000), learning experience warns that e-learners may be unable to sustain their momentum unless they have skills for self-directed learning, technological management, self-motivated and prepared for isolation. Indeed, Horwath (1999) recorded anxiety in novice users when the technology failed to respond within 15 seconds. This theme is addressed by Newmann and Smith (1999), who use Lave and Wenger’s (1991) concept of “communities of practice” to note the significance of a supportive and interactive context of learning in highlighting the danger of the learners’ needs being ignored in the enthusiasm for technology. This point surfaces again in respect to evaluation, and much of the evaluation of e-learning that does take place concentrates on uptake rather than the comparative effectiveness of online and traditional courses (Horwath, 1999). The exceptions to this include Furnell et al. (1999) and Leins and Orton (2000), who reiterate all of the above concerns and take a stakeholder perspective, and Athanasou (1999) who urges the need for evaluation and who offers a six-step framework which includes a range of qualitative issues as well as cost.

Hartley (2000) concentrates on the impact of e-learning on the role and skills of the trainer. Moreover, a recent study by Masie (2001) further reinforces this message, highlighting that “learner acceptance” is not guaranteed and will require firms to address issues of marketing (to encourage participation), support (to aid retention), incentives (to provide validation of the training completed) and technology (to support collaboration and provide blended solutions).

These issues seem obvious on reflection but as Dobbs (2000) and O'Reilly (2000) pointed out that, many trainers responsible for developing and implementing e-learning strategies are struggling with new fields of studies. They possess some of the skills required but lack experience and the “know how” of others particularly on the technical skills. Here again the literature proves less useful technical skills than it could in terms of providing guidance across the broad spectrum of issues. Indeed, what is largely ignored in the literature is that e-learning sits within a broader context or agenda of employee development that may be guilty of providing innovative fads at the expense of pedagogical sound training (Beech et al., 2000), where managers retain faith with “traditional” training methods (Sadler-Smith et al., 2000), where there are struggles to balance competing individual and organisational priorities (Antonacopoulou, 2000), and where the language of the democratisation of learning through employee development schemes is argued to increase motivation, (Hamblett and Holden, 2000).

These issues will clearly inform the discourse on e-learning and, given that the majority of the literature tends to support a cost-driven and flexibility agenda. The wider context of employee development may also create tensions between employee development practice and the involvement of the line manager and, the needs of the individual. Consequently new entrants to the field have to piece together the key issues from a range of sources and resolve the tensions that exist within the organisational context. Moreover, the focus on cost and flexibility may undermine the technical possibilities to create stimulating learning environments and does not address the issue of providing a unique pedagogy of learning. Govindasamy (2001) argues that pedagogy is the most neglected aspect of attempts to implement e-learning. Given these concerns, it is important to consider how e-learning can contribute to the strategic objectives of the third generation of corporate universities.

2.11 CONCLUSION

This chapter explore on the implications of work-integrated learning policies where emphasises is made on how higher education institutions operate, structured and organised. For this reason, it is becoming increasingly important to establish what effect such policies have and how they are achieved. The chapter demonstrate ways in which change can be achieved and understood and explored how work-integrated learning policy drives changes (both organisational and pedagogic) within higher education institutions and the workplaces.

In the next chapter, chapter three (3) research methodologies are presented.

Chapter 3: RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

The focus will be on research methodology and design where the researcher will explain in detail the method intended to be used and why in his opinion it is the most suitable method to be used. Also data gathering instruments and techniques are explained in this chapter and how are they going to be used in order to collect data. It is a step in research to guide the researcher in collecting, analysing and interpreting observed and collected facts. It relates directly to the testing of hypotheses and is a specification of the most adequate operations to be performed in order to test specific hypotheses under given conditions. Chapter 3 expands on of the selection research design and methods used in the study. It provides detail on the sampling, data collection and analysis procedures adopted. The quality and rigour of the intended research design and the ethics regarding the research are assessed.

3.2 RESEARCH PARADIGM-THE PHILOSOPHY

The research done was based on the underlying assumptions about what represents good research. The term research philosophy relates to how knowledge is developed as well as the nature of that knowledge (Nieuwenhuis, 2007, p. 52). It is the researchers's worldview that guides the investigation, the assumptions, the methodology and practical considerations for the research (Saunders, Lewis and Thornhill, 2007, p. 101). In qualitative research it is essential for researchers to determine their own beliefs with regard to certain key issues, in order to produce good and credible research. The first issue concerns the nature of ontology (i.e. how one sees reality) and the second, the epistemology (how one believes social phenomena should be studied). I will now address these key scientific issues and indicate how they relate to my study.

3.2.1 Ontology

Researchers need concepts and ideas of how to categorise phenomena and processes and present a comprehensive description and explanation of some reality. Ontology is about the deeper meaning of social actions, how they are interpreted and appreciated by individuals or groups, and how they have been shaped by various factors over time to form something that is 'real' (Nieuwenhuis, 2007, p. 54).

The specific ontological perspective assumed by the researcher for this study, was that of materialism which assumes that reality must be studied through people's experiences in order to learn more about their richness.

3.2.2 Epistemology

Whereas ontological assumptions are concerned about the nature of reality, epistemology relates to how things can be known (Nieuwenhuis, 2007, p. 55). Simply stated, epistemology is concerned with how individuals or groups know or come to know reality. There is an assumption that a relationship exist between the individual and what is known by that individual. In general, research is guided by a set of beliefs and feelings about the world. The nature of research will lead one to decide how it should be understood and investigated. Based on my ontology and epistemological beliefs, the focus of this research reflected the modernistic element.

3.2.3 Modernistic Approach

The modernistic paradigm was deemed as an appropriate approach to this study because of first, the volume of data expected to be gathered and second, the complexity of such data and the need for the researcher to understand the phenomenon. This is in accord with the opinion (Serfontein, Basson & Burden, 2009, p.4) that his phenomenon exists has to be understood to determine meaning.

3.3 DESCRIPTION OF ENQUIRY STRATEGY AND BROAD RESEARCH DESIGN

This study aimed to evaluate the policy implications of work-integrated learning and service learning for academia, corporate environment and students in addressing the needs for industry graduates employability and student competence and skills needed for corporate world. A study of existing literature indicates the appropriateness of a qualitative strategy of inquiry. According Schurink (2003, p.3) and Nieuwenhuis (2007, p.48), qualitative research is concerned with understanding the social and cultural contexts which form the basis of various behavioural patterns and methods of data generation and analysis. It is flexible and sensitive to the social context in which it is produced. This

strategy of enquiry is concerned with explanation building that requires the understanding of complexity, details and context (Leedy and Ormrod, 2005, p.95).

Using case study research enables the researcher to thoroughly examine one or two cases or compare a limited set of cases, focusing on several factors. Case study research is a powerful and flexible method used primarily for exploratory research. It can be exploratory, descriptive or explanatory in nature. Its distinctive strength is its ability to deal with a wide variety of data, including direct observation of events being studied and interviews of persons involved in the event (Fourie, 2006, p. 9-14).

3.3.1 The basic characteristics of qualitative research

Qualitative research methods are designed to scientifically explain about people and matters associated with them and not to depend on statistical forms of analysis (Schurink, 2003, p. 3). The process is described in Leedy and Ormrod (2005, p. 95) as being more holistic in nature and evolving in the sense that the design of the study, the measurements and interpretation of the data could change along the way.

The holistic nature of qualitative research provides a platform for a rich, detailed and contextualised explanation of data as opposed to being concerned with mapping of patterns, trends or correlations of data (Schurink, 2003, p. 3). The emphasis is on understanding the complexity of behaviour, focusing on meanings and interpretations, through direct interaction with participants in their natural environment (Maree, 2007, p. 4).

Qualitative research is typically used to answer questions about the complex nature of phenomena, often focusing on describing and understanding a phenomenon from the point of view of the participants (Leedy and Ormrod, 2005, p. 94). Simply stated, qualitative studies aim to describe and interpret the experience of participants in a context-specific setting (Ponterotto, 2005, p. 128).

The general theme of qualitative research implies that rich detailed information could be gathered from an identified group of individuals allowing the researcher to gain further insight into the observable facts and data and therefore develop new theoretical perspectives. In this study, the researcher's objective was to evaluate the effectiveness of work-integrated learning policies in South African higher learning institutions. Therefore an in-depth, flexible approach was required to allow the researcher to gather detailed information about the participants in their environment. As such, this study was classified as a qualitative study as it encompassed empirical observations and interpretations given by selected corporate leaders and academics.

3.3.2 Description of the general characteristics of the research design

- *Empirical research.* The study was classified as an empirical study since the researcher collected and analysed primary data. In this study, the researcher gathered new data directly from the participants.
- *Basic research.* In this study, the researcher applied basic research skills to understand the challenges and requirements of academia and corporate world. The results would not directly inform managerial decision-making or policy formulation. This action is supported by the views of the other researchers (Leedy & Omrod 2005, p. 43) that the aim of basic research is to enhance the theoretical conceptualisations of a particular topic and in this particular setting, to understand the process of learning and workplace learning (Saunders *et al.*, 2007, p. 7).
- *Exploratory research.* Exploratory research is a valuable means of establishing what is happening and gaining insight into phenomena. According to Saunders *et al.*, (2007, p. 143), exploratory research is characterised by evolving or taking on a new direction as new data emerges and new insights are gained by the researcher. An exploratory study was deemed appropriate as it encourages flexibility.
- *Cross-sectional research.* Cross-sectional research involves the study of particular phenomena at a particular point in time (Saunders *et al.*, 2007, p.1480. This study was time-bound in the sense that participants were interviewed only once and the data provided a picture of the phenomenon at a particular point in time.

- *Primary data.* Primary data refers to data that is specifically collected for the research project being undertaken (Saunders et al., 2007, p.607). In this case, the research collected empirical data to address the research objectives.
- *Qualitative data.* Qualitative data refers to non-numerical data that has not been quantified whilst quantitative data refers to numerical data and data that has been quantified (Saunders et al., 2007, p.608). In this study qualitative data is applied since the method of data collection was in the form of semi-structured and in depth interviews.

3.4 SAMPLING

Sampling is the process of selecting a portion of the population targeted for the research. Generally it is impossible to include the entire population in a study, the two main restrictions being time and cost. Therefore, for any study where it is impractical to collect data from the entire population, the researcher would need to select a sample of that population (Saunders et al., 2007, p.206; Maree, 2007, p.172).

3.4.1 Target population

The target population comprised of corporate leaders in the private business sector and academia. For practical reasons, the sample population had to be narrowed down. Given that the study aimed to evaluate factors relating to the implementation of work-integrated learning, it was deemed appropriate to use corporate leaders and academics currently in their position of execution.

3.4.2 Unit of analysis

The unit of analysis of a study refers to the entities about which the researcher wishes to draw conclusions (Terre Blanche and Durrheim quoted by Kotze, 2009, p.22). In some cases unit of analysis can refer to individuals whilst in others, it could refer to groupings of individuals or entities, for example business units and departments (Kotze, 2009, p.23). In this study, both the unit analysis and the sampling unit were the same.

3.4.3 Sampling Size

Qualitative samples are generally smaller in size due to the nature and complexities of qualitative studies, the latter requiring in-depth research in order to gather rich, detailed information from participants. Typical of the nature of qualitative research, a small sample size was used to enable the research to gather rich, detailed information and allow for flexibility during the process. A small sample allowed the researcher to spend more time with each participant and in so doing, facilitated more in-depth questioning, discussion and reflection. For this reason, a sample of five participants was selected.

3.4.4 Sampling technique

For samples to be valid, they should accurately represent the characteristics of the population that they represent. There should not be bias in the sample. The two methods of sample selection are probability sampling (random selection) and non-probability sampling (arbitrary, non-random). In this case, probability sampling was not possible as there was no complete list of all senior, corporate leaders in South Africa. It would have been impractical to interview every leader in the country within the time frame and budget allocated to this study. Therefore, although probability sampling is a superior method of sampling due to the removal of sampling bias (Cooper & Schlinder, 2003, p. 184), this study had to use non-probability sampling. As this was an exploratory study, this method of sampling was deemed to be sufficient.

Qualitative research is generally based on non-probability and purposive sampling. The latter simply means that participants are selected on some defining characteristics that make them the holders of the data needed for the study, Maree (2007, p. 5). Sampling decisions are therefore made for the explicit purpose of obtaining the richest possible source of information to answer the research questions.

Judgement sampling, a form of purposive sampling, was used to select the sample. According to Cooper and Schindler (2003, p. 184), judgement sampling refers to selecting samples that conform to

a specified criterion. The participants selected were required to meet the standard criteria they were expected to have had.

3.4.5 Participant Profiles

When compiling the participants' involvement in the study, I took special precautionary measures to protect their identity since I had assured them of confidentiality. Through my interaction with them, I gained valuable insight into how they perceive integration of academia and workplace learning and the various challenges surrounding their professions as a whole. At this point I should share some of my impressions about the participants.

Table 3-1: Participant's profiles

Participant	Background
P1	Participant one. a white female associate professor – programme manager at a South African university with a PhD in Industrial Psychology, she has been in the position for two year and has ten years' experience in the HRM field
P2	Participant two is a white female and is the executive Dean within the faculty of commerce and administration at one of the South African Universities and has been in the position for three and a half years. She has a D. Com in Human Resource Management (HRM) and has been in the HRM field since 1977.
P3	Participant three is a white female Professor at a South African University and has a PhD in Organisational Behaviour, she has been with the current university for 3 weeks at the time of the interview but has vast experience in the HRM field as she has been in it for the past thirty years. She is a member of the following HRM professional bodies: SABPP, AOM, AFAM, EURAM and EOWOP
P4	Participant four is an Indian male and a school director of cooperative education at a Polytechnic which is outside South Africa and has been in that position for two years. He has an MBA and has been in the HR field for fifteen years
P5	Is a focus group (a conference that was focusing on Academia meets business). There were five participants all from different backgrounds which included Europeans, Africans, Academics, and also Business leaders.

3.5 DATA COLLECTION

According to O'Neil (2009, p.5), qualitative data collection methods typically include interviews and observation. Other methods are participant observation, direct observation, in-depth interviewing (one person), focus groups, document reviews, narrative enquiry, life histories, open ended questionnaires, project techniques, psychological testing and enabling techniques.

For the purpose of this study, a combination of semi-structured and in-depth interviews was used. According to Saunders *et al.*, (2007, p.312) these categories are described as follow:

- Semi-structured interview. In these interviews, the researcher prepares a list of themes and questions to be covered during the interview. The number, order and nature of questions may vary from one interview to the next, and is dependent on the context and situation within which the interview takes place. The researcher leads the interview and uses opportunities to explore certain issues as they arise. The interview is recorded using an audio device or by means of note taking.
- In-depth interviews are used to explore in detail the general themes in which the researcher is interested. Although there should be a predetermined list of questions these should be very broadly structured.

In this study, the intention was to use a combination of the two types of interviews, by having a basic list of broad questions that would allow participants to respond to leading questions that arose from issues raised. According to Saunders *et al.* (2007, p. 313) both form of interviews, that is, semi-structured and in-depth, are appropriate for exploratory studies. The aim of this was to gather information concerning business and leadership challenges as well as their views on required leadership competencies within the given context. For this reason, the interview was deemed an appropriate method for gathering such data.

3.5.1 Primary Data Collection Procedure

The first step was for the researcher to schedule meetings with prospective participants to meet them, establish rapport and introduce the research project. Since the participants were senior leaders and

academics from different institutions, these interviews were set up on an individual basis for a time and place that suited them.

During these meetings the researcher explained the objectives and relevance of the study as well the participant's role during the research process. It also served as an appropriate forum to answer any questions or concerns the participants had regarding the study. At this stage the researcher sought permission from participants to use a tape recorder during the interviews. These meetings were also used to schedule the actual interview.

A follow-up letter and a guideline interview questionnaire (Appendix A) were sent to each participant to confirm discussion and gain formal consent. The researcher provided the guideline questions upfront so that participants could familiarise themselves with the line of questioning and theme of pursuant discussions. It also gave participants the opportunity to informally prepare for the actual interview.

During the actual interview participants were interviewed using the interview questions as a guide. Each interview lasted between one and two hours. The interview questions were structured in very broad terms to allow participants to discuss and voice their opinions, views and perceptions of the phenomenon at hand. All interviews were taped whilst the researcher took notes of all non-verbal cues such as tone, body language and context. There was no need for follow-up interviews and discussions.

Once all interviews were completed the researcher began the process of analysis and ensured that all data collected was saved and stored.

3.5.2 Data collection and storage of data

Qualitative data was collected by means of open-ended questions in the interview. These types of questions encouraged discussion and made it difficult for participants to respond with a simple yes or no answer.

Since qualitative research produces a considerable amount of data it becomes imperative to ensure the easy retrieval of data for later detailed analysis. To support this method of data collection, i.e. semi-structured and in-depth interviews, audio recordings and transcripts were used and deemed to be appropriate. In addition, manual notes were taken of all conversations and observations by the researcher. These notes were typed and stored directly after each interview and discussion session.

3.5.3 Data Analyses

Qualitative data refers to data that has not been quantified, or otherwise termed non-numeric data. Qualitative data could range from a simple, short list of responses to more complex data such as transcripts of in-depth interviews. To make sense, the data need to be analysed and the meaning understood. Qualitative data analysis procedures assist in achieving this by allowing the researcher to develop a theory from the data Saunders *et al.*, (2007, p. 474). Conducting qualitative data analysis is therefore a means of establishing how participants make sense of a specific phenomenon by analysing their perceptions, attitudes, understanding, knowledge, values, feelings and experiences about the phenomenon (Nieuwenhuis, 2007, p. 99)

Considering the nature of study, as well as the level of detail expected during the data gathering process, the use of content analysis and coding are seen to be suitable for analysing the data. Content analysis is typically used to analyse such things as books, brochures, written documents and transcripts as well as the qualitative responses to open-ended questions in surveys, interviews or focus groups. Content analysis is an inductive and iterative process where the researcher looks for similarities and differences in data to confirm or refute the proposed theory. In the main, it is aimed at understanding how participants make meaning of the phenomenon under study (Nieuwenhuis, 2007, p.101).

After preliminary evaluations of the responses to the questions, response categories were created for each item. Content analysis was then used to identify themes and trends. These themes were recorded by the researcher against each question and allocated a unique code. Cooper & Schindler (2003, p.461) state the benefits of content analysis as guarding against selective perception, the ability to apply reliability and validity criteria, and the fact that data can then be computerised. Data analysis was assisted by the fact that there were no questions that allowed for a “do not know” or “yes or no response”.

3.5.4 Data Verification

To verify the accuracy and completeness of the data the transcripts and notes were handed to the participants to confirm the accuracy of the information and to correct any errors. This was done once the interviews had been completed. Due to the nature of discussions and the level of detail in the responses it was not necessary for the researcher to relay or verify the researcher’s own understanding and interpretations of information gathered.

3.6 ASSESSING AND DEMONSTRATING THE QUALITY AND RIGOUR OF THE RESEARCH DESIGN

When evaluating qualitative work the norms of qualitative research have to be redefined in order to suit the realities of qualitative research. Lincoln and Guba (in Golafshani, 2003) use the terms credibility and trustworthiness in qualitative research, which is consistent with the notions of reliability and validity in qualitative research. In this study, the researcher had to gain the trust of the participants and guarantee them that the information obtained during the interviews would be kept confidential and that their anonymity would be maintained.

3.6.1 Credibility and trustworthiness

Researchers, regardless of whether their studies are quantitative or qualitative, must ensure and demonstrate that their studies are trustworthy. Since the purpose of a qualitative study is to explore

and describe phenomena of interest from the participant's perspectives, the participants themselves are the only ones who can judge the credibility and trustworthiness of the results. Credibility can be demonstrated by asking the participants to review the interview transcripts and results of the study. In addition, the researcher listened to the recording of the interviews on multiple occasions to verify a comment or clarify a statement when it was not clear.

3.6.2 Transferability

Transferability refers to the degree to which the results of the research can be applied to other comparable research contexts. With qualitative research it does not necessarily mean that the results of the research study have to be applicable to another. Qualitative findings are more dependable when generalised to theories as opposed to the overall population of the study (Babbie and Mouton, 2007, p. 278).

3.7 RESEARCH ETHICS

Ethics, when considered in the context of research, refers to the appropriateness or correctness of the researcher's behaviour in relations to the rights of the subjects of the research or those who are affected by it (Saunders et al, 2007, p. 178). According to Leedy and Ormrod (2005, p.101), whenever human beings are the focus of investigation it is important to pay close attention to the ethical implications of what the researcher is proposing to do. These authors assert that most ethical issues fall into one of four categories: protection from harm, informed consent, right to privacy, and honesty with professional colleagues. Saunders et al., (2007, p. 180) break this down even further by citing some of the most common ethical issues for consideration such as: privacy, voluntary nature, consent, deception, confidentiality, anonymity, embarrassment, stress, harm, discomfort, pain, objectivity and quality of research.

In simple terms, research ethics relates to questions about how the researcher formulates and clarifies the research topic, the research design and accessibility to information, the data collection methods, processing and storage and analysis of the data and the writing up of research data in a moral and responsible manner.

3.8 CONCLUSION

This research methodology chapter focused on the methods and processes which were undertaken in order to carry out the research. Semi-structured, in-depth interviews were conducted with four individual participants and focused group whom are currently active role-players in South African Higher Learning Institutions and Corporate world. The data were recorded using a tape recorder and transcribed in Microsoft Word. The transcriptions were exported to ATLAS.ti which was used to code and then analyse the data in order to address the research objectives presented in Chapter 1 of the study.

The following chapter, Chapter 4, will report on and discuss the results and findings of the data analysis.

Chapter 4: FINDINGS

4.1 INTRODUCTION

This chapter focuses on interpreting and analysing the research findings gathered through the in-depth interviews. A detailed discussion of the results is provided and sub-conclusions are discussed in relation to the specific research questions.

4.2 IDENTIFYING THE STATEMENTS RELATING TO THE TOPIC

The most important part of the data analysis process involved identifying the general themes in the participants' descriptions of their experiences. The data was therefore analysed through a thematic analysis. Significant important quotes, statements or sentences that related to the topic and research questions were identified from the transcripts and coded (Leedy and Ormrod, 2010). During this process the relevant information was separated from all the irrelevant information. This type of analysis was appropriate as it identified general themes that were common to most of the participants.

Table 4-1: Themes identified to describe the phenomenon

Initial Statements	Main Themes Identified	Description
• Universities to shift mind-set • Student Training • Need enough resources • Practical simulation exercise • Opportunity for business cases • It's difficult to say • No balance between theory and practice • Organisations should provide training and information for HEI • Merging relationship required	Higher education institution preparation for students for the workplace	This category includes factors related to the extent which higher education institutions prepare students for the workplace
• Need for the use of relevant technology • Preparation of students	Factors for the implementation processes of work	This research question indicates factors related to the

• Assessment thereof • Flexible technology • Framework for cooperative education • Design curriculum that meets industry needs • Change input factors in the curriculum, teaching and learning, assessment strategy, and pedagogy • To analyse job recruitment request • Commitment towards growth • Financial allocation for training • Need for integration with academic environment • Higher education needs to go out and setup initiatives	integrated learning	implementation process of work integrated learning
• Government give sufficient infrastructure • Have quality teaching environment • Consistency in compensation in terms of academia • Equitable and transparent policies across all Universities in South Africa • Feasibility • Need community engagement • Broader application for work integrated learning • Need for service learning policy • Conventional western model for application • Traditional limitation • SETA requires	Policy implications of work integrated learning	This category include factors related to the policy implications of work integrated learning

4.3 FINDINGS IN RELATION TO THE RESEARCH QUESTIONS

The data is presented in relation to the research question. The different data themes that were identified correspond to different parts of the research problem (Leedy and Ormrod, 2010). The research questions are discussed by presenting the data in a table indicating which participants agreed with each specific statement. Quotations from participants are presented in italics and significant phrases were underlined. Finally, the data is analysed and discussed in relation to the literature reviewed. This section aims to provide a better understanding of the data and findings.

4.3.1 To what extent do higher education institutions prepare students for the workplace

This category includes factors related to the extent which higher education institutions prepare students for the workplace.

Table 4-2: Responses related to the extent higher education institutions prepare students for the workplace

Attraction factors to students preparedness	Participants
Able to do job analysis and job description	P3
Able to do compensation	P3
Universities to shift mind-set	P3
Student Training	P3, P1
Need enough resources	P3
Practical simulation exercise	P3
Opportunity for business cases	P3
It's difficult to say	P1, P2
No balance between theory and practice	P1
Organisations should provide training and information for HEI	P1
Merging relationship required	P1

The analysis related to what extent do higher education institutions prepare students for the workplace is provided. Some of the quotations made by the participants are stated below:

"We are currently busy with a huge curriculum redevelopment in higher education institutions and that also applies to HRM functions and also what we need to do, it's something that started at another university, we need to have training space, you know a thing like job analysis is not rocket science to do... For me what's important especially the final year students when they go out there in the workplace they need to be able to do a job analysis and also a job description..."

(P3)

The University needs to have a huge mind-set, a shift in mind-set on how we train our students. It is not just training students for the sake of doing that... But the other thing also from University side is that we don't have enough resources to do that, and that is a big thing...

(P3)

It's difficult to say because the way we prepare them is different and each tertiary has its own method. We give the students a lot of theory and now they do not know what to do with that... Therefore organisations should also give some sort of training and information for HEI on what they should teach...

(P1)

4.3.2 Factors relating to the implementation processes of work integrated learning

This research question indicates factors related to the implementation process of work integrated learning.

Table 4-3: Responses relating to the implementation processes of work-integrated learning

Factors indicating the implementation process of work integrated e-learning	Participants
Need for the use of relevant technology	P4
Preparation of students	P4
Assessment thereof	P4
Flexible technology	P4
Framework for cooperative education	P5
Design curriculum that meets industry needs	P5
Change input factors in the curriculum, teaching and learning, assessment strategy, and pedagogy	P5
To analyse job recruitment request	P5
Commitment towards growth	P5
Financial allocation for training	P5

Need for integration with academic environment	P5
Higher education needs to go out and setup initiatives	P5

The analysis showed the responses relating to the implementation processes of work integrated learning and some of the quotations made by the participants include the following:

On the e-learning policy side we need to use relevant technology, additional to the relevant technology must be the assessment methodology that upholds the taxonomy for the particular level that work integrated learning has been done at...and

(P4)

The first aspect is the preparation of students going out into the workplace... The second is the assessment thereof, and then, between the students' preparation phase before they go into the applied area, and the assessment, you have the capturing of task activities, responsibilities and the students reflection... So the technology must have the flexibility to accommodate the learning outcome...

(P4)

The Government places a lot of emphasis on ways of designing our curriculum also to meet industry needs, so Universities have fallen quite on hard times... So we started challenging the return of knowledge, the return on investment (ROI) for the past couple of years and part of that was to analyse the job recruitment request that come from industry and consistently the message was that in addition to a degree they wanted people who were creative, people who could solve problems, people who were media literate, and they listed these things that were not being taught in the mainstream education system...

(P5)

Do the organisations have a commitment towards growth, that capacity building towards ensuring that there is human capital in the country and because of that drives how they hire... Do the organisations have financial allocations for training to actually allocate a certain amount of their money not to be already in staff, but to say here is a certain amount of money to the University for the graduates who are going to spend some time with us? That sometimes should be planned for...

We need to integrate with the academic environment and give them our vision and our feedback as to what is happening in the work environment... Higher education need to go out and setup initiatives, talk to corporate. Corporate needs to go out to higher education and sit down and have a platform where they can discuss these things

(P5)

4.3.3 Factors that facilitate policy implications of work-integrated (e) learning

This category include factors related to the policy implications of work integrated learning

Table 4-4: Responses relating to the policy implications of work-integrated learning

Factors indicating policy implications of work integrated learning	Participants
Government give sufficient infrastructure	P3
Have quality teaching environment	P3
Consistency in compensation in terms of academia	P3
Equitable and transparent policies across all Universities in South Africa	P3
Feasibility	P4
Need community engagement	P4
Broader application for work integrated learning	P4
Need for service learning policy	P4
Conventional western model for application	P4
Traditional limited	P4
Service learning	P4
SETA requires	P4

The analysis indicated factors related to policy implications of work integrated learning. Here are some of the responses outlined by the participants:

Government must give sufficient infrastructure. Universities should have a quality teaching environment. .. Secondly, what I would like to see in South Africa is consistency in compensation in terms of academics because that is the main reason why they are moving around but also create better incentives and better benefits... I want to see equitable and transparent policies across all Universities in South Africa because what is going on is inappropriate...

(P3)

If I can see demonstrative gaps for areas that are falling short then we should introduce a policy, so that on a minimum standard it is maintained for the operationalization of WIL in the e-learning format, but currently our institution has 13000 students of which about 50% undergraduate students so our e-learning policy is a very substantial part and it covers a lot of things that we need to cover because many of our students are actually governed by that e-learning policy because that is the mode of delivery education...

(P4)

The broader application for work integrated learning that we need to identify. Firstly I would say the need for a community engagement policy. Why do I say that? A community policy will require the institution to define the community... We have a need for a service learning policy or the need for a work integrated learning policy to be enhanced and cater for service learning component, because it's imperative... The current policy looks at the conventional western model for application... If our curriculum couples with the SETA requirements students could get stipends to relax some of their requirements for higher education institutions to access workplace environment will be able and expand the reach of work integrated learning in a much more dynamic manner.

(P4)

4.4 CONCLUSION

In this chapter the results for the study were presented. The results for the qualitative responses were firstly presented and analysed based on the research questions. In the next chapter these results are discussed and linked to relevant literature in order to construct an integrated part of work-integrated learning policy implications.

In the next chapter, chapter five (5), data discussion of results are presented.

Chapter 5: DISCUSSION OF RESULTS

5.1 INTRODUCTION

This chapter discusses and interprets the results obtained in Chapter 4, from the analysis of data collected. The interpretation of results has been compared to the literature and these have been presented under the headings of the research questions to ensure that the research objectives have been met.

5.2 REPORT ON THE RESEARCH OBJECTIVES OF THE STUDY

5.2.1 Research Objective 1

To conceptualise Work Integrated (e) Learning from literature

From the literature review it is evident that various terms are used to describe the workplace learning of students such as cooperative education, experiential learning and work integrated learning and work-based learning. In the South African University of Technologies (UoT) context the term ‘Cooperative Education’ has been used to describe the placement of students in appropriate workplaces for the purpose of gaining work experience in their chosen fields or disciplines, with the cooperation of potential employers. Broader than the particular form taken by Cooperative Education, work-integrated learning has been termed ‘workplace learning’, (Boud & Garrick, 1999; Billett, 2001).

The term ‘experiential learning’ (in South Africa sometimes used synonymously with Cooperative Education) is used with a great variety of meanings in international literature and, the emergence of work integrated learning has attempt to define it more accurately particularly in its associations with workplace learning (e.g Illeris, 2007). More broadly it may refer to learning that has meaningful learner involvement (e.g., Zemelman Daniels and Hyde 1998). The term ‘work-based learning’ (WBL) has been defined as ‘learning for, at, or through work’ (Brennan and Little, 1996). Work-based learning involves the acquisition of work-related knowledge and skills both in the university

and in the workplace including the formal or non-formal involvement of employers, Boud and Solomon (2001).

Work integrated e-learning is a relatively new research field focussing on learning processes concerning both employees and organisations using e-learning as a way of gaining new knowledge relevant for the work process in which individual learning is integrated with the organisational learning (Svensson & Åberg, 2001).

5.2.2 Research Objective 2

To determine to what extent do higher education institutions prepare students for the workplace

The analysis of the research question relating to the sufficient preparations of student involves responses quoted below:

- It's difficult to say because the way we prepare them is different and each tertiary has its own method. We give students a lot of theory and now they do not know what to do with that. The University of Technologies are much better in preparing students because of the practical side.
- There is not a balance between theory and practice. In three years period of a degree, there is not enough time to give practical. Therefore organisations should also give some sort of training and information for higher education institutions on what they should teach. There has to be a merger relationship into the program.
- Some do and some don't. I think it's very difficult to generalise. Did you both graduate here? (This question was directed to the interviewers). Now you go into another institution which I will not mention, we going to get there in a third year class 250 students. Now are you telling me that you are getting the same? It's not the same.
- It is not a higher education liaising with their institution. So some do and some don't. One of things is the size in a class. If you have bigger classes then it is more difficult. You can do better training in smaller groups. That has been proven all over. So it is difficult to answer that for you.

According to Saunder and Machell (2000), within the higher education sector internationally and in South Africa (Department of Education, 1997; 2002a, 2002b), there have been calls for increased graduate employability. The United Kingdom-based Dearing report, (1997) recommended that all students obtain work-experience associated with their qualifications, and that the UK government should seek ways of encouraging employers to offer more opportunities for such work experience.

Many higher education programmes therefore consider workplace learning to be a valid learning experience for students. Most professional training programmes include a practicum, which can vary from a few weeks to a few years of practical experience at a site of professional practice. Students, as early as the first year, are brought into the workplace and are simultaneously acculturated into academic and workplace knowledge systems.

5.2.3 Research objective 3

To evaluate the implementation processes of work integrated e-learning

The analyses showed that work integrated e-learning does not have a clearly defined implementation processes but only work integrated learning and e-learning have implementation processes. Some of the quotes by the participants include:

- The first aspect is the preparation of students going out into the workplace. The second is the assessment thereof, and then, between the students preparation phase before they go into the applied area, and the assessment, you have the capturing of task activities, responsibilities and the students reflection
- So the technology must have the flexibility to accommodate the learning outcome. In an e-learning environment the processes are very vague, not because it should be that way, but because I think it's not been documented effectively.
- Also when we implement work integrated learning, there is a lot being done also currently in South Africa and Namibia in terms of developing the framework for cooperative education. The government places a lot of emphasis on ways of designing our curriculum also to meet industry

needs, so Universities have fallen quit on hard times. It is one thing to implement work integrated program.

Here are some of the quotations from the literature that are similar to the findings of the study. The theoretical components of work-integrated curricula need to take into account the dual nature of career-focused education, that is, that the curriculum needs to meet the demands of the discipline and professional practice (Barnett, 2006). This is likely to involve curriculum development that aligns disciplinary demands with workplace relevance (and thereby enhances rather than compromises the academic quality of the programme).

In work-integrated theoretical learning, the acquisition of discipline-based content knowledge should include active forms of learning such as group learning, demonstrations, tutorials, practicals, and experiential (in the sense of “hands-on”) learning opportunities (Brockbank and McGill 1998). Formal lectures (which could include guest lectures by workplace representatives) are not excluded, but should be balanced with more active forms of learning.

Group learning and autonomous learning should be promoted (e.g., through research projects, reading assignments, seminars) in order to align theoretical learning with workplace demands (Bennett, Dunne and Carre, 2000). Expectations similar to those of related workplaces (e.g., attendance, deadlines) should be placed on students (Saunders and Machell, 2000).

Assessment should simulate workplace models where these are appropriate. For example, technical reports might replace academic essays as academic practices are aligned with appropriate workplace ones (Dias et al, 1995). External workplace-based examiners are likely to be involved in curriculum planning and assessment. The particular demands of work-integrated theoretical learning will impact on the selection, appointment, role, training and guidance provided to workplace representatives (Gibbs 1995).

5.2.4 Research Objective 4

To evaluate policy implications of work-integrated learning

The results relating to the policy implications showed that work-integrated learning has policies that play a major role in the development of curriculum for work-integrated learning but there are some shortfalls with the programme that need to be reviewed. Some quotations relating to the policy include:

- The broader application for work-integrated learning that we need to identify. Firstly I would say the need for a community engagement policy. Why do I say that? A community policy will require the institution to define the community.
- If there is a demonstrative gap for areas that are falling short then policy needs to be introduced on a minimum standard that is maintained for the operationalization of work-integrated learning in the e-learning format.
- Academic institutions are traditionally limited in the understanding of work-integrated learning, because there is a policy to place students in the industry. There is a need for equitable and transparent policies across all Universities in South Africa.
- Cooperative education is loosely that we have at the centre defined the community as government, business, community, non-government organisations (NGO's) and civil society, communities at large and then the institution. So we have scoped our community, but the policy doesn't exist.
- There is a need for South Africa to have consistency in compensation in terms of academics, better incentives and better benefits.
- There is a need for equitable and transparent policies across all Universities in South Africa.
- The research recognises that there is indeed a gap between what our industries and communities are asking for. There is a need for a formal engagement between industries. The need to create an independent board that needs to consult the expectations to amend the skills in the corporation.
- What was clear is that, the students desire to communicate more closely with their stakeholders and they need them to give a clear understanding on what was expected of them from each party. For them who are at the top of integration without understanding the key factors, we want to mainstream what they think.

The findings in relation to the policy implication of work-integrated learning are similar to the findings contained in the literature. Work-integrated learning refers to “specific skills acquired through work and directly related to classroom teaching. It implies a concurrent process. It may be defined as a form of education that integrates periods of academic study with periods of work experience in positions relating to the students studies. The most common form of work-integrated learning is cooperative education or coop (experiential learning)” (Engelbrecht, 2003, p.24).

There are work-integrated learning policies in place regulating how work-integrated learning practices. Work-integrated learning policy and its implementation are gradually affecting how higher education institutions operate, being structured and organised (DFES, 2003a). This indicates that there is a relationship between work-integrated learning policies, organisational change and curriculum implementation. Furthermore, work-integrated learning strategy is used as part of an organisation’s change management strategy. Saunder and Machell (2000), within the higher education sector internationally and in South Africa (Department of Education, 1997; 2002a, 2002b), there have been calls for increased graduate employability.

The United Kingdom-based Dearing report, (1997) recommended that all students obtain work-experience associated with their qualifications, and that the UK government should seek ways of encouraging employers to offer more opportunities for such work experience. Due to work-integrated learning cross-cutting nature, it has been identified as a useful tool for change management within institutions. However, although reviews have been undertaken of policies within this area that, there has been relatively little attention paid to how these have influenced practice, Conole (2002).

5.3 CONCLUSION

This chapter shows the findings for the research study discussed based on the research objectives and can be concluded that the objectives for the study have been achieved. A summary of conclusions, limitations and recommendations are discussed for future research in the next chapter.

In the next chapter, chapter six (6), conclusions, limitations and recommendations are discussed.

Chapter 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

In chapter 6, a summary of the main findings as presented and discussed in Chapter five are offered. Recommendations for work-integrated learning policy implications within the research setting are postulated while suggestions for further research are also offered. Finally, some concluding notes are presented at the conclusion of the study.

6.2 OVERVIEW OF THE STUDY

The following section will discuss the purpose of the study, the main research objectives in the study and give an overview of the contents of the study.

6.2.1 Purpose of the study

The purpose of the study was to determine the factors relating to the effective implementation of work integrated learning in South African Higher Education Institutions.

6.2.1.1 Research objectives

The research objectives of the study were:

- To conceptualise work integrated (e) Learning from literature
- To determine the extent to which higher education institutions prepare students for the workplace
- To evaluate the implementation processes of work-integrated learning
- To determine the policy implications of work-integrated learning

6.3 CONTENT OF THE STUDY

Chapter 1: Overview of the study

In chapter 1 the study topic was presented to give the overview of the study and all relevant steps of the research process were given.

Chapter 2: Literature review

Chapter 2 explored the framework of work-integrated learning policy implications. It provided discussions of theoretical framework with regard to the study topic. The study aimed at evaluating the implementation of work-integrated learning policies in South African Institutions of Higher Learning.

Chapter 3: Research methodology design and methods

Chapter 3 expanded on the selection of research design and methods used in the study. It provided details on the sampling, data collection and analysis procedures adopted. The quality and rigour of the intended research design and the ethics regarding the research were assessed.

Chapter 4: Findings

This chapter focused on interpreting and analysing the research findings gathered through the semi-structured and in-depth interviews. Detailed discussions of the results were provided and sub-conclusions were discussed in relation to the specific research questions.

Chapter 5: Discussion of results

Chapter 5 discussed and interpreted the results obtained in Chapter 4, from the analysis of the data collected. The interpretations of results were compared to literature and were presented under the headings of the research questions to ensure that the research objectives are met.

Chapter 6: Conclusions, Limitations and Recommendations

This is a final chapter where a summary of the main findings as presented and discussed in Chapter five were offered. Recommendations for work-integrated learning policy implications within the research setting were postulated while suggestions for further research were also offered. Finally, some concluding remarks were presented in the conclusion of this study.

6.4 CONCLUSIONS DRAWN FROM THE STUDY

The following section summarises the conclusions which can be drawn from the study with emphasis on conclusions drawn from the literature and conclusions drawn from the empirical results.

6.4.1 Conclusion drawn the Literature

From the literature review the following conclusions are be drawn:

- If we are to understand the possible future of personal learning and working environments, we need to examine not only present trends but also the past development of learning and work. In other words, we need to try to understand why we got where we are today and what have been the main drivers of the development of the present learning and working environments. The online provision of education, e-learning, has been growing in scope and importance during the past few years.
- This could facilitate a development-oriented view of knowledge, where knowledge is related to the situation, according to Hedin and Svensson (1997). The learning process could then be experience based. The individual learners at work can apply their new knowledge to their daily work, which could increase a sense of meaning (Svensson and von Otter, 2000). Work-integrated learning (WIL) is primarily intended to enhance student learning, and to this end several innovative curricular, pedagogical and assessment forms have developed in response to concerns about graduates, employability and civic responsibility.
- E-learning strategy is increasingly being used as part of an organisation's change management strategy and due to its cross-cutting nature, e-learning has been identified as a useful tool for change management within institutions. However, although reviews have been undertaken of

policies within this area, there has been relatively little attention paid to how these have influenced practice (Conole, 2002).

- As work integrated learning is driven by policies, and such policies have an influence on the structure of the curriculum, curricula should involve a service learning policy within work-integrated learning policies. The curricula should also couple with the SETA and higher education institutions requirements to enable students' access to the workplace environment and also it will expand the reach of work-integrated learning in a much more dynamic manner. This will also encourage graduate employability in corporate world or industry. Within the higher education sector internationally, as well as in South Africa (Saunders and Machell, 2000). The UK-based Dearing report (1997), for example, recommends that all students obtain work-experience associated with their qualifications, and that the UK government should seek ways of encouraging employers to offer more opportunities for such work experience.
- Innovative curricular, pedagogical and assessment forms have been developed in response to concerns about graduate employability and the enhancement of student learning. In the South African University of Technology (UoT) context the term 'Cooperative Education' has been used to describe the placement of students in appropriate workplaces for the purpose of gaining work experience in their chosen fields or disciplines, with the cooperation of potential employers. Cooperative Education is a specific international movement with its own particular approaches to WIL (see the World Association of Cooperative Education website, 2008). More broad than the particular forms taken by Cooperative Education, work-integrated learning has been termed 'workplace learning' (WPL) (Boud and Garrick 1999; Billett, 2001).

6.4.2 Conclusions drawn from the findings

From the research findings the following conclusion can be drawn:

- From the findings many higher education programmes consider workplace learning to be a valid learning experience for students. Most professional training programmes include a practicum, which can vary from a few weeks to a few years of practical experience at a site of professional practice. Students as early as the first year, should be brought into the workplace, and simultaneously acculturated into academic and workplace knowledge systems.

- Also the point of technology is very significant; technology should have the flexibility to accommodate the learning outcome. In an e-learning environment the processes are very vague, not because it should be that way, but because it is not documented effectively.
- As academic institutions are traditionally limited in the understanding of work integrated learning, there is a need for policy to place students in the industry. There is a need for equitable and transparent policies across all Universities in South Africa
- And lastly, there is a need for a policy that will define the integration part of cooperative education and regard community as government, business, non-governmental organisations (NGO's), civil society, community at large and higher learning institutions.

6.5 LIMITATIONS OF THE STUDY

The following limitations have been identified in relations to the study:

As sampling is the process of selecting a portion of the population targeted for the research, generally it is impossible to include the entire population in a study. The two main restrictions is time and cost. Therefore, for any study where it is impractical to collect data from the entire population, the researcher needs to select a sample of that population (Saunders et al., 2007, p.206; Maree, 2007, p.172).

6.6 RECOMMENDATIONS

6.6.1 Recommendations for practice

The following recommendations are made for practice:

- Academia needs to identify the lack of competencies and whether the right industry can bridge gaps depending on the need.
- Linkages between academic and professional bodies as critical points are also required
- Academia should add on skills development and identify the role of the industry help with competencies.
- Formal engagement between industries should be encouraged.

- The relationship should build on trust and on the basis that, there are lot of students that share their emotional experience and fear for industries.
- Change in mind-set is a crucial aspect that needs to be encouraged in the industry and also allow open-minds.
- Also there is a need to create an independent board that needs to consult about the expectation to amend the skills in the corporation
- Government should setup a policy direction in collaboration with industry, also government and the universities should drive the centre of work integrated learning together.
- The curriculum should couple with the SETA and higher education institutions requirements to enable students' access to the workplace environment and also it will expand the reach of work integrated learning in a much more dynamic manner.
- The curriculum should involve a service learning policy within work-integrated learning policies.

6.6.2 Recommendations for future research

The results of this study provided the valuable insight of the research, it's crucial for this study to be carried-out further for more information to be gathered. The topic should be expanded to allow the researcher an opportunity to further obtain sufficient and relevant data on the study. It is indicated that, a relationship should be established between industry and institutions of higher learning in order to meet the needs of a work-integrated learning programmes. Findings revealed the need for an independent board that needs to consult about the expectations to amend the skills in the corporation and also government and universities should setup a policy direction in collaboration with the industry to drive the centre of work-integrated learning.

6.7 CONCLUSION

The emphasised on the findings of the study is that the operational relationship between the industry and higher education institutions should be encouraged in terms of a programme implementation strategy to be achieved, also work-integrated learning policies should be improved in a sense of creating new structures of support for tutors, including increased training, technical and pedagogical support. Linkage between academic and professional bodies is also a critical point to be encouraged and established between academia and industry.

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