

UNIVERSITY OF NATAL

**WORKBASED LEARNING: AN ANALYSIS OF THE
EXPECTATIONS OF STAFF, STUDENTS AND EMPLOYERS OF
STUDENTS PLACED FOR INSERVICE LEARNING**

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EXPECTATIONS OF STAFF, STUDENTS AND EMPLOYERS OF
STUDENTS PLACED FOR INSERVICE LEARNING**

by

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Declaration

I, Rooksana Rajab, declare that this dissertation is my own work and that all sources I have used or quoted have been indicated and acknowledged by means of complete references.



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Abstract

Experiential learning is an integral part of most programs offered at the M.L.Sultan Technikon because of the technical nature of the programs. This study focuses on learning from experience when students from the technikon are placed in work-based settings. It considers how successful workplace experience are from the perspective of staff involved with the Dental Assisting program, students registered for the program that are placed for in-service learning and employers that are involved with these placements, in the light of student learning. With transformation and restructuring within the present higher education system, currently more emphasis is being placed on experiential learning at both universities and technikons.

The primary objectives of this study therefore were:

- (1) to examine the link between education, work and personal development,
- (2) to document experiences which students lived through during their placements
- (3) to evaluate how successful workplacements were from the perspective of staff, students and employers in the Dental Assisting program.

Two models of experiential learning, Kolb's Model (1984) as a learning cycle and Boud and Walker's model (1991) provided a framework for examining and strengthening the critical linkages among institution, the learner and the workplace supervisor. The study looks at student preparation before the placement; it considered thoroughly the environment in which students found themselves; the difficulties students faced in the workplace and reflection during and after the event. The study provides a holistic integrative perspective on learning and the total educational experience of students.

A small sample was selected to afford the opportunity of assessing a lot of information through interviews. Data was analysed by identifying patterns of responses or embedded themes from the interviews. As a qualitative and ethnographic research project the results and recommendations made from the analysis can be utilised to improve my practice. Although student placements were successful in terms of their learning, there needs to be adequate pre-placement preparation for both students and employers in order to enhance the success of the placement. There is also a need to encourage students to reflect on their experience in order to make their learning more meaningful.

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CHAPTER ONE

Introduction

1.1 Introduction

Technikons in South Africa have their origin in Technical Colleges, which offered vocational training in various commercial and technical subjects. In January 1946, the Minister of Education declared M.L.Sultan Technical College an approved institution in terms of the Higher Education Act of 1923. March 1969 saw the college become a college for Advanced Technical Education following the passing of the Indian Advanced Technical Education Act No.12 of 1968. Ten years later in May 1979 the college for Advanced Technical Education became M.L.Sultan Technikon. The revised Technikons' Act of 1993 conferred the right on technikons to award degrees and since 1996 technikons have been granted permission to offer programmes leading to the award of Bachelor, Master and Doctor of Technology. Most programs at the technikon include an "in-service training" component and students are placed in work situations to gain "hands-on", experience making the real world available to students. This differs considerably from University education which, until recently has generally been highly theoretical, academic and focuses on research.

This study focuses on learning gained from experience during workplacements within this in-service component. It considers how successful workplace experiences are from the perspective of staff involved with a technikon program, students registered for the program that are placed for in-service learning, and employers who are involved with these placements, in the light of student learning. Further, it examines the link between student, staff and employer in the facilitation of work-based learning. This study differs from other studies carried out in the field of work based learning (Martin, 1998; Boud, 1993; Garrick & Kirkpatrick, 1998; Foster & Stevenson, 1998), since it encompasses a holistic and integrated view of learning from experience by considering all aspects of the learning process integrating the formal as well as the

workplace as a learning environment, the role of the student within this environment, and the employer and academic staff as facilitators of learning.

This chapter gives us an understanding of learning from experience. It places work based learning in the context of technikon education in South Africa and provides details of the work based learning component of the Dental Assisting program in the Department of Health Care Services at the M.L. Sultan Technikon. Further, it elaborates on the rationale for this study. The chapter also introduces the key questions in this study and defines those concepts that have guided the study. This is followed by a brief outline of the study.

1. 2. Understanding learning from experience.

Academic staff members in higher education institutions, and in particular technikons, need to have a thorough understanding of learning from experience, since many programs at the technikon include “in-service learning”. Technikon students cannot receive the qualification they seek at the end of a course of study without undertaking periods of practical experience during workplacements and having their learning from experience evaluated by the coordinating lecturer. With the emphasis now, in the National Qualifications Framework (discussed later on in this chapter), this learning will receive greater attention from areas not previously engaged in in-service training. According to the literature on learning from experience, (see Dewey, 1938) there are many people who learn effectively through doing things, and having learned that way successfully, are subsequently better able to learn in more abstract ways from books and formal instruction. Dewey (1938) adds that informally acquired knowledge and skill may be as significant as learning through any formal means and therefore, this allows us to recognize that individuals can and do learn by doing as well as through formal instruction. However, Dewey (1938) also alerts us to the variable value of experience:

----- all genuine education comes about through experience does not mean that all experiences are genuinely educative.

(Dewey, 1938: 25)

By this he means that experience is educative when it is examined and reflected on and which then develops meaning for the learner. It is not sufficient just to create a situation with all the physical characteristics of a workplace and expect the learner to automatically achieve the necessary expertise from experience. According to Kolb (1984) experiential learning is seen as the process that links education, work and personal development. He defines learning thus:

Learning is the process whereby knowledge is created through the transformation of experience.

(Kolb, 1984:38)

This definition emphasises critical aspects of the learning process as viewed from the experiential perspective. It emphasises the process of adaptation and learning as opposed to content and outcome. It also emphasises that knowledge is a transformative process being continuously created and recreated and should not be considered as an independent entity to be acquired or transmitted.

Saddington (in Mulligan & Griffin, 1992) views experiential learning as a process in which an experience is reflected upon and then translated into concepts, which in turn become guidelines for new experiences. The ideas expressed in informal discussions which I have had with academic staff members at the M.L.Sultan Technikon, indicate that staff hold a contrary view to this. Here, experiential learning is perceived as “student learning by doing” when students are placed in a relevant industry for integrated workplace learning. Staff members made no mention of reflection on this experience or making meaning of their experience. This provided me with an incentive to view “learning from experience” within the context of the Dental

Assisting program at the technikon when students are placed in private dental practices during their in-service period.

Another view of experiential learning is offered by Trigwell & Reid , where work based learning is seen as a form of flexible learning:

It can offer flexibility to students in what they study; flexibility in where and when they study; flexibility on the nature and scope of assessments; and flexibility of entry and exit.

(Trigwell & Reid, 1998:142)

For these reasons, they conclude that many universities acknowledge a connection with the workplace or a vocation since the curriculum has moved from being determined by the university to being defined more by work issues. The curriculum is influenced by issues and challenges, which emerge from the exigencies of work rather than academic content. They add that while some Australian universities have a stronger research focus, others have adopted a vocational focus and hence have developed a greater involvement with learning in the workplace. Stevenson (1994) has defined vocational education and training as any learning that is aimed at improving a person's ability to perform in the workplace. It is recognised that this learning can be on-the-job, off the job or a combination of the two, in a college, organisation or at home. Thus the Dental Assisting program can be viewed as vocational education.

1.3 Purpose of the study

In this study, one of the main aims was to examine the link between higher education, work and student development in a formal teaching programme. Central is the idea that placements are to be treated as providing genuine educational experiences and specific education in terms of the Dental Assisting programme, so their management has as its foremost purpose the facilitation of learning in placement settings. I needed to find out whether the student placements within the Dental Assisting program

encouraged genuine learning and what needed to happen in order to enhance and facilitate learning at the workplace and to be able to improve my practice.

Ashworth and Saxton (1992) believe that there is a need to take a close look at experiential learning in work-based settings. They have identified a wide range of supervised work experience that exists globally. One example of this is the British “sandwich degree” which is typically a four-year course of study during which a year is devoted to employment relevant to the degree. In the “thick sandwich” model, the student spends an intact year (generally the third year) outside of the higher education institution. “Thin sandwich” courses normally split the year of work experience into two separated periods of six months. Despite the fact that the sandwich degree is well established and widespread, there has been little systematic study of this form of higher education (Ashworth and Saxton, 1992). Accordingly, the Dental Assisting program would then be considered to be a “thin sandwich program” since the workplacement is incorporated within the year of study.

Boud and Walker (1991) have also expressed the need for more research on experiential learning. Most of the research presented thus far emphasizes the assessment and evaluation of learning from experience and Assessment of Prior Learning (APEL) and very little has been said about the learner’s actual experience. According to Evans (1994) interest in experiential learning has been gaining momentum globally since the early 1970s when the Americans led the field in the recognition and assessment of experiential learning. He adds that in the 1980s Britain followed developments in the field of experiential learning. Interest began to quicken in France, Canada and Australia thereafter.

In 1994, when South Africa underwent political change from apartheid to democracy, it brought forth many challenges in education such as a need for restructuring the National Education system. There have been changes within the higher and further education sector and it is within this context that student-centred learning, where the emphasis is on the learner, takes on new and urgent meanings within credit accumulation arrangements.

The statement made by the current Minister of Education, Kader Asmal, in his address to foreign correspondents needs to be highlighted:

Within the Department of Education we have shifted our focus on providing the type of education that will prepare our learners for a future cybernetic world. This is the new educational approach, namely, curriculum 2005, which revolves around the concept of Outcomes Based Education (OBE). It's main objective is to deliver a culture of lifelong learning. This is a concept proved and accepted by some of the leading countries in the world.

(Kader Asmal, Minister of Education, 4 Oct 1999)

The Ministry is committed to Outcomes Based Education as an approach that embraces the capacity of learners to think for themselves, to learn from the environment and to respond to guidance by teachers who value creativity and self-motivated learning strengthening the links between education, vocation and economic needs. This has various implications for educators within the Higher Education sector as far as teaching and learning are concerned. Against this background of a new direction of Higher Education in South Africa, it appears as if new learning and educational demands emphasise "co-operative education", of which experiential learning is one component, as a potentially valuable model in higher education.

Engelbrecht (1999) explains the value of co-operative education:

Since co-operative education is based in real-life situations, the model is particularly well equipped to promote critical learning outcomes like communication in a variety of contexts, effective team participation, problem solving, self-management and understanding systems.

(Engelbrecht, 1999: 2)

The concept of co-operative education needs clarification here, which according to Engelbrecht (1999) has a variety of connotations. He believes that the concept is often interchangeably used for collaborative educational initiatives, to imply experiential learning management only, or to indicate private consulting services of staff to industry and that this concept needs to be developed. He feels that the mnemonic **Inc-Cel-Far** contributes to some clarity regarding the practice of co-operative education by technikons in South Africa. This is made up by the first letter of the words for the four sub-components of co-operative education and the first letter of reciprocity and these spell the mnemonic:

| | | | | |
|-----------|----------------|--------------|-----------|-------------|
| Industry | Continuous | Experiential | Faculty | Reciprocity |
| Needs | + Consultation | + Learning | + Abreast | + |
| In | c-C | el | Fa | r |

Groenewald, examining the technikon education philosophy and the statutory policy, regulations and standards as well as the Committee for Technikon Principals (CTP)'s glossary, further elaborates this concept on. Experiential Learning within this context is described as:

Workplace or community based experiential learning and the maintenance of the necessary systems and mechanisms to ensure proper integration of tuition and practical application, thus deriving deep learning and competence.

(Groenewald, 1999: 4)

If educators believe that experiential learning is one form of student-centred learning, and since programs in higher education are already incorporating experiential learning as a module of the course, a careful study of experiential learning in our institutions of higher education is essential to ascertain whether students actually do learn from experience and how effectively. Barr and Tagg (1995) define student-centred learning as a paradigm shift from instruction given by the lecturer to students assuming

responsibility for their own learning where knowledge exists in each person's mind. Hence, I see learning from experience as an innovative method of inculcating lifelong learning.

My interest in the field of experiential-learning stems, from my involvement as coordinator of the in-service component within the Dental Assisting program. From this involvement with placement of students into a work environment I was curious to find out how students learn and can benefit from their workplacements. Hence, this study would not only contribute towards improving my practice but would also improve the Dental Assisting programme as a whole. This aspect is elaborated on in the next section, which explains precisely how the student placements are made at the technikon.

1.4 Experiential learning within the technikon.

Experiential learning is an integral part of most programs offered at the M.L. Sultan Technikon because of the technical and vocational nature of the programs. Yet, Martin (1998) reports that usually the planning associated with workplace learning, the structure and infrastructure to support the program, and the assessment and evaluation associated with work based learning or experiential learning are significantly less developed and scrutinized than other parts of a course (Martin, 1998).

Most departments at the technikon undertake the responsibility of overseeing this component and placements in the workplace are arranged between employers and coordinating lecturers of a particular program. With the introduction of the Certification Council for Technikon Education (SERTEC) which is responsible for accreditation of programs offered at all technikons nationally, evaluations of academic programs at the technikon brought to light the necessity to develop policy around issues of experiential learning to guide employers and the institution. SERTEC, introduced in 1993, established a committee to evaluate the quality and relevance of courses that are offered at the technikon. From the reports of this

evaluation process it was established that there is a need for documented guidelines to be used by the institution, the student and the employer during placements of students for in-service training. At this stage each department at the M.L.Sultan Technikon carries out this process on an individual basis. Since the experiential learning component through placement in industry for technikon education is greatly emphasized, I needed to explore the importance of work based learning as part of technikon education.

At the beginning of 1999, a Co-operative Education Unit was set up at the technikon. The unit is responsible for coordinating the experiential learning component of all programs at the technikon and its mission is to create liaison between the technikon, employers, professional bodies, professional societies and student bodies. At this stage, this unit has not developed or implemented any policies around issues of experiential learning. This is envisaged as occurring once an adequate infrastructure is put into place and sufficient resources are allocated.

For purposes of this study, the experiential learning component in the National Certificate in Dental Assisting at the M.L.Sultan Technikon, is described in detail. The program in its entirety consists of three theoretical courses and one practical component. The courses that students register for are as follows:

- Dental Assisting Theory
- Dental Assisting Practical
- Oral Anatomy and Pathology
- Dental Practice Management

It is a one-year program, which includes an in-service period of at least 160 hours in addition to clinical work that is carried out at the technikon dental clinic and is based on the campus during the clinical sessions. Students are exposed to demonstrations, simulations, group work and presentations in preparation for their workplacements. The student is required to spend at least one day a week in a private dental practice in the second term of the year and then gradually introduced to more “hands on”

procedures. Completion of the in-service component is compulsory in order for students to be awarded the certificate.

Prior to the placement, students are interviewed to establish the convenience factor for travel to the practice they will be placed in. Students are also requested to contact and notify a dentist in their residential area that they are registered for the National Certificate in Dental Assisting and inquire if the dentist is willing to allow the student to work in his/her practice. If possible, the name and address is to be acquired, if not, the student can choose from a list of dentists already willing to participate in the in-service program. A letter from the technikon is sent out to all dentists agreeing to participate, requesting permission for the student to spend one day at the practice just observing. On returning to the technikon the student has to submit a portfolio or diary giving a detailed account of their experience. In the third term students are placed at the same practice for a continuous period of two weeks. These placements are yet again, coordinated by myself as member of the academic staff from the technikon. At first a letter is sent to private practitioners stating dates and times for the placement to be scheduled; this is followed by a telephone call to confirm whether the scheduled dates are suitable for the employer. When these arrangements are confirmed the student commences the continuous in-service period of two weeks. I monitor and record the progress of the student during the placement. The private dental practitioner is provided with evaluation forms (see Appendix 1) to evaluate the student's clinical competencies as well as personal details such as student's approach to patients, punctuality, dress code etc. These evaluation forms are given to the employer at the beginning of the placement, which indicates to the employer the aspects of clinical work that are covered at the technikon. Employers may have particular expectations from students during the placement based on the evaluation forms. These evaluation forms are usually designed by each coordinating lecturer of specific programs for a particular discipline at the technikon. I monitor approximately twenty students that have registered for the Dental Assisting programme.

1.5 Experiential Learning in the National Qualifications Framework

Kolb (1984) states that people do learn from their experience, and the results of that learning can be reliably assessed and certified for college credit. This is becoming a trend in higher education today. For instance, one of the challenges facing higher education in South Africa today is the conversion of annual courses into modules. Programs are being structured in such a manner that with the accumulation of sufficient modules a Diploma or Degree may be awarded. Thus the technikon sector is presently faced with challenges posed by the introduction of a National Qualifications Framework (NQF) and its attendant policies and structures (see Appendix 2).

According to the National Qualifications Framework, a qualification is the certification of the attainment of the learning outcomes of a coherent learning program expressed as an accumulation of credits at specified levels (NSB Regulations, RSA, 1998). The National Qualifications Framework further defines a program as a combination of units of learning (modules) expressed in an outcome-based format, which leads to one or more qualifications and which serve an academic or vocational purpose (Genis, 1999). Institutions of Higher Education are undergoing changes to register their programs as "outcomes-based" in accordance with the National Qualifications Framework. These changes pose many challenges to lecturers since the process requires addressing changes in curriculum for each program.

The 1997 *White Paper* requires the Higher Education system to produce graduates for an economy that must be globally competitive. The Higher Education system is also expected to contribute to the reconstruction and development needs of society and assumes that through the implementation of the National Qualifications Framework, curriculum change would occur. These changes have enormous implications for Higher Education learning and teaching, for the development, accreditation and registration of programs and qualifications and ultimately, for how knowledge and institutions are organised.

This task of curriculum change to meet all these requirements is sometimes bewildering for educators. For example, to comply with the National Qualifications

Framework, a task team of representatives from each of the technikons offering the Dental Assisting program nationally has been formed. The purpose of this team, of which I am a member, is to ensure that the program meets with current market and societal needs. This is carried out in collaboration with dental professional bodies and employers of dental assistants. This is obviously both a time-consuming and expensive exercise. Its strength lies in providing a curriculum that complies with current market trends, making students more employable and meeting with government regulations, as well as moving towards a community of learners that is expected to be actively involved with their own learning and finally moving away from a theoretical and content-based curriculum.

If, as Kolb (1984) states, learning from experience can be reliably assessed and certified for college credits, then higher education institutions in South Africa need to view modules in experiential learning and the assessment of experiential learning for accreditation quite seriously. The time might be ripe now to recognise and value experiential learning by awarding credit properly in integrated planning. This is new to the Dental Assisting program since accreditation for the experiential component has not been based on achieving credits for a module separately, but rather as part of the whole program. For these reasons, lecturers need to have a clear understanding of experiential learning theory and the impact it has on student learning so that it's assessment can be carried out properly.

1.6 Methodology

The ethnographic approach was applied to this research project since ethnographers study people in their natural settings, seeking to document that world in terms of the meanings and behaviour of the people in it (Seale, 1998). The observer, in this case myself, is the primary research instrument, accessing the field, which is the work-based learning site within a private dental practice. The research involved establishing field relations with both students that were placed as well as dentists within the field. Data was collected by conducting structured interviews (see Appendices 4, 5 and 6), observation at the dental practice, writing field notes, using audio recordings, reading

documents, recording and transcribing and finally writing up the research. Ethnography has a large constructional and reflexive character and seems an appropriate method for this research.

The results of this study support changes that were needed to improve the link between employers and the M.L.Sultan Technikon during student placements for the in-service learning component of the Dental Assisting program. Further, the role of employers, staff and students during the placements are made more explicit by the study.

I surveyed relevant literature on learning and models of experiential learning to evaluate the success of workplacements for Dental Assisting students at the Technikon. I employed the interview method to provide accounts of the subject's behaviour, practices and actions. The data collected was analysed according to themes and patterns of commonality that emerged from the study. The details of the methodology adopted in this research, is described in the chapters that follow.

1.7 Overview of the study

Having defined experiential learning and described the experiential learning component within the Dental Assisting program, Chapter Two highlights the theories of learning and in particular experiential learning and models of experiential learning that have been developed over the years. I have linked these theories and models of learning to the present study. The next chapter also sets out the framework that has provided the theoretical insights that have shaped this study.

In Chapter Three a detailed account of how the study was conducted is discussed. A small number of subjects were selected to afford the opportunity of accessing a lot of information and served to bring up key issues that needed to be raised. The study created an opportunity to develop rapport between the institution and the workplace through interviews, which provided accounts of the subject's behaviour, practices and actions. The subjects were students, workplace employers and staff from the

technikon involved with the Dental Assisting program. A tape recording of all interviews was made and transcripts were drawn up for analysis.

In Chapter Four an analysis of the interviews with academic staff members, students and employers is carried out which provides information regarding the preparation of students prior to placements, the role of the student during placements and information regarding the facilitation of learning. Much information regarding the students experience was gathered including their expectations of the workplace. The chapter also covers aspects of the role of the employer in student learning. Data was analysed by identifying patterns of responses or embedded themes from the interviews.

In the final chapter a discussion of the implications of the results is offered and recommendations for further studies are made.

CHAPTER TWO

Towards a Conceptual & Theoretical Framework

2.1 Introduction

This chapter sets out the framework that has provided the theoretical insights that have shaped the nature of this study. The theoretical framework has largely contributed to the design of the interview schedule and provided direction in analysing key concepts embedded in the data collected. The main purpose of this chapter is to review some pertinent literature in order to situate this study within a broader framework and to further explain concepts of learning in higher education and of experiential learning in particular.

Having defined what experiential learning is from the perspective of technikon education and having discussed its value in the curriculum in Chapter One, we need to scrutinise theories around issues of experiential learning that researchers have identified over a number of years. Cohen and Manion (1982: 17) note that Kerlinger defines theory as “a set of interrelated constructs [concepts], definitions and propositions that presents a systematic view of phenomenon by specifying relations among variables, with the purpose of explaining and predicting the phenomena.”

Thus theory allows different aspects of a phenomenon to be gathered together into a coherent conceptual framework, which can be made applicable and meaningful. Theories can therefore be a source of further information and new findings. For these reasons, I had decided to look at theories of learning presented in the field of education. There is a large body of research literature on theories of knowledge production and creation, and of student learning pertaining to higher education (Martin & Ramsden, 1987; Gibbs, 1992, Marton & Saljö, 1976, Trigwell & Prosser, 1997). These researchers have examined the process of learning and have identified the different approaches, strategies or styles that may be adopted by different groups of learners.

The chapter draws upon recent studies in the literature carried out on approaches to learning. To begin with, I have decided to discuss how theories of learning impact on educators in higher education institutions, and approaches to learning by both teachers and learners in higher education and their implications for the Dental Assisting program, bringing together theory and practice. This is followed by a discussion of the proponents of experiential learning and the implications and effectiveness of this method as a teaching tool within the professional discipline of Dental Assisting. The works of key educational researchers, who have contributed largely to the field of experiential learning, namely, Kolb (1984) and Boud, Keogh and Walker (1985), have been discussed and elaborated upon. These researchers explain how their models can influence educators and providers of experiential learning in institutions of higher education. A discussion on how these models influenced this study is provided.

2.2 Theories of Learning

Lecturers in higher education need to examine what is known about the quality of student learning. Ramsden (1992) looked at qualitative differences in student learning. He introduced the idea that there is often an inconsistency between the outcomes teachers want students to achieve and what students actually accomplish. From personal experience, this is often the case. Lecturers want students to understand important concepts and procedures within their courses but many students are unable to accomplish these goals. Ramsden (1992) believes that this discrepancy occurs because there is differences in the ways students go about learning and these differences can in turn be explained in terms of experiences of teaching. He describes two contrasting ways of relating to a learning assignment known as surface and deep learning. If the learner focuses on what the task is about and tries to develop an understanding of, for example, the author's intention, then the learner uses a "deep approach". On the other hand, if the learner focuses on the "signs", for example the word - sentence level of the text, this is said to be a "surface approach". Ramsden (1992) further points out that many research studies have shown that the outcomes of students learning are associated with the approaches they use (Ramsden & Entwistle,

1981; Biggs, 1989). He concludes that with a surface approach material that is learnt is soon forgotten and that a deep approach leads to better retention, better grades and high quality outcomes. The way we teach has a marked effect on study approaches and subsequent learning quality. Thus, we need to examine aspects of student learning other than those proposed by Ramsden (1992).

Boud, Cohen and Walker (1993) make a further and important point, that while we commonly assume that teaching leads to learning, it is the experiences which teaching helps create that prompt learning, not primarily the acts of the teacher. Boud et al add that one of the keys to learning is by working with experience and it does not involve any intervention by someone in a teaching role.

Learning does not emerge simply from experience even when we work actively with it..... Learning occurs over time and meaning may take many years to become apparent.

(Boud et al, 1993: 9)

Saljö (1979) adds a further dimension which is that the approach people adopt to learning tasks has to do with their conception of what knowledge and learning are. This is a similar point to that emphasised by Perry (1970) whose work at Harvard clearly implies that students develop increasingly sophisticated ways of thinking as they progress through higher education. He describes a gradual change in students' conceptions of knowledge and learning and identified nine positions along a spectrum of ethical and intellectual development in students. It would therefore be of little significance if lecturers have to concentrate on teaching or teaching methods without developing a corresponding awareness of learning or understanding students' conceptions of knowledge. The students in this research have been made aware of learning during the course of their studies by asking them what their conceptions of learning are. The responses varied from "memorizing" to "making meaning of."

The following student responses illustrate this:

Learning is remembering everything that the lecturer has taught me in class so that I can do well in tests and exams.

The issue of memorizing is raised here. This is distinctly different to the response given by another student from the same group:

I learn when I understand what the lecturer is discussing. Reading my notes without understanding is only memorizing the work and it is very easy to forget. So I have to make sure that I understand so that I can apply this information.

These responses clearly illustrate that there are differences in the way students conceive of “learning”, and this impacts on their individual approach to learning and educators must acknowledge these differences.

This is contrary to the comments made by Stevenson (1994:29) who proposes that we as educators cannot assume that all learners are alike and learners will be motivated to move towards pre-specified learning outcomes:

Motivation and comprehension are not automatic - they need to be created and nourished. We need to ensure that new learning connects with the learner’s previous knowledge and we need to increase the learner’s interest in new knowledge through these connections.

Stevenson (1994) believes further that some ways of developing the learner’s interest and getting the learner involved in the active construction of knowledge would be by situating the learner in settings of authentic practice, building a community of learners, making comprehension easier, highlighting the importance of salient concepts and making use of analogies and comparisons.

It is appropriate in this context then, to mention other educational research , which investigates the influence a student's understanding of learning has on the student's learning of some subject matter. Zuber-Skerritt (1992: 49) emphasises Baird's point:

Metacognition refers to the knowledge, awareness and control of one's own learning.....Adequate metacognition means that 'self-direction' or 'responsibility and control' of learning is considered, informed and purposeful. Improving learning is a process of intellectual development towards enhanced metacognition.

In 1998 when I registered for the Masters in Higher Education, extensive discussions with colleagues around issues of learning and debates about students becoming more aware of their own learning resulted in each of us introducing this element of "metacognition" to our students in practice. Students were thus made aware of their own learning. By talking to students about their learning during lecture sessions, I have made them aware of their approach to learning. Although I have previously been rooted in "completing a syllabus" and "covering the content" I now give far more opportunity for collaboration between students and myself. There have been many frustrations about my and those of my colleagues' practices being entrenched in fifty minute lecture periods and our approach to students being technocist with little regard for the student as a learner.

Thus, as educators, if we take cognisance of the literature on learning and approaches to learning, we can instil in students an awareness of learning during our contact with them resulting in a "deep approach", more "control" in their learning and hence "responsibility" for their own learning with a move towards reflection. What needs to happen is that instead of covering content in lecture periods, we need to understand how students make meaning of what we say. Making students aware of their own learning is important so that how they conceive of a problem would make them independent thinkers and in turn give them the ability to respond to unusual situations by reflecting on them.

In the light of this, a common comment often made by colleagues, is that knowledge and skills often fail to transfer from the teaching context to real life. This is usually regarded as some sort of failure by the learner, to be able to apply what they know, which I term “metacognitive failure”. I believe that educators should anchor their instruction in more authentic tasks. Rather than instruction, facilitation of learning should be emphasised and students should be inducted into real life situations, as is the case during workplacements where they become a part of the role they are meant to play in the future. The active and engaging activities of workplace learning emphasise this. It is postulated that these types of activities press learners into higher order thinking and place them in a highly active role, not only by “doing” a task, but also in “thinking” or reflecting about the task (Stevenson, 1994). Hence, we need to look at theories that have been developed around learning from experience more seriously in order to be able to facilitate learning that occurs during student placements.

2.3 Experiential Learning Theories

If we consider experiential learning from an international perspective, we find that around 60% of all Australian degree courses now involve workplace learning. The work associated with this workplace experience typically accounts for between one eighth and one quarter of the total marks and grades of the degree program (Martin, 1998). There has been little research carried out on workplacements in South Africa and considering the attention it deserves, especially in the light of registering programs as modules, workplacements within the technikon situation need to be more intensely studied. There is a need for the utilisation of learning contracts, recording and reviewing of student skills in order to enhance work-related learning and the personal development of the student.

Foster & Stephenson (1998), in the course of their studies, note that there have been many projects recently in the United Kingdom that have addressed issues in workplacements such as the academic difficulties associated with learning in work-experience contexts (Ashworth & Saxton, 1989), integrating placements more closely

with academic courses (Rees & Collett, 1990), identifying modes of learning, recording, assessing and accrediting work-based learning (University of Central Lancashire, 1991) and investigating the roles and responsibilities of employers, academics and students (Tuck, Lee & Bennet, 1993). In all the above projects control remains essentially with Higher Education providers rather than with employers and with tutors rather than students.

If we have to examine the aspect of “control” within the in-service component at the M.L.Sultan technikon, as far as placements are concerned, the same applies. The first contact the student has with industry is through the technikon; the student is placed, progress is monitored and the coordinating lecturer from the technikon in collaboration with the workplace supervisor evaluates the student. From the technikon’s perspective very little emphasis is placed on the workplace supervisor who is looked at as providing an opportunity for the student to gain experience but who only partially participates in the evaluation process of the student. The supervisor is not involved in the preparation of the student prior to the placement nor is he evaluated or accredited as a supervisor. The supervisor, is given guidelines regarding the academic programme at the technikon but the supervisor with regard to the programme itself, is not seen as making a formal contribution. Thus “control” remains with the institution.

Therefore, we need to examine student placements from the perspective of the technikon. The procedure involved with placement of students within the Dental Assisting program has been described in detail in the first chapter and does not need to be elaborated upon here, however, what actually happens during the placement is of vital importance. This is uncovered in the analysis and interpretation of data collected during interviews done for the research. A thorough examination of the approach of students to learning from experience highlights the success or failure of the experiential learning component of the course. Various aspects such as student preparedness and their role during the placement explain what happens when students apply theory to practice.

Although the works of many educational researchers have influenced this study, the contributions of Kolb (1984) and Boud, Keogh & Walker (1985) stand out. Kolb (1984) provides a comprehensive and systematic statement of the theory of learning. He describes the process of experiential learning and proposes a model of the underlying structures of learning based on research in psychology, philosophy and physiology. He draws on the origins of experiential learning from the works of John Dewey, Kurt Lewin and Jean Piaget. The other contributors to this study were Boud, Keogh and Walker (1985). They developed a model of learning that I have found helpful in identifying features in activities that involve learning from experience. A detailed discussion on each of these models follow and links between the theories of learning and this particular study are established.

According to Kolb (1984), experiential learning theory is differentiated from cognitive theories of learning (that emphasise acquisition, manipulation and recall) as well as from behavioural learning theories that deny any role for consciousness and subjective experience. It is different, not because it proposes a third learning theory, but rather because it suggests a holistic integrative view on learning. It combines experience, perception, cognition and behaviour.

The models presented by Kolb (1984) and Boud, Keogh & Walker (1985) have been the basis of developing my thought processes in analysing my findings. Since these models have been most appropriate to the study, critical reviews of the conclusions of these models have aided in the interpretation of the results. Sometimes the word model is used instead of, or interchangeably with theory. Both are seen as explanatory schemes, which have a broad conceptual framework, but models are more graphic or have a visual representation of a particular phenomenon. Models are of great help in achieving clarity and focusing on key issues in the nature of phenomenon. A brief description of the models that were selected is given below.

2.3.1 Kolb's experiential learning model

Kolb (1984) describes his model as a learning cycle (see *fig. 1*). He believes that concrete experience is followed by reflective observation. Thereafter there is abstract conceptualisation followed by active experimentation, which leads back to the point of concrete experience.

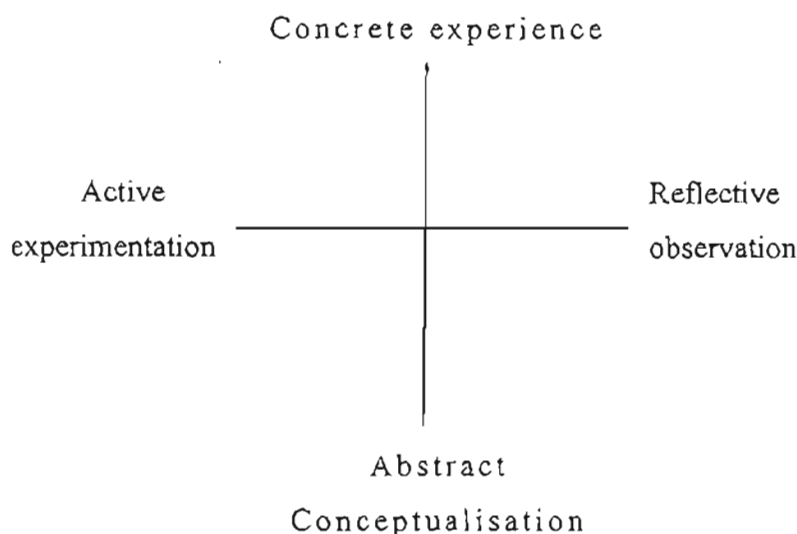


Fig 1: Kolb's Learning Cycle

In this model there are four adaptive learning modes. Concrete experience/ abstract conceptualisation and active experimentation/ reflective observation are opposed orientations. Kolb (1984) describes the concrete experience and abstract conceptualisation modes as tangible, taking hold of experience in the world. This is the comprehension or felt qualities of immediate experience. The active and reflective modes are described as transformation. What we see, hear and feel around us are those sensations that we call reality. They are simply grasped through a mode of knowing called apprehension. Through comprehension we introduce order into what would normally be just a series of apprehensions. Therefore it gives meaning.

I believe that students go through a similar learning process when placed for in-service work at private dental practices. Through a series of what Kolb (1984) describes as apprehensions where the student is exposed to seeing new equipment,

materials, and instruments and so on, a sense of reality is established. This apprehension has to then be transformed into comprehension where the student, when looking at the instruments, equipment etc., can clearly understand why, how and the way they are used. The comprehension makes the student realise and think ahead of procedures that will be carried out with such equipment or instruments. Students then make meaning of what they have experienced. It also opens up opportunities for students responding in “unseen” situations.

Kolb (1984) emphasises several critical aspects of the learning process. First, he emphasises the process of adaptation and learning as opposed to content or outcomes. Second, is that knowledge is a transformation process, being continuously created and recreated, not an independent entity to be acquired or transmitted. Third, learning transforms experience in both its objective and subjective forms. Finally, to understand learning we must understand knowledge and vice versa.

Two aspects of this learning model can have a direct influence on educators. First, for us as lecturers in higher education, we can use the personal experience of learners as a focal point of learning. Students may share their experience with educators, which will enlighten us about how they conceive this experience. Secondly, is based on “feed back processes”. Lewin in Kolb (1984) believed that organisational ineffectiveness is ultimately due to a lack of adequate feedback processes. Educators should use this feedback process to make learning goal-directed and effective. Thus, with intense scrutiny of this model, I have arrived at the conclusion that if we as lecturers want to foster student development within a course, we need to identify those aspects that will lead to learning, manage those aspects and eventually influence the learning process within an individual. To educate, according to Kolb (1984), literally means, “to draw out”. This requires an ability on the part of the lecturer to make contact with the student’s inner resources, attitudes and ideas. This would occur through dialogue between student and lecturer, which has implications of individualising instruction. Lectures given in the traditional classroom method are not conducive to individualised instruction; therefore, I believe that the experiential learning method has appeal. Lecturers could use experiential learning as an educational technique that could assist in the learning process by sharing student’s “concrete experience” and “reflective observation” as Kolb (1984) distinguishes with

his model. The strength in the model lies in the fact that learners are encouraged to reflect upon an experience, which can be shared with educators. Expressions of feelings are encouraged and seen as productive inputs to the learning process. I see this aspect of Kolb's model as being vital to the study and to our practice as educators. During their placements, students in a dental practice gain field experience. On returning to the technikon, this experience is then reflected upon during assignment writing or portfolios that are written up as tasks given to the student. This gives me an insight into how students apply their skills from theoretical knowledge to a real-life situation giving this model its relevance. There is much similarity in the model proposed by Boud, Keogh & Walker (1985), which is discussed next.

2.3.2 Boud, Keogh & Walker's Model of Learning

Boud believes that learning occurs in many contexts; it is prompted in many ways. It means different things to different people at different times and in different places. However, he also believes that what is fundamental to learning is experience.

Experience is the foundation of and stimulus for learning.

Experience is interpreted widely here. What counts as experience is what happens to the learner as a result of his or her transactions with the world.

(Boud, 1993:35).

Boud and Walker (1991) together with other colleagues in the Australian Consortium on Experiential Education (ACEE) have been trying to make sense of learning from experience and believe that the process requires facilitation. They have developed a model, which can provide a framework to be used by educators in the process of facilitating learning from experience. Boud and Walker (1991) believe that this framework takes on greater value when they are linked to particular contexts and practices, and should not just represent some external reality. Their goal has been to examine the central features of learning from experience which operate in most learning situations. They took reflection by the learner on his or her own experience as the central focus in learning from experience. The question they ask themselves is "What are the key elements in encouraging reflection following a learning activity?"

They see reflection as having three components:

1. Returning to the experience (what happened?)
2. Acknowledging and dealing with feeling (how do I feel?)
3. Thinking through the implications (what does it mean?).

In my own practice, when students return to the technikon from a dental clinic and become involved with writing up their portfolios, they return to the experience by recapturing details that address negative and positive feelings about their experience. I have found this model useful in finding ways of assisting students to integrate reflection of their experience and be able to self-assess which otherwise would not have occurred to me as an important aspect of the normal curriculum. Most colleagues at the technikon with whom I have had numerous conversations regarding student learning, express surprise and general unawareness of the process of learning or the benefits in getting students to reflect. I agree with Boud (1993) that lecturers themselves need to reflect on their own practice:

Learning from experience applies equally to staff as to students. Perhaps the greatest problem we have to face is not which theoretical approach to use to inform practice, but how to extend the experience base of staff so that they have a greater repertoire of approaches of which they have personal experiences upon which they can draw.

(Boud, 1993:42)

Boud et al (1985) place reflection as something happening after the event. On the other hand Schön (1987: 28) is interested in the way different professionals act and reflect in action. He challenges the assumption that professional practice involves only the application of relevant technical knowledge to clearly defined problems. He believes:

Reflection gives rise to on the spot experiment. We think up and try out new actions intended to explore the newly observed phenomena, test our tentative understandings of them, or affirm the moves we have invented to change things for the better.

However, Boud, Keogh and Walker's model (1985) is helpful in identifying some of the learning features in activities that involve learning from experience in both formal and informal settings. This model is in three parts, corresponding to the key phases to be considered, and are represented by three circles (see figure 2): preparation before the event, the experience/s in which students engage and subsequent reflection on the event where each phase influences the next.

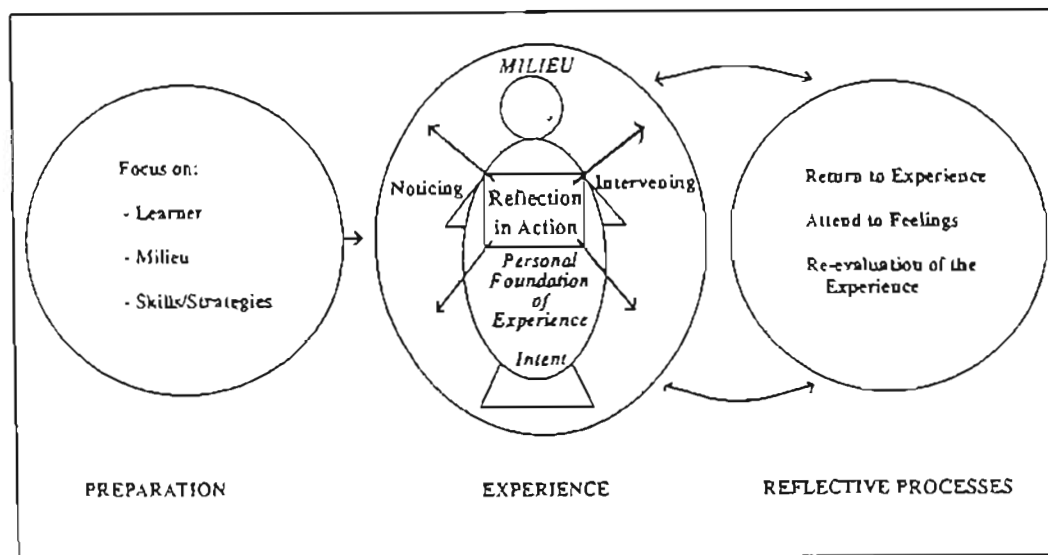


Fig.2: Boud, Keogh and Walker's model of learning

For purposes of this study, the first circle represents the preparation of students registered for the Dental assisting program before she/he is placed in a private dental practice for in-service learning. As coordinating lecturer, I discussed details about the student placements with students, which encompasses discussions on the procedure to be followed during the placement, the visit that is made by the lecturer from the technikon to evaluate, and discussion of the evaluation by the employing dentist. The events and experiences that follow from this are represented by the second circle and here learners engage with the milieu i.e. objects and people they encounter during their placement. The student's actual experience at the dental practice is taken into account and interpersonal relationships within the practice are emphasised. Other factors such as procedures carried out, materials and equipment that are used are also highlighted. The third circle represents reflection on the experiences after the event with particular attention being drawn to recapturing the event in detail, attending to

feelings and consolidating the learning from experience. This reflective activity is captured during portfolio writing. The students are thus given the opportunity to reflect on their experience during their in-service period at the work-placement; attending to feelings - building on good feelings about the experience and dealing with negative feelings giving students an opportunity of recognising any barriers to learning that they may experience.

Boud, Keogh & Walker's model (1985) serves to highlight each aspect that was considered during the study. It looks at student preparation before the placement; it considers thoroughly the environment in which students found themselves, as well as influences of people within this environment. In addition, an important aspect of this study was to use Boud et al (1985) idea of reflection after the experience. Further, it pursues a framework for examining and strengthening the critical linkages between the institution, the learner and the workplace supervision. It also provides a holistic integrative perspective on learning and the total educational experience of students.

Lastly, the model provides a means of evaluating the actual work experience of students registered for the in-service component of the Dental Assisting program.

2.4 Reflective Experiential Learning

An important and recurrent theme that seems to emerge from all the literature studied on experiential learning is the agreement about the importance of "reflection". Boud and Walker (1991) discuss reflection after the experience that brings about learning; Schön (1987) describes reflection-in-action which he believes is what makes the learner aware of an unusual situation by the element of surprise, which subsequently leads to learning. Criticos (1993) distinguishes three types of experiential learning:

1. Practical Training.
2. Experience-based Learning.
3. Reflective Experiential Learning.

Criticos (1993) believes that the key distinction between each of the above is the central role of reflection. He adds, that what is valuable from experience is the intellectual growth that follows the process of reflecting on experience. He believes that learning does not follow from a positive experience but from effective reflection and quotes Aitchison and Graham who state that experience has to be arrested, examined, analysed, considered and negated in order to shift it to knowledge. Criticos emphasises that his own personal experience of tensions and contradictory explanations from an apartheid education, forced him to be reflective. He claims that learning took place only when he could explain the contradictions.

Boud (1993) proposes that his model of experiential learning should be used to introduce students to the need to reflect upon their learning. He adds that almost all students we meet in higher education have the basic intellectual equipment to deal with the cognitive demands of the course but what many of them lack are the skills to enable them to acknowledge their own ability, to organise their learning in situations of high complexity and conflicting demands, and to monitor their own performance to determine whether they are learning effectively or not.

I agree with Boud's (1993) comment that we need to find ways of integrating reflection and self-assessment into the normal curriculum so that they are not add-ons. Students need to believe that reflection is valued and to have the opportunity to practice it within the context of their courses. It is on this premise that I need to examine how successful student placements actually were on returning to the institution after their work experience.

2.5 Conclusion

Having discussed models of experiential learning, I have come to the conclusion that learning has to be described as a process that is influenced by experience. No two thoughts are ever the same, since experience always intervenes (Kolb, 1984). What this means for us in institutions of higher education is that as lecturers, we need to understand the process of learning first so that we can apply this understanding when

dealing with students. We need to be able to recognise the concepts of each aspect within the process of the learning cycle. We have to get to the root of how learning occurs to be able to intervene and achieve success with student learning. Research into studies that have already been carried out will provide guidance and direction in facilitating learning. We need to apply this theoretical framework when observing students in a workplace.

As Martin and Ramsden (1987) have concluded, students learn because they conceive of a problem and engage with it in a particular way. Within this framework, knowledge is looked at as that which exists in each person's mind and is shaped by individual experience. We need to take cognisance of the fact that each student is an individual and brings to the event their own development in their own particular environment. Our understanding of these theories will provide some solutions to dealing with problems of students coming to the event with different backgrounds and different experiences.

Likewise, Trigwell and Prosser (1997) suggest that in order to develop as teachers, academic staff must be encouraged to engage with the problem of helping students to learn rather than being given a range of teaching strategies. The fact that learning is a continuous process grounded in experience has important implications. It implies that all learning is relearning:

Thus one's job as educator is not only to implant new ideas but also to dispose of or modify old ones.

(Kolb, 1984:28)

Therefore, I believe, that those who manage experiential learning at institutions of higher education should have a thorough knowledge of conceptual models of experiential learning and how it works in the field of learning from experience. Such knowledge will provide educators and providers of experiential learning the means of ensuring that the most suitable models are used. We need to be able to integrate concepts such as reflection of learning into the curriculum. Finally, this understanding

of experiential learning will not only serve the needs of organisations of higher education as a whole, but will serve individual needs of lecturers as well.

CHAPTER THREE

Research Design & Implementation

3.1 Introduction

The methodology underpinning any research study must be carefully chosen depending on the nature of the study and the research questions to be asked. It articulates the values of the researcher that informs the study. A researcher has to work out the area to be researched and then select the most appropriate paradigm, approaches and methods.

Educational research is the way in which one acquires dependable and useful information about the education process.

(Ary, Jacobs & Razavieh, 1990)

In order to acquire useful information a researcher may want to obtain an in-depth view of a particular situation with a more holistic impression of teaching and learning and be more interested in the quality of a particular activity than in how it occurs or how it should be evaluated. Research studies that investigate the quality of relationships, activities, situations, or materials are frequently referred to as qualitative research (Fraenkel & Wallen, 1993).

According to Patton (1990), a qualitative paradigm acknowledges that the social and physical worlds in research are different. He believes that the qualitative paradigm seeks to understand human behaviour by “observing and interacting with people in order to be able to construct the social world as they construct it” (Patton, 1990). He adds that qualitative research views human behaviour as context bound. The researcher observes persons or events in their natural setting. Its major purpose is to understand the influence of particular contexts of the events.

The priority of this research is to understand and present the world of the participants (i.e. staff, students and employers) as they view it. The view of the participants is

considered most significant, as is the meaning they attribute to their experiences and context. This is important because an understanding of the views of each group of participants in this study will indicate both positive and negative aspects of the learning and facilitation during student placements in a work environment. The information provided by my subjects has been invaluable and has allowed me to recognize linkages between their experiences, the placement and their environment at the workplace. I have also been able to determine relationships between student, employer and lecturers within the Dental Assisting program. Not only has the information gathered been invaluable in providing me with an in-depth understanding of learning and the facilitation of learning, but has also provided me an opportunity of improving my practice.

This chapter covers issues on the qualitative research methodology and elaborates on the reasons for carrying out an ethnographic study within a qualitative framework.

3.2 Research Methodology

The methodology underpinning this research is qualitative and ethnographic since the study sets out to examine the quality of the link between student, staff and employer in the facilitation of work- based learning when students are placed within specific dental practices. The study encompasses a holistic view of learning from experience by considering the workplace as a learning environment, the role of the student within this environment and the employer and academic staff as facilitators of learning.

Qualitative educational research involves the researcher working closely with educators and learners in a particular context. The ultimate goal of this kind of research is to portray the complex pattern of what is being studied in sufficient depth and detail so that one who has not experienced it can understand it. The complexities of learning within this environment are highlighted and indicate several factors that need to be taken into consideration when students make the transition from a higher education institution such as the technikon to the real work situation.

Qualitative research can be considered both “scientific” and artistic (Patton, 1990). It is scientific as it is systematic, analytical, rigorous, disciplined and critical. However,

At the simple level, an emphasis on critical thinking is the focus of the scientific side of analysis, the art of analysis depends on creativity.

(Patton, 1990: 433)

In critically evaluating the data, I have attempted to look for problems, shortcomings and relationships, while the artistic part, allows me to be creative, to consider new possibilities, gain insights and consider relationships and linkages. This dual focus in qualitative analysis allows one to balance one's thinking when considering data.

According to Patton,

The purpose of qualitative evaluation is to produce findings useful for decision making and action.

(Patton, 1990: 435)

Applied research, according to Cohen and Manion (1982) insists on studying a large number of cases, establishing as much control as possible over variables, precise sampling techniques and a serious concern to generalise its findings to comparable situations. In this study, the accent is not on generalising scientific knowledge but rather on providing specific knowledge on student's work based learning.

Ethnography presents both problems and opportunities for social and cultural research because of its largely qualitative character and its essential basis in the participant observer as the research instrument itself.

Ethnography, through participant observation of the social and cultural worlds, opens out the possibility of an understanding of reality which no other method can realise.

(Seale, 1998: 232)

Ethnography is distinctive in three ways. Firstly, there are no distinct stages of theorizing, hypothesis construction, data gathering and hypothesis testing. Instead the research process is one of a constant interaction between problem formulation, data collection and data analysis. The analysis of data feeds into research design; data collection and theory come to be developed out of data analysis and all subsequent data collection is guided strategically by the emergent theory. Secondly, ethnography brings a variety of techniques of inquiry into play involving attempts to observe things that happen, listen to what people say and question people involved in the study. Thirdly, the observer is the primary research instrument, accessing the field, establishing field relations, conducting and structuring observation and interviews, writing field notes, using audio and/or visual recordings, transcribing and finally writing up the research.

The kinds of data collected in this study include interview transcripts drawn up interviews held with each of the participants, observations and field notes written soon after the observations were made and audio recordings, which were used as verification while the transcripts were being written. In addition, data was verified by triangulation, which is an important method for contrasting and comparing different accounts of the same situation (Altrichter, Posch & Someckh, 1993). Triangulation was helpful in crosschecking information provided during the interview with observations made at the practice as well as validating the same information from portfolios that are submitted at the end of the placement. Triangulation techniques are suitable when a more holistic view of educational outcomes is sought and is used to compare different kinds of data from different sources to see whether they collaborate one another (Cohen, Manion and Morrison, 2000). In the study the responses provided during the interviews were compared with observations made during the visit at the work site and finally compared to student's portfolio submissions made after the placement period.

This study lends itself well to adopting an ethnographic approach because a small number of subjects were chosen to provide a deep insight into the interactions between staff, students and employers during work based learning by myself as researcher and as a participant observer during the placement within a dental practice.

3.3 Participant observation

Observation, inquiry and data collection depend upon the observer gaining access to the appropriate field and establishing good working relations with the people in it. They need to be relationships that are able to generate the data the research requires. Thus, the study was carried out with a small number of students registered for the National Certificate in Dental Assisting at the M.L. Sultan Technikon that were placed for experiential learning in private dental practices where out of a class of twenty students, five subjects were selected using two very important criteria. First, subjects were chosen from students who were placed in a private dental practice with sufficient resources. Students needed to be placed in a practice where all dental procedures are carried out so that the work environment in which they were observed and evaluated were consistent for each of the subjects which is important for this study. The practice had to have good facilities such as reception area, at least two clinical surgeries, an x-ray facility and separate sterilization areas had to be included in the physical resources. It was important to place students in practices where the employer performed most dental procedures in which students had been trained to assist. This ensured that students were exposed to similar aspects of clinical and administrative work at a specific practice and evaluated accordingly to reduce any bias within the study. It is sometimes difficult to find a dental practice with all these facilities and have a dentist that is agreeable to host a student for in-service training. A general dentist would normally do extractions, fillings; make dentures, repair of dentures and practice preventive dentistry by educating the patient regarding good oral hygiene. However, some practices do not include this aspect of prevention and merely treat pain and sepsis. This is common in sub economic populations where the dentist usually only extracts teeth to alleviate pain. A careful analysis of these practices was made, by asking the dentist exactly what procedures he/she carried out. This was done telephonically before the placements so that consistency within the study could be achieved.

Once it was established that all procedures were carried out at a particular practice, a second criteria for the selection was to look at the student's competencies and capabilities. The student's average practical scores for the first half of the year had to

be at least 50% which indicated that the student was capable, to some extent, of successfully assisting at the technikon dental clinic where simulations had been carried out for purposes of teaching and assessing students within the normal academic program.

I chose the subjects according to the two important criteria mentioned above. Since only five subjects were chosen, it was possible to elicit a great deal of information to provide an in-depth analysis of work based experience each student had undergone during their work placement. It gave me the opportunity of probing deeply into matters concerning each student's experience.

Once the subjects were selected, I sought permission for the research to be carried out by sending a letter of request to the employers i.e. the dentists in private practice where the students were placed (see Appendix 3).

3.4 Data Collection

The main aim of this research project is to develop and improve my practice in the interests of all those concerned with learning from experience. It is often possible to use research methods that are integral to the teaching and learning situation. For example, an interview with a student can be both a learning experience for the student as well as a means of collecting data for the study. Although ethnography does not work with a logical sequential research design that compartmentalises it into distinct stages it does have phases and activities that give it a funnel structure in which the research is progressively focused over its course. Interviewing has a particular character in ethnography and is commonly used to gather data. In this instance interviewing was used as a way of collecting data from selected interviewees.

3.4.1 Interviews

Interviews are used to gather information regarding an individual's experience and knowledge, his or her opinions, beliefs and feelings.

The purpose of interviewing is to find out what is in or on someone else's mind. The purpose of open-ended interviewing is not to put things in someone's mind but to access the perspective of the person being interviewed.

(Patton, 1990:278)

According to Patton (1990) interviews present the researcher with accounts of the subject's behaviour, practices and actions, and provide information that would sometimes not be possible through questionnaires. It is personal and allows further probing if information is inadequate. The interview has both advantages and disadvantages in qualitative research. The fact that interviews allow one to really delve into issues immediately, offers the researcher an advantage, as it allows for issues to be clarified. The interviewer can get the interviewee to elaborate on particular points on the spot. This idea is also shared by Cohen and Manion (1982) when they claim that the interview:

.....allows for greater depth than is the case with any other methods of data collection.

(Cohen & Manion, 1982: 272)

They also point out an important shortcoming of the interview. During the interview both the interviewer and the interviewee are engaged in conversation on a one-to-one basis, dealing with topics or issues that the interviewer may feel strongly about and unintentionally become involved with issues of subjectivity and personal bias, which easily taint the data. Many other criticisms have been levelled against interviews as a research technique. Interviews let loose information, especially where sensitive issues

are concerned, that the researcher may not expect. It could lead to the participant feeling vulnerable. Tripp (1990) argues that interviews must provide more coherence for the subject. The interviewer's influence through probing and prompting could change the direction of the interview. The main disadvantage of interviews is that they are more expensive and time consuming than other means such as questionnaires, which are impersonal. As with questionnaires, interviews are only as good or useful as the questions that are asked, so that information gathered and analysed can be used for drawing conclusions.

One of the most important aspects of the interview is its flexibility. Its content, sequence and wording are entirely dependent on the situation and how the responses are made. Another advantage is the fact that there is more control over the situation, where the interviewer can begin by asking general questions to make the interviewee completely relaxed and comfortable before delving into pertinent issues of the study.

For all the advantages mentioned above, it was most appropriate to use the interview method as a means of collecting data from each of the five students selected for this study and their employers, as well as staff involved with the Dental Assisting program at the technikon. An interview schedule was prepared for each group of participants of the research (see Appendix 4, 5 and 6). The interview schedule was used to provide consistency during the interviews. Tape recordings were done, to avoid losing important information in the process of note taking, and to reduce bias or personal interference, to an extent, since it introduced some form of consistency and means of checking. Transcripts of all interviews were therefore drawn up for the analysis. Although the questions were prepared in advance, there was a lot of flexibility in asking the questions. Their content, sequence and wording were entirely dependent on the situation and how the responses were made. I interviewed employers and students at the dental practice on the scheduled date and time, which was arranged telephonically. The interview scheduled was not shown to any of the subjects involved in the study. The order in which I asked the questions varied slightly amongst the respondents. This was to ensure that the subject being interviewed was completely relaxed and comfortable about being interviewed. At times it was necessary to discuss the institution, giving more background about the course and in

particular the research, before questions related to the study were asked. Questions were repeated when the respondent did not understand them and I made every effort of explaining exactly what I meant by a particular question. This was to ensure that students and employers did not misunderstand the question or what information was required since it sometimes happens that the same questions have different meanings for different people. This way I could press for additional information when a response seemed incomplete or not entirely relevant or if I did not feel satisfied that the response would be useful for interpretation of results.

(i) Employers

An appointment was scheduled in advance prior to the visit to each practice. Most dentists complained about a lack of time due to the number of appointments already scheduled for patient treatment. Employers were assured that the interview would not disrupt their normal day's work and would be carried out at their own convenience. For this reason, interviews had to be brief. The time allocated for each interview was approximately thirty minutes but this varied vastly when the interviews were actually carried out. Every effort was made to interview the employer at a time that they were least busy according to their appointment books. This did not always work in practice. Most of the interviews took longer than the allocated time and patients were made to wait. Apologies were made by the receptionist on duty. There was no refusal to have a tape recording of the interview but some employers were very aware of this technique and took a little time to actually relax and forget about it. Further, notes were made of key issues that were raised during the interview, allowing time for them to reflect on the questions asked about student's participation in the practice. Most dentists expressed interest in the findings of the research and showed appreciation towards the institution for carrying out such research and for showing interest in students and their learning. Ethnographic research implies a need for this kind of participant collaboration.

In addition to questions asked regarding the student's experience, their own participation as supervisors in the work situation, and problems that they encounter

during the supervision; employers volunteered a lot of other information. Although, this information was not directly related to the research e.g. conferences and short courses to be held in the near future, information about meetings of the South African Dental Association and information about new materials and techniques in dentistry that they wanted to share, it was useful during analysis of the interviews since it provided more insight regarding the employer. Some employers enthusiastically showed me around their practice. Some of the information that dentists volunteered indicated their suitability as supervisors. Most of them were up to date with current trends within their profession indicating their value as supervisors as well as being able to induct students into the profession of Dentistry.

It was evident during the interviewing process that one of the most common problems encountered during interviews is that individuals will only allow you to know what they choose to want you to know. Employers may recreate their circumstances simply to impress the interviewer, for example, one dentist in particular was adamant about scheduling a time for an appointment at the end of his working day when staff members were not busy. This was not ideal for me since I needed to observe the student in a normal working environment. On arrival at the dental practice to carry out the interviews, the practice was immaculate. When interviewing the student at the practice, it became obvious that the practice was not normally as immaculate, and that every effort was made before my visit to clean the practice.

Although such occurrences, according to Patton (1990), question the validity of qualitative studies it does not invalidate the data totally, especially if the researcher is astute enough to realize that something is not quite right and then proceeds to investigate it and takes it into account when drawing the conclusions. It was possible to realise that something was amiss and this was confirmed during the interview with the student who was placed in the same practice. Triangulation is also a means of validating data and cross checking any discrepancies that may occur. Observations within the practice were helpful in scrutinising these discrepancies. Triangulation has the advantage of giving a more detailed and balanced picture of the situation and this was achieved when comparing transcripts of the employer with those of students that were placed in the same practice as well as notes taken when I visited the dental practices.

(ii) Students

Students that were interviewed at the learning site were pleased to see someone from the institution. The kind of support that is provided by a follow-up visit from the technikon is important to avoid students feeling alienated from the institution. They were willing to be tape-recorded and were assured of confidentiality and anonymity. As much information as possible about the student's experience was gathered. This research has given me the opportunity of visiting students in a work-based environment. The interviews were carried out as planned with one exception. One of the interviews (at the practice) had to be re-scheduled since the student had not arrived for work. This was scheduled for a later date when it was possible to carry out the interviews with both employer and student at the practice. More information regarding this will be discussed under the results section.

Since I am directly involved as a lecturer and coordinator of the Dental Assisting program, students felt that they were being assessed and needed to do their best. I had to explain my role in the research in order to gain trust and establish a relationship that would benefit the research since a few students were nervous about being interviewed. However, most students used this opportunity to complain about things that they were not entirely pleased about in the practice and appreciated the opportunity to express them regarding these matters. This is elaborated on in the results section since it is pertinent to some of the questions asked about their role in the practice. I explained that as researcher I needed information and that this would be confidential. Most students were comfortable and enthusiastic about the research. Responses were tape-recorded. Taping has the obvious advantage of recording verbatim, and allowed me to participate in the dialogue. Some notes were taken during the recording to allow time for respondents to think about their answers and not feel pressurized.

As lecturer and coordinator of the Dental Assisting program, my contact with students has usually been academically driven, so my involvement with this research project was completely new and different. Students had to be convinced that it was in the best interest of all concerned for them to be honest and upfront about any issue regarding

their learning within the workplace. I had to develop their trust in me as researcher so that I could elicit whatever problems they faced without them being afraid of repercussions that might occur once they return to the technikon. It was thus, important for me to emphasise to students that the research being carried out was to find out more about how students learn in real life situations and what the technikon can do to enhance student learning. I also explained that the results of this study would enable me to improve on certain aspects of student placements.

Although the interview with students was conducted at the placement practice, the interview was completely private. I was given the opportunity of using the dentist's office to conduct the interview with the student while the dentist continued with his/her work in the surgery or "operatory room" as it is termed in dental terminology. Students were relaxed with the situation and acknowledged my visit as interest shown in their progress.

One student in particular made me promise not to discuss any of her responses with the employer at the dental practice where she was placed so as not to jeopardize her relationship with the dentist in question. She claimed to have a very good relationship with him but was unhappy about some of the techniques he employed during treatment of patients and felt that this was not in keeping with "normal" practice and what she had learnt at the technikon.

(iii) Staff

Interviews were also scheduled with five academic staff members at the institution that are involved with the Dental assisting program at the M.L.Sultan Technikon. This provided information regarding the preparation of students prior to the placement. When lecturers were approached, two felt that it was some kind of policing exercise to check their work and did not like the idea of being interviewed. I met with them and explained details of the research, pointing out that the students' learning in relation to their experience is of utmost importance to this study. Interviews were held in the staff offices and no recording was done since staff members objected. They felt

that it would inhibit their responses and make them excessively cautious about what they say. Staff members were very aware of themselves during the interview process. However, a record of their responses was completed as soon as possible after the interviews so that none of the information would be lost.

There may be several reasons for staff being uncomfortable about the interviews. Although I am a member of the lecturing staff with the Dental Assisting program, I am placed in a unique position when compared to other staff members allocated to the same program. My portfolio includes the responsibility of coordinating the program and being responsible for student placements for the in-service component, which means that as co-ordinator of the Dental Assisting program I am involved in allocating the time schedule for lecture periods and overseeing the entire dental program. The other staff members involved with the facilitation of learning within the program are “servicing” lecturers, which means that they belong to another department on the campus but offer their services in a particular course as a specialist lecturer.

These staff members that are resident in the Department of Communication and the Department of Commerce are appointed to “cover” different aspects of the course and are specialist lecturers in their field. For example, the subject Dental Practice Management is divided into two sections: Communication and Office Management. The staff members servicing these sections are involved with students from a variety of programs throughout the technikon.

However, although these lecturers do not have a dental background, I have informed them about details of the program. Meetings are held to make these lecturers aware of the relevance of their sections to the Dental Assisting program so that material presented to students are appropriate. It is of their own accord that lecturers visit a dental practice, which may assist them in their facilitation of learning. Specialist lecturers have claimed that they in fact do visit a dental practice to enhance their facilitation.

The services of two dentists from private practice as part-time lecturers are also utilised. One dentist supervises all the clinical work carried out at the technikon dental clinic while the second is responsible for the lectures in Oral Anatomy and Pathology, which cover the aspect of diseases and abnormalities of the mouth. These lecturers/ dentists are in contact with students for a limited number of hours each week. Being a “specialist” each lecturer emphasises his/ her aspect of the course. There is no link between courses and very little inter-lecturer collaboration. As coordinator, I am in direct contact with each member of staff. In addition to being responsible for designing the time-table and scheduling dates for tests I am also responsible for the general management of the dental clinic, which involves maintenance and buying of dental equipment.

It may be my position as coordinator and manager as well as researcher that may have influenced the attitudes and approach of lecturers to the interview. However, I took this into consideration and tried to convince staff of the benefits of the study to earn their trust. I have also stressed the importance of their honesty in responding to questions related to the study.

3.4.2. Observations

Observation presents one with first hand information about what is actually done. It records impressions and happenings in their natural environment. It also describes and enables one to understand events as they occur. However, it is important when utilising this method of data collection, not to deviate from the topic of the study, but rather to fit the technique to the task involved.

During the interview I had the opportunity to observe each of the subjects and the environment in which he or she was responding, since I had decided to interview both students and dentists at the dental practices where students were placed during their in-service period. This served as a good way of gaining knowledge or understanding of the subjects in relation to their environment. I made notes of the observations at the end of every interview and filed them with the interview transcripts of each student.

The observation notes were generally useful in recalling details about the interview during the analysis of the results. Although academic staff members were interviewed in their offices at the technikon, I did not observe them when teaching students, thus no observation records were kept of staff members.

3.4.3. Audio-recordings

It is easy to make a tape-recording and it actually takes very little extra time. It assists in capturing data that may be missed out during note taking and allows more time for the interviewer to listen to the interviewee. However, consent for the tape-recording is essential. Sometimes, although tape-recording gives accurate information, it can prove to be intrusive. Note taking is more personal and establishes a better relationship between the interviewer and the respondent. There was no refusal to have a tape-recording of the interview by students and employers and both were very cooperative. Although a short summary was made of responses during the interview, recording the responses ensured that all the information was captured. This avoided any unconscious preconceptions influencing the recording and emphasising only those responses that I agreed with. However, academic staff objected to tape-recording and felt that it would inhibit their responses and make them excessively cautious about what they say.

3.5 Ethical Considerations

Issues of honesty, ethics and responsibility arise in qualitative research. Educational research is about people who have rights and “feelings”, therefore, obtaining the consent of participants is very important. Here the consent to carry out the study was necessary from employers in private dental practices, students who were selected as subjects and academic staff of the technikon who are involved with the Dental Assisting program. Wherever possible, all subjects were informed of the purpose of the study and confidentiality and anonymity was promised during the course of the interviews.

3.6 Portfolios

During analysis of data, particular aspects of portfolios that were submitted by students on completion of their work based learning, were examined. This was done to gain some insight into the student's actual experience. An in-depth analysis of portfolio writing was out of the scope of this study but a brief overview of the descriptions of how students felt, what they perceived from their experience and whether the experience was in keeping with their expectations, was necessary to elicit. There were a number of reasons for getting the students to keep portfolios. While I was registered for the Masters in Higher Education, I realised the benefits students gained from recording their thoughts and experiences and the insight it gives staff members about student learning. Students get the opportunity of reflecting on their learning experiences, which further enhances their learning. I had decided to introduce portfolio writing during the course of the academic year in my practice. The students in this study were thus familiar with the process of portfolio writing and once again, students were asked to submit these on returning to the technikon after their in-service placement.

3.7 Analysing Data

Analysis tries to make sense of data. Since, according to Patton (1990), another name for qualitative research is interpretive, researchers are expected to interpret the detail in relation to the research circumstances and then draw conclusions that should give one insight about human behaviour. The post data collection analysis involved listening to the audiotapes, reviewing the notes taken during the interview and drawing up transcripts verbatim. The transcripts were one of the major focuses of data analysis. Such material allowed me to understand the participant's point of view and interpret their circumstances. It gave me, as researcher an opportunity of gathering much information about the subject's environment, i.e. the workplace, the attitudes of students' towards learning in the work place, relationships that were established during the placements and the strengths and weaknesses of the placement. It was also

possible to observe both student and employer in the workplace in addition to collecting data. This enhanced the interpretation and analysis of their circumstances.

Once the data was collected through interviews and transcripts drawn up, several readings of the results were necessary to establish underlying themes or patterns in all cases. The results were approached holistically for each student, combining the point of view of each employer where that student was placed and the general opinion of academic staff with regard to student placements. The use of key words enabled me to categorize responses. I choose two or more key words that could be linked together to create some order for interpretation and that were relevant to the research question. According to Altrichter, Posch and Someckh (1993) categories are key concepts, which form the nuclei of ideas. This study was not aimed at either making generalisations or developing theories but was intended to examine the quality of student learning within a work-based environment. It was also intended to raise issues around the facilitation of work based learning by both the employer and the academic staff from the technikon. The study was aimed at obtaining information and providing insights around work-based learning so that my practice could be improved for future placements of students in a working environment. In order to do this I used the analysis to see if there was any link between the models of experiential learning, as described in the theoretical chapter, with student's actual experience in the workplace and subsequent reflection of their experience. I was thus in a position to determine how successful student placements actually were in relation to learning from experience. The criteria for success were the following:

- the student had a good rapport with the employer and other members of the dental team
- the student was given opportunity to ask questions
- the employer facilitated learning in the workplace by creating opportunity for students to reflect
- the employer was enthusiastic to be facilitator

Boud, Keogh and Walker's model (1985) was used as a tool in order to interpret data. Interpretations of aspects of student preparedness, their experience and their reflection after the event were influenced by the model. Further, my in-depth involvement in

both the Dental Assisting course and in the field of higher education provided me with an advantage in the analysis stage. Finally, statements were grouped in such a way so that their meaning was made relevant to the study so that I could draw conclusions from them. Both, the advantages and disadvantages of "learning by doing" were elicited from the data.

3.8 Limitations of the study

One of the major limitations of this study is that as researcher, I am also the coordinating staff member for the in-service learning component for the Dental Assisting program and directly involved with the student placements. This gives me as researcher an advantage over the other members of staff involved with the same students. All the academic staff members that were interviewed are specialist lecturers in their own fields within the program e.g. Communication, Office Management, Oral Anatomy and Pathology and Dental Pharmacology. These lecturers are only involved with student preparation for the workplace and do not coordinate the actual placements themselves. This could have influenced the results of this study. One way of counteracting this limitation is to acknowledge my position as coordinator of student placements, lecturer to students and researcher in this study and present the results and interpretations as honestly as possible.

In participant observation subjectivity may be seen as either a problem or strength. This includes the influence of attitudes and opinions of the interviewer; there is a tendency for the interviewer to see the respondent in her own image and misconceptions on the part of the interviewer of what the respondent is saying.

In the light of my role as coordinator of the program and being directly involved with student placements, I have tried to limit my subjectivity by limiting the influence I might have had over the students. However, it is sometimes not possible to completely avoid the issue of subjectivity since I am in contact with these students on a daily basis at the technikon for at least one academic year. I can only endeavour to make my position within the research as clear and explicit as possible.

3.9 Conclusion

Data collection around key questions for any research has to be carefully planned. Hence, a lot of time and effort is required in the designing stage long before this is put into action. One has to use a variety of procedures so that data collected will be sufficient to provide the scope and depth that is necessary for analysis. This can take the form of observations over and above the interviews and responses can be linked between the respondents.

Arrangements for procedures such as interviews must also be carefully planned so that the researcher is not faced with unnecessary logistical problems during data collection. Questions that are asked during interviews need to address pertinent issues in the study and these too have to be carefully thought through so that information received can be meaningfully interpreted. Although a structured interview approach was used for consistency, flexibility within the interview was necessary.

Influences and subjectivity on my part as researcher needed to be addressed during the study, since as researcher I may have predetermined attitudes towards particular aspects of the research and this has been acknowledged. The analysis of data was planned such that my understanding of a situation becomes clearer and more analytical for planning of future action.

CHAPTER FOUR

Analysis and Interpretation

4.1 Introduction

In ethnography the analysis of data can be said to begin in the pre-fieldwork phase with the formulation and clarification of research problems. It continues through the fieldwork into the process of writing up reports (Seale, 1998). In other words, the inquirer does not wait until all the data are “in” before he or she begins to interpret them. From the outset of the first interview or observation, I have been reflecting on the meaning of what I have heard and seen, developing hunches about what it means and seeking to confirm or disprove those hunches in subsequent interviews. This process of data analysis is inductive - it proceeds from data to hypotheses to theory (Ary, Jacobs & Razavieh, 1990).

This means that from this study all data collected were analysed thoroughly so that the interpretation of the data forms a coherent conceptual framework that has a wider applicability for the future placements of students for work based learning. Thus, in this sense the results needed to be organised from information received from respondents into a meaningful and manageable form. There was a need to interpret this information and group common themes and patterns that were emerging, thus giving me a systematic view of the key issues involved in this study. I have tabularised the responses of the participants after grouping the responses according to key words and emerging patterns. The questions asked during the interview process were planned so that the information received could then be grouped for commonality and interpreted with ease by linking associations between key words. The literature survey carried out in preparation for this study informed and influenced the type of questions asked during the interview and a copy of the questions asked to each group within the study is attached as Appendix 4, 5 and 6.

The information gathered during the interviews, disclosed gaps in my knowledge of student learning from experience during placements. Analysis of information served to identify critical areas for further investigation. It would appear that reflection is left as implicit – or not recognised at all. As already mentioned, models of learning from experience were used as a means of comparison with previous research carried out in this field and the present study. These models assisted me in achieving clarity around issues of learning and provided me with a perspective to focus on learning and reflection.

Hence, this chapter probes the key issues within this study to analyse the success of student placements with regard to learning, reflection and relationships between the three groups: academic staff, student, and employer/supervisor. Some of the issues discussed in this chapter are therefore, preparation of students before placement, the preparedness of the employer as facilitator of learning and difficulties that the employer faces with facilitation. Other aspects that are discussed are the role of the student within the work environment, what they perceive their role to be and what actually happens. Students' reflection on their learning from the work environment is elaborated on, as well as expectations of both students and employers during the placement. The role lecturers and employers play in the reflection process is expanded on. The kinds of questions both these groups might ask and how this facilitates the reflection process is also discussed.

Thus, the analysis focuses on the learning gained from experience when students are placed in a working environment during their in-service period and factors helping and hindering the learning process. This information came from the data collected, which needed to be analysed according to key words or themes emerging from the data. Boud (1993) suggests that in his model of learning from experience (discussed earlier) that learners engage with the milieu (the objects and people they encounter during their placement) and that their construction of what takes place constitutes the learning experience. Learners engage in cycles of noticing, intervening and reflection-in-action even if there is little opportunity to step aside from the action. What is of importance ultimately is that whatever the role of the student in the practice, the most important feature is learning.

I also focus on the importance of reflection as an activity, which seems to be vital in transforming experience into learning. Ashworth and Saxton (1992) point out that a placement experience does not necessarily and automatically lead to “natural” learning. For this to happen, reflection - including reflection on ambiguities of the student’s role, must take place. This can be related to Kolb (1984) who points out that although experience is the focal point for learning, experience needs to be processed consciously by reflecting on it making learning from experience a cyclic process where there is integration of immediate experience, reflection, abstract conceptualisation and action. Kolb and Fry (1975) expands on this as follows:

(1) The here and now experience is followed by (2) a collection of data and observations about that experience. The data is then (3) analysed and the conclusions of this analysis are feedback to the actors in the experience for their use in the (4) modification of their behaviour and choice of new experiences.

Kolb & Fry (1975:33-34)

4.2 Student Preparation for the workplace

Boud (1993) notes that teaching that does not lead to learning happens because of a lack of consideration for the following features, and proposes that teachers should pay attention to them:

- Learners and teachers must consider what the learner brings to the event.
- The milieu involves consideration of what the event has to offer. This must be taken into account when students are briefed before a particular activity.
- Learning strategies involve learners equipping themselves with tools and devices that help them to notice what is occurring in the event and enables them to intervene fully.

(Boud, 1993: 38)

Data is examined to see what evidence there is of any implicit or explicit awareness of the need for reflection in order for students to be prepared for the workplace, are able to adapt to different situations or the milieu and subsequently if this leads to successful learning.

Thus, an important aspect during this study was to find out how prepared the students were for their placements in dental practices and what preparedness meant for each of the three groups, that is, academic staff, students and employers/supervisors, since perceptions of being prepared and actually being prepared may mean different things to each of them. It was necessary to find out whether or not students that were registered for the course were actually successful in bringing together theory that was “learnt” during their participation in the program at the technikon (with the application of knowledge) and applying the knowledge gained to a practical work situation and then move beyond application to reflection and adaptability so that deep learning is achieved.

From this perspective it was therefore necessary to explore what academic staff, students, and employers perceived as being “prepared” for the placement. Employers were asked questions such as “How prepared is the student for the placement?” and “What do you think needs to be done to make students better prepared?” (See Appendix 4). Regarding preparation for their placement in a working situation, students were asked (see Appendix 5) how prepared they were for their role and in what way could they be better prepared for their role in the workplace. Staff members were also asked questions (see Appendix 6) on their role in preparing students for in-service learning. The following are tables of responses from each of the groups in the study to questions on preparation:

Table 1A: Staff responses to questions on preparation for the workplace

| Staff | Response |
|-------|---|
| 1 | I prepare the students by creating an opportunity for them to participate in role- plays and simulations of what their work experience would be. They learn when they actively do it themselves. The student enacts or participates in role-playing so that various aspects of communication can be elaborated upon. Examples of methods of communication are taken out of their role-playing such as body language, tone of voice etc. I find this method of illustration useful instead of standing in front of the group of students and listing the different methods of communication. |
| 2 | I provided information (to the students) that I know is absolutely necessary for them to have in order for them to function efficiently in a clinical situation. The student has to know which instrument is required for each procedure. We have to give students this basic knowledge to prepare them for the placement. |
| 3 | I provide all the background knowledge students require in order to function in a dental clinic. They are given research projects in order to expose them to different aspects of clinical work. Students are shown all the equipment and I demonstrate how they are used. |
| 4 | I prepare the students by providing the theory and providing examples of how to apply this theory. I make sure that the student understands what needs to be done for all procedures. It is sometimes not possible for every student to actually do things themselves, but for as long as they understand what is being done, how it is done and why it needs to be done, they will learn from experience when they actually do it themselves. |
| 5 | The students are given practical examples of a work situation. We work with models, charts and diagrams, which illustrate the real situation. I make my teaching relevant. |

Table 1B: Student responses to questions on preparation for the workplace

| Student | Response |
|---------|--|
| 1 | I have been well prepared. Everything fits in. I do not think that there is any more that could prepare me better. Now I need experience. |
| 2 | I should have paid more attention in class. As students we only learn for tests. Now I understand that when we work we must understand what we do and why we do it. |
| 3 | Nothing is new. I have been well prepared. With the different methods of teaching, I think that all the lecturers, they prepare me well. They teach me everything and show me everything. But I myself must do everything and sometimes I forget. |
| 4 | All the lecturers show me how to do things. I have to do things myself. I don't know all the materials. I could be better prepared if I came here more often. When the dentist asks me questions about work at the technikon, I understand better. |
| 5 | I need to improve my speed. We do not get enough practice at the technikon. There is nothing the lecturers could have done to prepare me for this role. I should have paid more attention in class and make sure that I know and learn everything. |

Table 1C: Employer responses to questions on preparation for the workplace

| Employer | Response |
|----------|---|
| 1 | The student is well prepared. She has sufficient knowledge and information. I feel she is prepared because she handles things well and is competent. My nurse wanted to go on leave while the student was here. Preparing any student will depend on the intellectual level of the student and the ability to cope. |
| 2 | It is difficult to say how prepared the student is because she forgets a lot. I have shown her certain things and she cannot remember the next day. She needs a lot more practical training at the technikon. She might need to go into a practice that is not very busy so that she can build up confidence. |
| 3 | Her knowledge of instruments is excellent. Although she knows which materials to use for what purpose, she needs to practice more. The student needs to have communication skills. She is often intimidated. More emphasis should be placed on developing student's communication skills. |
| 4 | The student does not have the right attitude. She may know her work, but does not show seriousness and respect for what she is doing. I don't know what can prepare her better as I am sure that you prepare them well. |

| | |
|---|---|
| 5 | She is well prepared as far as knowledge and clinical work is concerned. The problem is the patients. They are weary of someone new and especially if it is a student. She is eager to learn and I have offered her to join us on the “flying doctor” trip over weekends when we go to rural clinics. She will be exposed to new circumstances. |
|---|---|

From Table 1A response 1 seems to allow no time for exploration of the role play experience i.e. for reflection. Responses 2, 3, and 5 seem information oriented/ or practically based while 4 indicates a need for students to “understand” the process. This does not seem to be a move in the right direction if we consider reflection and deep learning. Students seem to veer between only wanting to be able to complete the procedures correctly and wanting to understand (from responses in Table 1B). At the same time, it seems that employers do not really consider “teaching the student” as their responsibility. They expect the student to come prepared to the practice where learning has already occurred. This is evident from responses 3, 4 and 5 in Table 1C.

In an effort to prepare students for placement, and ultimately their practice out in the profession, the Dental program focuses on specific courses as outlined in Chapter One. From the academic staff members’ perspective, students in the Dental Assisting program experience a variety of teaching and learning methods at the institution. They are exposed to at least five lecturers in the duration of the course; each utilising their own methods of disseminating information, simulating real life situations and providing examples to illustrate various methods and techniques that are used in practice.

What is common to all lecturers is that they believe they are preparing the learner for the work situation and that this was made clear to students during lectures. Although this notion of providing opportunities for learning is an important one, there is no notion of reflection as a part of the process of learning. This was illustrated during interviews with staff members (refer Table 1A) involved with the program, where it was evident that each lecturer provides the background information by relaying information that is necessary for learners to be able to carry out functions in practice. There is the issue of staff placing information in context e.g. a lecturer explains:

I provided information (to the students) that I know is absolutely necessary for them to have in order for them to function efficiently in a clinical situation. The student has to know which instrument is required for each procedure. We have to give students this basic knowledge to prepare them for the placement.

It was evident that within the Communications course simulations involve role-playing by students during group projects, which provided practical situations for each student to portray a specific character typical of a dental visit by a patient. Each student is supposed to enact the role assigned to him or her, that is, the role of a dentist, dental assistant or patient. The manner in which students relate to each other, communication skills, content of their conversations, body language, voice control used in addressing patients, approachability and attitudes are assessed by the specialist lecturer in Communication. The student is expected to do some research prior to the presentation, either by way of reading material in textbooks and journal articles or by visiting a local dentist. The purpose of this exercise pointed to “learning by doing”.

The lecturer involved with this aspect of the programme, did not expand on the rationale for adopting this method of “teaching” but suggested that since theory of communication was an aspect of the curriculum that had to be delivered, she found it most appropriate to get students to participate in simulations so that aspects of communication could be explained. The lecturer believed that since students were registered for a dental course, it was relevant to get students to place the task within a dental context. However, what was obvious from my interview with the lecturer is that the lecturer’s main accent was on student’s understanding of various components of the communication curriculum. A lot of attention was placed on developing communication skills and noticing body language rather than the dental knowledge that was combined in the exercise.

The student enacts or participates in role-playing so that various aspects of communication can be elaborated upon. Examples of methods of communication are taken out of their role-playing such as body language, tone of voice etc.

I find this method of illustration useful instead of standing in front of the group of students and listing the different methods of communication.

The lecturer's reason for choosing this particular style of facilitating learning was:

It gets students actively involved. By doing,
they tend to remember.

There is an emphasis on the experience or activity, which leads to learning rather than seeing the importance of reflection. Ashworth and Saxton (1992) need to be emphasised once again:

....experience does not necessarily and automatically
lead to "natural" learning.

Thus, the lecturer recognises active learning, but does not recognise the role of reflection in the learning process, since no mention of engagement with activities was mentioned. It seems that the lecturer does not give students a chance to sit and discuss the role-play afterwards in terms of its implications for them. It may have been beneficial had students made meaning and reflected on what it was that they were doing by becoming engaged with the process. It is therefore necessary to acknowledge the usefulness of simulations and role-playing for learning for specific circumstances, however reflection on practice provides the advantage of being able to facilitate a transfer of skills, which are adaptable to new situations of learning. The lecturer has provided ways of creating links between content and the work situation during role-playing, but there has been a definite lack of reflection during the process or the development of appropriate "tools" for this purpose.

In the Boud et al model (1985) particular reference is made to "*attending to feelings*" and "*re-evaluation of the experience*" which lecturers did not consider. If opportunities for reflection were created, critical thinking and self-development would

enhance the learner's adaptability to a variety of circumstances. Thus, there is a need for student discussion of their experiences.

The lecturer involved with Practice Management elaborated another example of relevant content provided to students. For this course students are given the opportunity of working on computers with a task of entering details of dental treatment, which may be provided by the lecturer in the form of a dental card which is typical of one that is used in dental practices.

The students are given practical examples of a work situation. We work with models, charts and diagrams, which illustrate the real situation. I make my teaching relevant.

Preparation for the workplace in this example is twofold. First, the student is able to interpret dental terminology and then record them correctly. These opportunities are provided at the institution and the staff member believes that in this way she is "preparing" students for workplacements. However, this encourages students to implement methods in a rather mechanical way without questioning or real understanding. This indicates that lecturer's understanding of the learning process maybe limited, since there is no mention of actual learning, internalising, or reflecting as part of learning. The specialist lecturers mentioned in the two cases cited above are specialists in the fields of Communication and Commerce. They have not had any formal "teaching education" and are therefore not familiar with theories of learning. These individuals adapt their own specialities into the dental context to make their lectures more relevant with no consideration of the actual learning process. According to Boud (1993) reflection helps to internalise, add meaning and assists the students in seeing the bigger picture. This is more than just an ad hoc response activity, which seems to be the expectations of lecturers.

Most lecturers in the study were of the opinion that content covered in the lectures together with simulations or clinical demonstration was sufficient to prepare the student to work in a clinical situation. For instance, in one interview, there was insistence that everything possible was done to make sure that the student “learnt” how to handle materials, sterilize instruments, understand procedures and prepare the surgery appropriately:

I make sure that the student understands what needs to be done for all procedures. It is sometimes not possible for every student to actually do things themselves, but for as long as they understand what is being done, how it is done and why it needs to be done, they will learn from experience when they actually do it themselves.

According to Boud (1993) we must do a great deal more to bring an awareness of and a response to the affective and conative aspects of teaching and learning into our institutions. He maintains that learners are only partially aware of their personal foundation of experience and many have great difficulty in articulating any of it. Learners bring different backgrounds, experiences, values and assumptions to the learning situation which educators must take cognisance of. He says that there are two fundamental ideas that need to be considered in the preparation of students before placement. These are the student’s personal foundation of experience and “intent”. The student’s intent may not be consistent with the goals of the teacher or the teacher may not regard the student’s intent as desirable or achievable. By this we can deduce that it is imperative that staff come to realise what the goals of the students are. There is no evidence from the data provided in Table 1A that lecturers give students an opportunity to discuss their understandings of what they are doing and why they are doing it. Perhaps it is the “why” that moves content beyond the technical aspects of doing.

From the above, it seems rather apparent that lecturers demonstrate and provide an explanation of basic knowledge. However, it is questionable whether this is sufficient to actually prepare the student for the workplace since it does not help students deal

with unpredictable, unstructured aspects of the work environment. It may be interesting in future research to get students' understanding of working and to develop conceptions of working in the same way as we developed conceptions of learning. This would enable researchers to see if employers and students have different perceptions, whether a mismatch occurs and if one does exist. how it would reflect on students' behaviour and understandings. There has also been no discussion of unusual or different situations that students may find themselves in and how to handle these situations.

Schön (1987) believes that there must be a development of skills in areas of reflection and self-assessment so that students can deal with what he describes as "the hard, high ground of technical-rational learning" as well as "the swamp of practice". He argues that professional education should be centred on enhancing the practitioner's ability for reflection-in-action –that is learning by doing and developing the ability for continued learning and problem solving throughout the professional's career.

Thus, it is clear that the perception by academic staff of "preparedness" involves learning by doing and does not consider what Boud (1993) describes as preparation for work based learning, neither is it consistent with the Kolb model (1984) both of which are discussed in detail in Chapter Two. Lecturers have not prepared the students for all aspects of the work environment. Lecturers tend to focus on the technical aspects of clinical work and should allow opportunities of introducing students to prepare themselves with the less predictable elements of work.

Students are shown all the equipment and I demonstrate
how they are used.

There is no emphasis on the process of adaptation and cognitive learning since, from the interviews with academic staff it was evident that there was no consideration of metacognition which means to make students aware of their own learning and thereby give them the necessary "tools" that will help them to notice what is occurring in the event. If according to Zuber-Skerrit referring to Baird (1992) metacognition refers to

the knowledge, awareness and control of one's own learning, then lecturers need to themselves become aware of student learning in order for them to develop techniques that will assist the student to notice what is happening around them. Lecturers who can create opportunities for developing skills for reflection can help students.

There must be a consideration by lecturers of student expectations of the workplace as well as their hopes and fears of being placed in a dental practice. Students should be prepared for the placement during a workshop where all these factors are considered. Lecturers need to take into account the role emotions or affective factors play in students, which lead to the nervousness expressed by students. Thus, students need to be "briefed" and preparation for the event requires more attention as Boud, Keogh and Walker (1985) illustrate with their model. There is a complete lack of awareness of this aspect in the quotes obtained.

Apart from the obvious silence regarding student reflection, there is a need for actually discussing particular aspects of the placement in an open forum with all staff and students. It might be useful to consider having a workshop prior to student placements to discuss exactly what the student can expect in the work situation and how best to handle the situation. As coordinator, I need to structure the workshop within the course and make it part of the curriculum so that aspects of learning and how best to approach learning in a work situation can be identified by both staff and students.

In summary, these comments illustrate that staff perceive preparation for workplacements as providing theory, examples of real life situations and explaining how to carry out the practical components of the course. Academic staff did not express any need for anything more to happen in the way of preparation. This belief may be due to staff operating at a distance to actual placements and not being an integral part of the process. Lecturers did not mention difficulties that students may experience with learning when placed in a different environment as apposed to the familiarity of the institution, which is structured, safe and predictable. For lecturers to have insights of the learning process so that students may learn effectively, it seems

imperative that lecturers be exposed to educational theories, which indicates a need for academic staff members to attend continuing education courses or workshops on learning. Management of higher education institutions could suggest that all academic staff members attain formal education in the facilitation of learning or attend workshops to discuss the process of learning and reflection.

On examining student responses on preparedness for the placement most students said that they were prepared. At the time of their interviews, students had been in the practices for approximately one week and were able to fit into the work routine. They believed that they were well prepared, that they had received adequate information that enabled them to handle the clinical environment and that it was up to the student to make sure that they themselves “knew” everything that was “taught” This corresponded with my own perceptions about students assuming responsibility for their learning.

A student emphasises this:

With the different methods of teaching, I think that all the lecturers, they prepare me well. They teach me everything and show me everything. But I myself must do everything and sometimes I forget.

The conception of learning yet again is the notion of learning by doing which may be reinforced by the approach lecturer’s use during their contact with students. This is not an effective method of learning and does not lead to deep learning.

Another student adds:

Everything I do here I have already been taught at the technikon. Nothing is new. So I believe that I have been well prepared. If I do not know something, it is because I was absent from class or did not pay attention and learn correctly.

This indicates that the student's understanding about learning is limited to the idea that teaching is evidently for practicality and functionality. Students do not feel a gap in the facilitation of learning and approach their work experience as a set of tasks that need to be carried out. The idea of mechanical procedure rather than critical or thoughtful engagement seems to be being reinforced. The question to ask ourselves then is: What does this mean for learning? If Kolb's model (1984) is described as a cycle of transforming a tangible situation or experience into a learning event by reflecting and conceptualising what is seen, heard and felt then, students are not genuinely learning. This focuses on the reflective observation section of the learning cycle.

The main aim of workplacement is to encourage genuine learning and to close the gap we commonly find between the world of work and the world of the classroom. It should not only provide an opportunity to apply academic theory to the work situation but rather create an opportunity to see, do and reflect about the situation so that students can theorise for themselves. The purpose of placements should be to get learners to think for themselves, become problem-solvers and improve self-management, making them more flexible and adaptable.

Some students assume responsibility for their own learning as seen in Table 1B and do not have further expectations of lecturers prior to their placement:

There is nothing the lecturers could have done to prepare me for this role. I should have paid more attention in class and make sure that I know and learn everything.

None of the students interviewed mentioned actual preparation for the placement. None of them felt the need for clarification of their role in a dental practice. There was no awareness of learning processes or how they would be able to judge their learning activities to be a success. Students did not consider that lecturers should provide the necessary "tools" that facilitate the learning process. Most students felt that being "taught" or provided with knowledge was adequate. They did not expect any more. In short, they were also not aware of the learning process, which involves

internalising the knowledge provided or as Kolb (1984) states transforming knowledge by active and reflexive modes. Students seemed satisfied with the simple transmission of knowledge and see the placement as an opportunity to apply what they have learnt at the technikon. Their understanding of the task is thus the same as what lecturers expect of them. They seem to have absorbed the way staff do things. i.e. “do” rather than understand the process.

4.3 The role of the student during work placements

On placement the student takes on the role of “employee” whilst also being expected to regularly stand back and see his or her experience from the viewpoint of a “learner”. The three individuals, lecturers, students and employers hold different expectations of the functions of the student within a dental practice. This leads to one or more of them feeling dissatisfied with the placement as a whole, as seen in Table 2B below. The question staff members, students and employers were asked is:

1. What are your expectations of the student during placement? (staff)
2. What is your role in the practice in the practice? (students)
3. What will be the student’s role in the practice? (employers)

Table 2A: Staff expectations of the role of students during in-service placements.

| Staff | Response |
|-------|---|
| 1 | The student must show initiative and learn whatever she can. She must ask question about things she does not understand. I ask them to do that. |
| 2 | Students must be eager and willing to learn. If they are not attentive and enthusiastic there is not much any employer can do to make the student learn. |
| 3 | The student must show responsibility for his or her own learning. The reason they are placed is to see the other side in the real world. They must participate in everything. |
| 4 | The student must understand what she is doing so that she can improve with time. She must apply things she has learnt at the technikon. |

| | |
|---|---|
| 5 | Students must apply their knowledge, and skills they have learnt in the real situation and realise that they do not know everything, they are still learning. |
|---|---|

Table 2B: Student expectations of the role of students during in-service placements.

| Student | Response |
|---------|---|
| 1 | I feel part of the working team. I only feel like a student when I am asked questions. I am expected to do everything an employed dental assistant does. |
| 2 | I am treated like a student. I am not allowed to do everything that the employed assistant does. Sometimes I am made to observe only and sometimes I am given all the menial tasks to help out. I suppose it is different to what I expected. I am still a student and feel protected at the technikon. Now I am working here and feel exposed. I have to answer to the dentist for everything. |
| 3 | I am like a member of staff. The dentist expects me to do everything in a specific manner. He is aware of what I can do and what I am apprehensive about doing. We had an interview when I first arrived. |
| 4 | I feel as part of the team and not a student. I just follow the example of the employed dental assistant and do everything she does |
| 5 | I am treated like a student. I am not allowed to do most things. The dentist made me observe for at least a few days. When I did start to work I was slow but my work was good. |

Table 2C: Employer expectations of the role of students during in-service placements.

| Employer | Responses |
|----------|--|
| 1 | I get the student totally integrated into the practice. I demonstrate and ask questions. I prefer not to agitate my patients and get their permission first before I allow the student to assist with procedures. |
| 2 | I have allowed the student to be part of the clinic, but she does not know everything so I have kept her role limited. |
| 3 | The student is a visitor and is temporary. She is still learning. She will improve as she gets more experience and gain confidence. |
| 4 | The student is still learning and we cannot put the same demand on the student as someone qualified. I will assist her wherever I can. I have my own methods of mixing, and particular ways of doing things, which the student will have to learn. |
| 5 | This is the first time the student is in a practice. I will assess her progress before allowing her to assist with procedures. I cannot stand any mistakes. My assistant will show her how I like things done. |

In Table 2A staff seem consistent in their approach as well as their expectations by demonstrating and modelling rather than eliciting discussion. It is interesting the way they also recognise that learning is in the control of the student and do not clearly indicate whether this absolves themselves from the responsibility of student learning. The students seem to fall into two categories of insiders or outsiders, which must affect their learning, which is also confirmed by employers in evidence from statements they make. There is a tension that exists in students and the expectation of what their role should be. This is mirrored by employers who also seem to be unclear of their expectations of the student. Employers are not clear about their intentions of becoming involved in the teaching/learning process and indicate their reluctance at time of getting too involved. Although employers are of the opinion that students are still learning, there is nothing in the data that suggests that employers prompt reflection or model and encourage a reflective process during their contact with students. This may be an area for development.

From the data it is evident that lecturers view the role of the student as that of a learner. They require students to be aware of their environment, to notice events around them and capitalize on the experience and make the assumption that students will learn without providing students with the necessary “tools” to create awareness. Employers on the other hand view the student as both a “producers of work” and as a learner. Although in some cases within the study, the employer regards the students as “learning while working”, the implications can be far reaching since a mismatch between the views of lecturers on the one hand and views of the employers can confuse students. It is evident that staff members see the workplace as just a learning environment (which is linked with their lack of awareness of the affective issues) while employers tend to see it as more as a workplace.

There are some difficulties students face when placed in a work situation. These difficulties are to be expected as a normal transition from classroom to work. Students have to consider their responsibilities of working within a dental team and being in contact with patients within the practice, in addition to their own apprehensions about what to expect in terms of practice. There is no evidence from the data that lecturers

provide any guidance to students regarding their role or what to expect during the placement when “preparing” students for work-based learning.

According to Ashworth and Saxton (1992), one of the difficulties students face is the ambiguity in their role during placements. They describe two kinds of ambiguity: essential and the accidental. Essential ambiguities are those that are necessary and have a desirable effect, which facilitate the integration of academic history and the workplace practice. Accidental ambiguities are described as unintended effects such as the length of employment being limited. These come about as a result of sheer practicalities of the placement. I needed to find out what the expectations of students were when assuming the responsibility of contributing to the work environment and how actively they participated.

During interviews with students regarding their role in the practice there were two opposing views. Some students are made to feel part of the dental team and treated “as another staff member”. In this case, the student “fits in” with ease and follows by the example of the full time employed dental assistant but have difficulties in adjusting to their new role. The second view of students regarding their role is “being treated as a student”. They feel that because their placement within the practice is a temporary one and because of their apparent lack of experience, dentists approach them as “students” and have high expectations of them and are sometimes impatient. These students do not perceive their role as important within the dental team. This can affect the way students behave and consequently the way the employers respond to them. The effect this may have on the learning process cannot be overemphasised. Student access to information and the role the employer takes in relation to facilitating reflection will obviously affect student learning.

From my observations when visiting students at the practice during the study, I have found that the routine that is followed is usually quite hectic with very little time for teaching and learning. The student has to match the pace of the dentist and keep up with the service requirements to patients. Thus, the student often has an odd status within the dental practice:

I am treated like a student. I am not allowed to do everything that the employed assistant does. Sometimes I am made to observe only and sometimes I am given all the menial tasks to help out.

The pressure of time or lack of it in a busy schedule possibly creates a situation where the learner is left to reflect on his/her own. This expectancy by the learner to participate in activities of the dental practice may de-motivate the learner and thereby hinder rather than enhance the learning process. These aspects of the role students play in a practice, during the experiential learning period, can be discussed during the training and also thought about when students reflect on their experiences. It seems that this pressure of time also affects employers such that employers take the route of “wait and see”. Employers seem to think that if students observe, they will be able to assist much quicker. On the other hand, employers also want to know what the students can “do” before allowing the student the opportunity of participating. This tension once again confuses students of their role and what to expect.

There are clearly significant differences in ways of working and learning in higher education as compared to the work situation. For example, at the technikon, students are really working for themselves under the guidance of the lecturer, whereas at work they have a “boss” to report to and clearly do not have a choice in this.

I suppose it is different to what I expected. I am still a student and feel protected at the technikon. Now I am working here and feel exposed. I have to answer to the dentist for everything.

There is a sense of security that students feel at the technikon. There is peer-security with other students around them with the same goals while at work there are many different types of people with different backgrounds and with whom they are not familiar. From data provided it is apparent that students need to be prepared to expect

these difficulties and vulnerabilities during preparation for the placement since they come into a situation with their own experiences and expectations and employers need to be made aware of what students have already been exposed to and what they bring to the situation. There are levels of dependency on staff from the technician and when placed in practice students adopt a more passive approach to their actions.

Students become party to many features of the practice and prefer to be “quiet” about it, which again may stifle reflection. For example, various methods of sterilization and general infection control are not strictly controlled in practice and the student is expected to “go along” with what is the norm of the practice. Thus, the student must be able to deal with his/her ambiguous role by reflecting on it to see the difference between the theory or rules and practice or pragmatism. Students must be given a chance to think through for themselves especially since some employers have their own methods of doing things.

It must not be overlooked that reflection on ambiguity of the role of the student can be an extremely enriching and developmental process and should be expected when students make the transition from a “secure” environment into the world of work. This experience can only prepare them better for their entrée into working as professionals at the end of their study.

However, these could be identified as barriers to learning which Boud and Walker (1991) claim can inhibit learning by reducing the learning potential of the experience. The learner could fail to focus existing knowledge and skills in relation to the new environment. In the dental practice these barriers may be the lack of confidence that students mentioned as well as the “unexpected” circumstances and “sense of insecurity” students are faced with. Boud and Walker (1991) add that for learning to take place barriers to learning must be recognised so that we can acknowledge, understand and work with these barriers.

Although both educators and learners have agreed that learners are adequately prepared for the placement, employers are emphatic that learners coming into the practice need to learn how to deal with particular circumstances and that each

practitioner has their own preferences. This emphasises my earlier point of the students' need for adaptability and flexibility. It is this individuality in techniques of mixing, methods of sterilizing equipment, filing systems and so on which makes students less confident initially when first coming to their placements. Therefore, I see the role of reflection as one of preparing the student to be able to adapt to various scenarios and individual preferences. This differs from the views of both lecturers and students who feel that it is not just individual styles and unique approaches to clinical procedures but rather a lack of constant practice on the part of the student and that students "have to start somewhere". On the other hand, the controlling environment of working in a practice with a structured routine such as the clinic at the technikon where students are trained may contribute to the student's insecurity and lack of confidence. This situation does not lend itself to reflection on activity, but rather on "doing" or imitating procedures carried out. Employers may themselves not be confident enough to encourage student independence. Thus we need to take cognisance of what the learner brings to the situation.

4.4 The Facilitation of Learning within the Workplace

There is the individuality of the student and what each student brings to the situation that must be considered by academic staff and by the employers who act as supervisors within the workplace. Thus, it is important for lecturers and employers to ascertain what would enable students to deal with the uniqueness of each situation, as this would affect the student's level of confidence and how they would subsequently learn.

Boud (1993) believes:

Prior learning and experience needs to be considered both as a starting point for students embarking on studying and as an influence on the direction the exploration will take.

They will always initially make sense of new experiences
in the light of old, no matter what new frameworks we
attempt to present.

(Boud, 1993:39)

He adds that the effect of students engaging in reflection on their prior learning is to develop their confidence in their own efficacy and that we should move away from emphasizing lack of knowledge and rather concentrate on what is known. Students need to be given the opportunity of demonstrating what he/she already knows and to build the level of confidence within him/herself. In this way, the students would display prior knowledge and their own past experience, which they bring to the situation. We need to find ways of integrating reflection and self-assessment into the normal curriculum. This may result in the self-determination and independence both as learners and as workers that employers and lecturers expect students to show during the placement as seen in Table 2A and Table 2C. On the other hand, if employers allow opportunity for reflection at the dental practice, students would have the opportunity to make sense of their new experience in the light of the old and show initiative, adaptation to new circumstances and express confidence and ultimately enhance their learning.

In order to probe the question of facilitation of learning in the workplace I asked students the question: "What role does the dentist play in your learning and how does the actual placement facilitate your learning?" Table 3 provides data on the question of facilitation of learning in the workplace from the perspective of students and employers. Employers were asked: "How do you facilitate learning for the student?" Only the responses of students and employers are recorded here since staff did not provide a perspective on how learning in the workplace should be facilitated.

Table 3A Employers views on facilitation in the workplace

| Employers | Response |
|-----------|--|
| 1 | I explain a lot to the student. The student is enthusiastic and eager to learn so it is easy to teach her something she does not quite understand. |
| 2 | I cannot really spend a lot of time with the student. We are busy. I expect that she is trained but needs practice and improve her speed. I get her to explain and ask what she does not know. |
| 3 | I feel that the nurse would make the student more comfortable. She is apprehensive around me. I can only explain sometimes if it is not a disturbance to the patient. |
| 4 | The student knows a lot already, but I would like some kind of report to say what the student knows, what they have been taught and what this particular student is capable of doing other wise I assume that I need to teach her everything. |
| 5 | We talk when there is no patient. I demonstrate and give tips from my experiences. I explain that different dentist have different preferences and that the assistant must be adaptable. I update her on the current trends in dentistry. I explain procedures as we work and often ask her questions. She has to tell m what she does not understand. |

Table 3B Students views on facilitation in the workplace

| Student | Response |
|---------|---|
| 1 | The dentist asks a lot of questions while we are working. I also talk to patients when I can. At the technikon, the patients are all students, which is very different. The dentist expects a high standard of work. Sometimes he calls me into the office to discuss cases. While he does procedures, he explains. When it is something difficult I can only watch |
| 2 | The dentist gets me to explain what I am doing and why. Sometimes I know how to do things, but I cannot remember why we use a particular material because I forgot. I learn about how the practice is run. His nurse chats a lot to me in our spare time. Shows me where everything is kept. Sometimes I get very tired because I am not used to working. We are very busy. The dentist is prepared to teach me. |
| 3 | Here the dentist and his nurse are supervisors. The nurse shows me how to do things their way and I teach her all the latest terminology. I have learnt new techniques. The time is short for each patient and we have to work fast, but they are patient. The nurse makes me do things myself and then corrects it if it is wrong. There are different ways of doing the same thing. You are learning from someone who knows the practical side of the job and also someone who you can relate to. I am not shy to say I don't know. |

| | |
|---|--|
| 4 | The dentist talks all the time. I learn all the time. He explains all the procedures and gets surprised when I already know them. Then he thinks I know something and gets irritated when I don't. The nurse is threatened that I will take her job when I qualify. |
| 5 | The dentist shows me all the latest materials and equipment. Although we have these at the technikon, they are new names and new brands. He tells me how to keep the patients happy. I learn a lot because I feel this is real. I know I am in the right profession. |

It is the aspect of informing the employer what the student's prior knowledge is and where they are in their learning that poses a problem. It is apparent that there is a gap between the acknowledgment by the employer of the student's prior learning and assumptions made by staff when placing the student. The technikon does not provide a detailed report on the student nor does the student have the opportunity of informing the employer what his/her prior learning has been. Thus, the starting point assumed by the employer, is that the student is "new to the experience".

This is pointed out by an employer:

I would like some kind of report to say what the student knows, what they have been taught and what this particular student is capable of doing other wise I assume that I need to teach her everything.

This could be quite frustrating for the student if they have mastered certain skills and indicates that once again a difference or mismatch of expectations between employers and students exists. This frustration can also be a barrier to reflection and to learning on the part of the student. At the same time the employers' attitude could be based on their exclusion rather than inclusion by the technikon. Inclusion may make them more open to including the students into their practice and getting the students more involved in the activities of the practice. Employers may be more willing to give their time and effort to the students. Ashworth & Saxton (1992) also believe that supervisors would welcome more information about the academic course level of achievement. Thus, employers need to find ways of acknowledging students prior learning. One way of doing this would be to question students about what they already know instead of relying on a report. Employers may interview the student prior to commencement of the workplacement. This would provide an opportunity to

both employer as well as student to develop a rapport between them. This needs to be suggested to employers as a strategy that employers can adopt as supervisors.

Interviews can be part of a reflective process and be encouraged as a technique.

As a premise of what employers can expect student's prior experience to encompass, an outline of what activities we require students to be involved in at the practice could be provided to the employer. This may be done in consultation with employers, soon after permission is sought, for participation in the in-service program. Providing the framework of what lecturers expect students to do in a dental practice will ensure that there is a common understanding by employers, staff and students regarding the role of the student within the practice and how actively the student should participate. Working towards a common goal will close the gap between academic staff, students and employers in private practice. This is beneficial to any learning program and may cut down on contradictions that come about when there is insufficient consultation. It would provide more clarity on student's prior learning. There is clearly a need to clarify the relationships between the technician and the worksite. This clarity will influence the interactions between staff, students and employers as well as enhance the smooth transition of students into the workplace.

It has been stated several times by both students and employers that the worksite is a busy place, thus lecturers need to take cognisance of this and endeavour to provide as much information to the employer about course content, curriculum and departmental issues that would affect employers and subsequently learners in the system so that learning is successfully facilitated.

4.5 Reflection

The third circle of Boud's model (1993) represents reflection on the experiences of the student after the event. He draws attention to three matters:

1. Returning to the experience to recapture it in as much detail as possible.
2. Attending to feelings to build on positive feelings and address negative ones.

3. Re-evaluation of the experience; to link new learning to old and consolidate the learning.

From the two models used in this study, it is evident that for learning to occur, students must reflect. Getting students to reflect on their learning, in action, is what most lecturers hope to achieve, but very few have expressed the need to make students aware of this when learning from experience. From the data provided, it seems unlikely that lecturers communicate to employers the need for students to reflect. I have not included specific questions on reflection in my interviews with any of the participants, although I was of the opinion that this is a key issue that I needed to investigate. This was to avoid leading the participants.

According to Schön (1987) the reflection-in-action may be subtle without the learner making a conscious effort to reflect. The learner adjusts his or her responses to variations they may face. The element of surprise when the student is faced with something “new” makes the student react almost spontaneously and what distinguishes reflection-in-action from other kinds of reflection is its immediate significance for action. Schön (1987) adds that a skilled performer can integrate reflection-in-action into the smooth performance of an ongoing task. Many dentists have claimed that they ask students questions about the treatment, while working on the patient as seen from response in Table 3A:

I demonstrate and give tips from my experiences.
I explain that different dentist have different preferences
and that the assistant must be adaptable. I update her
on the current trends in dentistry. I explain procedures
as we work and often ask her questions. She has to
tell me what she does not understand.

This provides an ideal opportunity for students to reflect on what they are doing, and to understand why particular aspects of treatment are being performed without an

awareness of their own reflection. I am certain that my interviews have provided a platform for reflective possibilities.

Another strategy that could be used to encourage and model reflection and the reflective process would be when employers explain the clinical procedures as they are carried out. This shows an ability to articulate changes in what one does – i.e. reflection in action. However, staff members need to create the awareness of reflection in students by expressing their expectations we have seen in Table 2A.

Burnard (1989) also believes that reflection is one of many underlying attributes that define experiential learning activity and claims that learning only occurs after the action is reflected upon. Ways of integrating reflection should not just be added on

but must rather be integrated into courses and the work situation. Students must learn to appreciate their own accomplishments and both lecturers and employers need to find ways of getting students to reflect on their own experience. One way of doing this is to get students to discuss their experiences in groups. Students would be comfortable talking to their peers about problems they encounter. Students tend to gain more insight from discussion with their peers where they realise they have similar problems. This might also provide them with a secure environment to think about their new situation. This would also contribute towards developing student's team participation. Thus, lecturers could set up these mechanisms for students to engage in reflection. This intervention by staff may have implications for them. These pressures from placements also create implications for the curriculum and the institution as a whole. Employers at the work site that ask the students questions while they work, are creating opportunity for reflection. However, employers may want to suggest alternatives to specific procedures and get students to make critical judgments about their preferred methods thereby creating an awareness of student reflection. These opportunities may assist the student in dealing with any barriers to learning that may exist from previous experiences. Reflection on different approaches to procedures in different workplaces may happen when students return to the institution and report back in an open forum to peers and lecturers.

Another means of getting students to reflect would be getting them to keep diaries or portfolios of their experience. The portfolio is a purposeful collection of work that exhibits the learner's efforts, progress and achievements. The portfolio helps the learner to extract learning from the experience by analytical reflection (Wolf, 1989; Jarvinen & Kohonen 1995).

Students in the Dental Assisting program have been introduced to keeping portfolios early in the duration of the course. This idea was introduced by discussions with colleagues during the first year of my Master program when benefits of portfolio writing were highlighted. It has thus far been successful in allowing students the opportunity to reflect and has given me an insight into a student's way of thinking, their feelings and attitudes about their work since I believe that the valuing of student ideas and visions are extremely important. In this way, students can take cognisance of what they already know and build on their knowledge.

Students might also look at their own expectations, goals and roles and what they want to achieve. If students are given the opportunity to find out what their strengths and weaknesses are, it will develop a foundation from which to embark on reflection in the practice they move into and how to deal with these strengths and weaknesses.

On returning to the technikon after their placement students are expected to submit a portfolio of their experiences. A brief overview of the portfolios has provided me with an opportunity to compare transcripts of student responses from interviews with their portfolio submissions. The portfolio writings prove that all the students have been honest and upfront during the interview process. I have compared the transcripts with the attitudes and feelings that emerge from the portfolios and a definite parallel can be drawn between both. A comparison has been made particularly on aspects that students feel unhappy about as well as benefits they gained during the placement.

Within the portfolios it was quite evident that students were aware of their responsibilities when placed for the in-service program. However, it was also evident that students felt that it was much more difficult being in a real life environment as opposed to being at the technikon.

It is difficult to work with new people. Everything is familiar at the Tech. I missed being with friends and found this experience very new.

Many students have expressed that they see the relevance of what they were learning at the technikon and felt that application of theory was important. Students produced reflective writing about their experiences and openly expressed their feelings. Students were glad for the opportunity to complain about issues they felt were out of their control.

I believe that during interviews students were also given an opportunity to reflect on their experiences. Many students felt that they benefited a great deal from their placement. They were given the opportunity by way of interviews carried out for this study, to build on positive feelings and address negative ones. I have summarised the responses in the following list. Positive feelings were:

- You pick up a lot from watching and seeing the right way to do things.
- You learn a lot from others.
- I can see good habits and bad habits in this practice and that way I know I am learning.
- I can apply theory learnt in class.
- I am not shy to talk to people now.
- By doing the job I am not just being told how by someone else I am doing it myself. This way I cannot forget.
- I got the feel for what it will be like when I finish the course.

These positive responses referred to both theory that was taught and the application of theory in practice. There have been many key points regarding experiential learning that have expired from this study. Students need to recognise the right and wrong way to do something by adopting an adaptive behaviour that is appropriate to each situation. From students' submissions, there was evidence of personal growth and they were able to relate the personal to broader issues of Dentistry. On reflection

students also felt that their experiences provided them with a more holistic understanding of the Dental assisting program. Many found the placement useful and emphasised an improvement in their socialisation skills, which they believe would not have happened if they were not exposed to a work situation. One student commented on how her view of the world changed since her working experience.

I now feel ready to work as a dental assistant.

I realise it is different to being a student, and appreciate
what the world of work is all about. I feel different.

It is apparent that lecturers have trained with clinical procedures in mind and not interpersonal relations. Some students described the portfolio writing as “a good opportunity to express” themselves and make meaning of their experiences. Thus, the benefits of portfolios in reflection cannot be overemphasised. Experience needs to be processed consciously by reflecting on it. When students linked their new learning to the old, some students acknowledged that they were frustrated and impatient at times with simulations and role playing and thought of them as games. On reflection, they now value the importance of innovative methods of delivery and how the interventions of others contribute to the process of learning.

Students also address negative feelings:

- It is hard work. The dentist works long hours and we do not get paid.
- It is sometimes too tiring.
- Sometimes the employers get impatient.
- The work is stressful.

The negative feelings that student expressed can be taken further when lecturers strategise on how to develop the strengths and diminish or deal with the negatives. This could be done with the students on their return to the technikon from work placements. Thus, more productive reflection can take place.

The data broadly support the theoretical propositions that were developed earlier in this study where learning is perceived as an active process that requires reflection. Learners can proceed to learn by themselves when “doing” but the guidance of others whether direct or indirect was highly valued when the students were given the opportunity to reflect.

Hence, the idea of portfolio writing provides an insight into the way in which students view the world of work. They show development from their initial entry into the course up to the time they actually gain hands on experience. Students must be given time and opportunity to reflect on their learning so that their learning becomes internalised and meaningful. There are situations in which students cannot express themselves clearly, especially since English is not their first language. In these cases, the language in the portfolio is more simple and repetitive with a limited use of adverbs that describe their experience. However, it is not difficult in these cases to elicit whether the student has gained or not from their in-service program. The portfolio is therefore an ideal tool for reflection.

4.6 Other Problems that Impact on Learning

During the study specific issues came to the fore which are worth mentioning since they may indirectly affect student learning and may also contribute to improving administration of future placements. Employers are sometimes reluctant to accept students for in-service learning. They have no idea what level the student is at, and are not prepared to accept responsibilities for student learning. Dental practices are busy and for a dentist (employer) this means money. Students involved in experiential learning tend to “slow down” the process of patient-practitioner contact. Dentists need to complete their treatment in the shortest possible time and often complain that they require a lot of patience and time when dealing with students in their practice. From the evidence provided in Table 3B, it is apparent that students are aware of the factor of speed and this can pressurise students and create negative consequence for learning. This also limits time for reflection.

In my experience as coordinator, the placements of students in a workplace is one of the difficult aspects of my duties and responsibilities due to the negative attitude of many dentists towards accepting students within their practices. This reflects the view held by dentists that they do not accept responsibility for training. Many dentists mention that their practices are “too small to have another person here” or that they are “not too busy” so that students will be wasting their time and “not really benefit”. Some dentists complain that they have accepted students in the past and that the students “break my equipment” and they create negativity in the minds of other employers about participating in future in-service programs. The effect this has had on me, as a co-ordinator is to establish relationships only with dentists that are willing to participate. This therefore limits the number of dentists that have any involvement with the institution and on curriculum issues. There is a need to get the “buy-in “ of employers so that there is a broad participation with as many employers as stakeholders and curriculum developers within the dental profession. This is also clearly in keeping with the principles of the National Qualifications Framework that suggest an inclusion of as many role-players in education and training as possible. The underlying principle is to have a more coherent and well-articulated education and training system nationally.

Some dental practices regard the placement as an extra pair of hands without the responsibility of full time employment and payment.

I am expected to do everything that the employed dental assistant does and to help her as much as possible.

Students considered the issue of payment as an “incentive” during their placement and viewed the placement as work and not only as a learning opportunity. Students felt that the employer who stood much to gain from their placement did not appreciate their work. Although students were of the belief that they were there for a specific purpose and that the situation was temporary, they felt that it “would be nice if employers paid us”. Although this does not relate directly to learning, it may well be a motivating factor towards students being rewarded for their effort. This may affect

their sense of responsibility and a perception of themselves as workers rather than learners.

Employers, however, were not of the same opinion regarding payment. Employers felt that by “accommodating” a student within their busy schedules, they were not obliged to offer any compensation to the student since the student is “still learning”. Many employers regard the placement as a “favour” to the technician since their practice time is compromised. Further, employers have expressed concern about students mishandling equipment due to a lack of experience and have indicated their reluctance to continue accepting students for in-service learning in the future. This issue of “exploitation” on either the part of the student or the employer can have negative effects on the National Qualifications Framework and its objectives. Another key objective of the National Qualifications Framework is the move towards incorporating more workplace learning opportunities and to make learning more relevant to the workplace so that skills and knowledge are well integrated and applied.

Another problem students face is resentment from permanent staff that sometimes sees the student as a threat.

The employed assistant was very threatened and she did not show me where things were kept. She thought that I will be taking her job. She is not qualified.

In the above instance, the student mentioned in her interview that she had to convince the nurse employed at the practice that she was not replacing her, but that she herself needed to learn from the nurse. The employed nurse was hence encouraged and motivated enough to share her experience with the student. This indicates that the student developed a strategy to cope with an unexpected and untaught situation.

Another significant difficulty that employers face emerged during this study when an appointment for an interview was scheduled with a dentist. On my arrival at the practice the student who was placed there had not attended work. It was important to

interview both the employer and the student at the practice for various reasons. I needed to be consistent with all interviews. I also needed to observe the student in the working environment. The interview was re-scheduled for a later date.

During the re-scheduled interview, the employer expressed his concern about the student's absence from work and felt that it was unethical for the student to stay away without an explanation. He stated that although the student was a temporary member of the practice, she was given responsibilities. The absence posed problems for the practice and impacted on the dentist's activities for the day. The dentist was reminded that he would evaluate the student at the end of the placement. However, the difficulties that employers face needed to be highlighted here since these incidences may affect how employers treat students and how they may react to future placements. Students need to be made aware of the dynamics involved in placements.

The problems indicated here point to a need for a strategy to be put into place that will address what employers in private dental practices expect and what needs to happen in higher education when placing students. We need to take cognisance of this for future placements. Once again, this points to a need for intervention by the coordinator to ensure adequate communication to keep all employers informed about placements and the role of lecturers prior to placements. There are also implications for institutional policies, which will clarify the aspects of the safety of students while in the "employ" of the dentist. The technikon may need to develop institutional policies of addressing the participation of employers within the curriculum. It must be stressed at this stage that there must be a closer relationship between employers in dental practice and the technikon.

4.7 Relationship between the workplace and institution

The role of dentists in designing the curriculum for dental assistants has thus far been limited although the training has obviously been carried out to provide employment specifically within dental practices. It is important to mention at this point that an advisory committee has been formed in 1994 of members that are representative of

professional bodies, providers of dental programs in the province and the public dental health sector. The function of this committee is to provide recommendations for the training and education of dental assistants. Dentists from both the private sector as well as dentists employed in public dental clinics serve on this committee. Meetings are held at least twice a year.

On asking dentists about their contribution to the dental assistant curriculum through specific professional bodies that they belong to, it was obvious that there was insufficient communication between dentists and their Dental Associations. On further investigation it was evident that these dentists did not attend all meetings of their professional bodies due to time constraints. They do, however, attend continuing education courses to keep abreast of new techniques and materials to update their knowledge, but cannot often attend meetings regarding "other matters".

It was not the purpose of this study to find out the professional activities of dentists and these questions were not included in the questionnaires. However, it seemed necessary to discuss curriculum issues with dentists since they believed that they needed to participate in an integrated way. Although dentists, dental therapists and oral hygienists are provided the opportunity of contributing to the dental assistant curriculum through their respective professional bodies, what was clear in this study, is that dentists who are participating in the in-service component need to be more fully integrated into the course. This may be overcome by inviting all dentists that participate in workplacements to the technikon and provide details of the curriculum and to discuss the need for experiential learning and how work experience is normally monitored and assessed. These discussions may also be useful in focusing on other issues that became apparent during the course of this study such as attendance of students and the actual role of the student in the practice. This process of information giving rather than inclusion into the curriculum may be a first step in the inclusion process. If it is not possible for all dentists to attend the meeting at the technikon, which is highly probable, a one-to-one consultation at the practice may be considered.

Many dentists saw their role as "information giving" rather than engaging students in the process of learning new information. This is demonstrated by a comment such as:

We (dentists) can advise lecturers what to teach students because of our daily activities. We know what is current and up-to-date.

This raises the issue of content versus process and knowing versus critical thinking. Therefore, for employers to become involved in the higher education institution curriculum in an integrated way we need more than “information giving” of what is current and relevant. There is a need for employers to become part of all aspects of the curriculum, such as becoming involved in the various methods of delivery of content as well as the different forms of assessment, which does not currently seem to be the case.

4.8 New Insights from the Data

Ashton and Saxton (1992) state that the importance of the role of the workplace supervisor has been acknowledged but the extent of its effect on the placement has seldom been discussed in any detail. They quote two notable exceptions: Glasborow (1980) and Cohen (1971). Glasborow in his evaluation of engineering placements looked at workplace supervision in respect of its frequency and quality. He considered what effects these factors have on overall value of the placement and concluded that the effectiveness is substantially important to the successful operation of the sandwich system (explained in an earlier chapter) and that once the training is in progress the significance of the supervisor is greater than that of the academic educator.

If we view this from the perspective of a student placed in a private dental practice; the supervisor is most likely to be the dental practitioner who is also the employer. However, on analysing students' responses there was one situation where the employed dental nurse supervised the student and not the dentist. This situation has been unusual but most interesting. Here the student worked with the nurse most of the time. The student's description of the process was:

The dental nurse shows me the stock; where it is stored and

how it is ordered. She showed me everything and how doctor wants it to be passed to him. She told me how the appointment book is kept e.g. how long he prefers for crown and bridge-work and only ten minutes for extractions. She told me about the tea and lunch breaks. I have learnt a lot from her.”

In this example, the employed Dental Assistant is the supervisor directly involved with student learning. Although from the example cited above it seems that the nurse was “telling” rather than allowing the student to “do”, it may well be that the student was given opportunity for carrying out these procedures later on. On probing further, the student was satisfied with this arrangement because she felt that the nurse was “experienced” and “knows what to teach me”. She further explained that she had good rapport with the nurse and that the nurse was under less pressure than the dentist and more time was dedicated to the student. What was important to the student was the willingness of the employed dental nurse to “guide” her and that she was introduced not only to the practice but to the administrative side of the practice as well. The student was pleased with the arrangement of having what she perceived as “someone on my level” to supervise her (refer Table 3 response 3):

You are learning from someone who knows the practical side of the job and also someone who you can relate to. I am not shy to say I don’t know.

The student did not want to make mistakes in front of the employer. It is thus important to note that the student in this case was at ease within the learning environment and this situation may produce a far better outcome than someone who is not relaxed. It is thus important to note that any element of anxiety may hinder learning. The “good rapport” produced a more confident individual who from my observations seemed to be enjoying what she was doing. The student also mentioned that if she required more time in grasping explanations, she did not feel compromised because the appointment schedule would be affected. This provided a better learning opportunity for her. She also mentioned that she “learnt a lot from casual discussions

with the nurse” whenever it was possible and did not have to be restricted to office hours only.

This is not a common feature in all dental practices. From the interviews and observations, it was interesting to note that the employing dentist usually played the role of supervisor. As coordinator having the responsibility of student placements, I have assumed that the employer or the dental practitioner would be most effective as supervisor. This assumption was brought about by the perception that the student is under direct supervision of the dentist and that the dentist is most likely to provide the “hands-on” opportunity for learning. The above example of the nurse being as effective as a supervisor needs to be further analysed. It would be worthwhile investigating the merits of getting a dental nurse that is employed at a practice to play the role of the supervisor. Ideally, the nurse would also be able to participate in the “preparation” workshops that may be scheduled at the technikon. However, this can only occur with the consent of the employer/dentist.

Students who said that they were anxious during their placements initially, and that it was the part that supervisors played in the process of their learning that put them at ease, confirmed this. Most students felt that they could “relate” to the employer and that they had a “good relationship”. Thus, the workplace supervisor could be either the nurse or the dentist, depending on the effectiveness of each. I can conclude that as long as the student is comfortable with whoever provides the learning intervention, it is of little significance who the individual is.

According to Boud (1993) learning occurs in a socio-emotional context.

----Emotions and feelings are the ones which are most neglected in our society: there is almost a taboo about them intruding into our educational institutions, particularly at high levels-----Denials of feelings is denial of learning.

(Boud, Cohen & Walker, 1993:15)

Thus, as co-ordinator of the dental program, I need to investigate the possibilities of having the dental nurse as a supervisor for future placements since data indicate that better opportunities are presented for learning in an anxiety free environment.

CHAPTER FIVE

Conclusion

During the course of this study student placements gave me the opportunity to observe and document many kinds of situations and experiences, which the students lived through. Further, this provided a clear understanding of the interaction between workplace supervisors, students and educators. Of importance in this study, was the planning associated with workplace learning and scrutinising the structures that were in place to support the Dental Assisting in-service program and whether the student placement was successful in achieving learning. The results of this study have implications for staff, the dental curriculum and the institution.

The data reported in the earlier chapter are supportive of work-based learning. However, making generalisations from these findings should be done with caution. The data are views of the participants of the study and may not accord with those of others in similar studies and are bound by their context and the time in which this study was carried out.

Learning from experience in many dental practices may lack expert guidance and facilitation and engage learners only in peripheral activities. The result of this is unsatisfactory learning and dissatisfaction on the part of the learner. Thus, all concerned, the academic staff that places the student in a work environment, the learner and the employer who is expected to supervise the students' learning, must understand every objective of the placement. The objectives of the placement must be clarified long before students are placed for experiential learning.

The primary aim of this study was to develop an understanding of the effects of student placements in a work environment with regard to successful learning. The workplace provides a range of authentic conditions for the development of vocational skills. The role of the student, workplace employer and academic staff members need to be carefully considered since it is through these human relationships that genuine learning on placements take place. The placement of students is seen as valuable

within an educational course and aims to bridge the gap between the academic world and the workplace.

As an ethnographic research project I have found the following areas that need to be addressed:

- There must be adequate pre-placement preparation in which students are helped to develop awareness of the wide range of learning experiences they might encounter.
- Explicit guidelines are necessary for both the student and the employer in the workplace.
- The workplace supervisor needs to be alerted of his/her role in facilitating learning.
- Both these aspects should be discussed in a workshop held specifically for that purpose.
- Employers in private practice may consider the dental nurse to be the supervisor since the study has shown that there is some merit in considering this.
- Encouraging the student to reflect and record their learning is a major aspect of learning from experience.
- There should be inclusiveness of all lecturers involved with students in the in-service program.
- There is a need for institutional policies that govern the safety of learners when placed for experiential learning.
- There is a need for institutional policies that relate to how employers should relate to the curriculum.
- Finally, there must be close collaboration between the institution and employers, which is vital to the success of the in-service program. However, there must commitment on the part of the employer to play the role of supervisor and facilitator of learning since employers seem to be restricted by various factors such as time, financial commitments and a lack of loyalty to the academic institution.
- A theoretical framework or educational philosophy helps to develop a holistic development of the dental assisting course and the learning experience.'

In conclusion, I believe that although learning from experience was not consistent with Boud's model in its entirety, there were some elements of the model present during student placements in the workplace, which led to some measure of success. First, there was a good relationship between employers and learners and second, most students felt that they have "learnt" since their experience was meaningful and that they were provided the opportunity to apply theory to practice. Students were allowed to ask questions to employers and their staff, so that student's doubts and curiosities could be satisfied. Students felt that they benefited from the placement program although the study has indicated that there is a need for something to happen so that students reflect, and make meaning of what they learn during the placement and by creating opportunity after the placement for reflection. Thus, there needs to be a re-organisation of administrative procedures for the placement of students. This study has provided me with an in-depth understanding of learning and in particular work-based learning as well as the transition that students undergo from institutions of higher education to the world of work.

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**M L SULTAN TECHNIKON
FACULTY OF SCIENCE
DEPARTMENT OF HEALTH CARE SERVICES
NATIONAL CERTIFICATE IN DENTAL ASSISTING**

NAME :

STUDENT NUMBER :

DATE :

CLINICAL EVALUATION

Please grade the student according to the following grade:

1. Excellent
2. Very Good
3. Average
4. Below Average
5. Very Poor

- | | | |
|-----|--------------------------------|-------|
| (a) | Charting | |
| (b) | Knowledge of instruments | |
| (c) | Knowledge of instruments | |
| (d) | Handling of materials / mixing | |
| (e) | Instrument transfer | |
| (f) | Suctioning | |
| (g) | Preparation prior to patient | |
| (h) | Sterilisation | |

GENERAL SKILLS

Please grade the student using the same scale as above:

- (a) Relationship with others
- (b) Confidence
- (c) Appearance
- (d) Ability to communicate (verbal)
- (e) Quality of work
- (f) attitude towards work
- (g) Ability to learn
- (h) Quality of work

EVALUATION REPORT

DEPARTMENT OF HEALTH CARE SERVICES NATIONAL CERTIFICATE IN DENTAL CHAIRSIDE ASSISTING

STUDENT : YEAR 1999 REPORT NO.:

UNDERWENT IN-SERVICE OR EXPERIENTIAL TRAINING IN THE

DEPARTMENT FROM TO

| | | | |
|----|---|----|---|
| 1. | RELATIONS WITH OTHERS Exceptionally well accepted Works well with others Gets along satisfactorily Has some difficulty working with others Works very poorly with others | 2. | ATTITUDE-APPLICATION TO WORK Outstanding in enthusiasm Very interested and industrious Average in diligence and interest Somewhat indifferent Definitely not interested |
| 3. | JUDGEMENT Exceptionally mature Above average in making decisions Usually makes the right decision Often uses poor judgement Consistently uses had judgement | 4. | DEPENDABILITY Completely dependable Above average in dependability Usually dependable Sometimes neglectful or careless Unreliable |
| 5. | ABILITY TO LEARN Learns very quickly Learns readily Average in learning Rather slow to learn Very slow to learn | 6. | APPEARANCE Excellent Very good Average Below average Very poor |
| 7. | QUALITY OF WORK Excellent Very good Average Below average Very poor | 8. | ABILITY TO COMMUNICATE (VERBAL) Excellent Very good Average Below average Very poor |

Structure of the NQF

| School Grades | NQF Level | Band | Types of Qualifications & Certificates | |
|---------------|-----------|---|--|--------|
| | 8 | Higher Education and Training Band | Doctorates, further research degrees | |
| | 7 | | Degrees, Diplomas & Certificates. (Occupational, first & higher) | |
| | 6 | | Professional Degree (B-Tech) | |
| | 5 | | First Degree Diploma Certificate | |
| 12 | 4 | Further Education and Training Band | School/College/NGO's Training Certificates (N3/NSC) | |
| 11 | 3 | Further Education and Training Band | School/College/NGO's Training Certificates (N2/NIC) | |
| 10 | 2 | | School/College/NGO's Training Certificates (N1) | |
| 9 | 1 | General Education and Training Certificates | | |
| 8 | | General Education and Training Bands | Senior Phase | ABET 4 |
| 7 | | | | |
| 6 | | | Intermediate Phase | ABET 3 |
| 5 | | | | |
| 4 | | | | |
| 3 | | | Foundation Phase | ABET 2 |
| 2 | | | | |
| 1 | | | | |
| R | | | | |

P.O.Box 50825
Musgrave
Durban
4062
15 August 1999

Dr.....
.....
.....
.....

Dear Dr.....

Re: Research on work-based learning

I would like to take this opportunity of thanking you for participating in our Dental Assisting In-service Program this year. As you know, this program is extremely important to both student and the institution, since it provides the environment necessary for the student to apply a theoretical background learnt at the technikon to the workplace. Regular reviews of the students progress is thus necessary and we are grateful for your contribution in providing us with information by way of the evaluation forms provided.

However, I have one further request. I am presently studying towards a Masters Degree in Tertiary Education through the University of Natal. I have undertaken to carry out research in the field of work-based learning. I therefore request permission to briefly interview you and the student during the next in-service period in September. With your permission an appointment for the interview will be telephonically scheduled closer to the time. Attached is a copy of the research proposal for your perusal and a consent form.

I thank you for your consideration in this regard.

Yours sincerely

Mrs. R.Rajab
Lecturer: Dental Assisting
Dept. of Health Care Services
Contact no. (031) 3085294
0829253529
rrajab@wpo.misultan.ac.za

University of Natal

Masters in Education

Consent Form

I, Dr/Ms.....hereby consent to be interviewed by Ms R. Rajab for purposes of her research towards a Masters in Education. I trust that the information that is received will be confidential and that anonymity will be maintained.

Signed at:.....

Date:.....

Signature o participant:.....

Signature of researcher:.....

University of Natal

Masters in Education

Interview Schedule for Employers

Name of student:.....

Name of supervisor/dentist:.....

Date placement commenced:.....

Date placement completed:.....

Framework

1. What will be the student's role in the practice?
2. What will this entail?
3. What kind of information did you receive from the institution about the student's role?
4. How do you facilitate learning for the student?
5. How prepared is the student for the placement?
6. What do you think needs to be done to make the students better prepared?
7. Are you aware of exactly what the lecturer expects your role to be?
8. Is this made explicit?
9. Do you have any difficulties with your role as supervisor?
10. What are they?
11. How do you propose to overcome them?
12. What are the strengths and weaknesses of this placement?

Interview Schedule for students

Name of student:.....

Name of supervisor/dentist:.....

Framework

1. What is your role in the practice?
2. What does this entail?
3. How were you prepared for this role?
4. In what way could you be better prepared for this role?
5. How does the placement facilitate learning?
6. What role does your supervisor play in your learning?
7. What problems do you encounter in your placement?
8. How can these problems be resolved?
9. What are some of the most difficult areas that you experience?
10. Why do you think that these are difficult?
11. What do you do about these difficulties?
12. How approachable is the supervisor?
13. What is the relationship between you and the supervisor and other members of the dental team?
14. In what ways do you think that your placement has been beneficial to you?
15. What are its strengths and weaknesses?

Interview schedule for staff

Name of staff member:.....

1. How do you prepare the student for work placements?
2. What is your expectation of the role of the student during the placement?
3. What are your expectations of the employer/supervisor?
4. Does the placement satisfy your expectations?
5. In what way?
6. What is the relationship between you, the student and the employer?
7. How can the relationship between you, the student and the employer improve?
8. What are some of the difficulties you encounter when students are placed for in-service learning?
9. How can you resolve any difficulties that may arise?