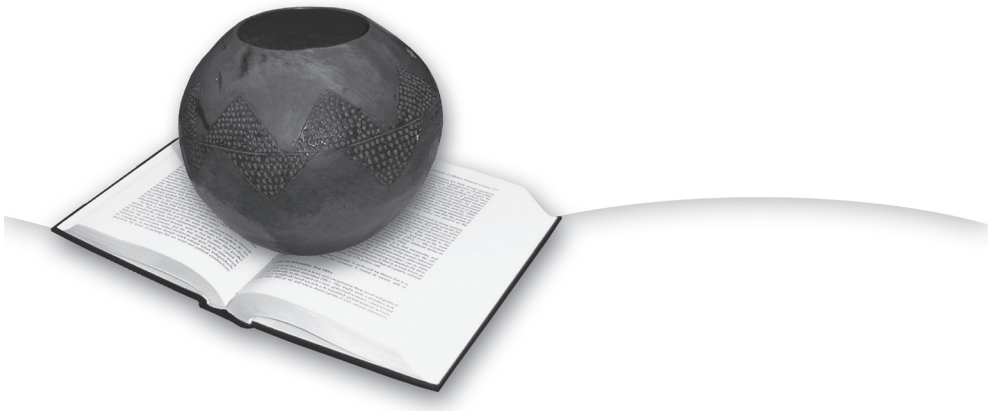
Distance Experiential Education Practices



Distance Experiential Education Practices

Sharing and cross-pollination of traditional university-type and former technikon-type 'work-integrated learning' practices.

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Contents

Foreword

The merger, on 2 January 2004, integrated the teaching strategies of the former Unisa with the co-operative education principles of the former technikon sector. Technikon SA contributed a wide range of qualifications that had been developed in consultation with the relevant employers and/or vocational bodies and councils. More than 60 per cent of these qualifications included a formal work-integrated learning component, with the remainder being predominantly of an applied nature. Furthermore, advisory structures were functional for the majority of qualifications.

It is not that work-integrated learning was not practised at the former Unisa. Several academic departments at the former Unisa used teaching strategies that equated to work-integrated learning. For example, in Health Sciences clinical training, professional practice and nursing-teaching practice have been in use; in Social Work practical work and supervision are used; in Education there are several teaching practice subjects; the qualifications of the School of Business Leadership are very much of an applied nature; and in other departments subjects such as Practical Theology are offered. In addition, internships and articles follow the completion of certain Unisa qualifications.

However, work-integrated learning (and its various synonyms) was not a mainstream distance education practice within the former Unisa. The integration of the faculties of the three institutions (a number of Vudec qualifications also included work-integrated learning) has led to a range of qualifications, throughout four of the five newly established colleges, that include work-integrated learning.

This situation ignited the idea to hold an internal seminar for the exchange of viewpoints, cross-pollination of experiences and successes, and printing of a publication. These reasons influenced me to host the seminar and sponsor both the seminar and the publication. The term 'experiential education' was chosen as the umbrella term for the various current practices within Unisa.

The seminar, held on 12 and 13 September 2005, and the publication are important for the Unisa community for a number of reasons. Firstly, in 2003/4 the Department of Education conducted an investigation into experiential learning and the funding thereof. Issues relating to the educational credibility of experiential learning and the management thereof were raised at national level. Furthermore, it is often questioned whether distance education institutions should offer career-focused and/or professional qualifications or programmes that require experiential education. It is Unisa's experience that the challenges we face in this regard do not differ much from those

faced by residential institutions. Secondly, the Higher Education Quality Committee (HEQC) of the Council on Higher Education (CHE) has since formulated criteria regarding work-based learning. The HEQC publication outlining the criteria for institutional audits and the HEQC publication specifying the criteria for programme accreditation contain specific criteria pertaining to work-based learning. These HEQC publications both emphasise efficient communication between the role players involved in work-based learning, as well as efficient systems pertaining to the mentoring, recording and monitoring of work-based learning. These references illustrate the importance of work-integrated learning to influential bodies external to Unisa.

The seminar was the first of its kind for the institution. Its intention was to encourage dialogue regarding good work-integrated learning practices within Unisa. It is hoped that this publication will continue the dialogue. As an educational community, we may use different terms and assign different nuances to the meanings of the terms used. This is not important. What is important is that we can learn a lot from one another's past experiences and current practices. Collectively the academic staff of the new comprehensive Unisa have gained extensive experience and achieved many successes in experiential education. We commend them for their contributions.

Neo R. Mathabe
Pro-Vice-Chancellor, Unisa

Introduction

This publication contains the papers delivered at an internal seminar, entitled 'Distance experiential education practices: Sharing and cross-pollination of traditional university-type and former technikon-type work-integrated learning practices', held from 12 to 13 September 2005 at the Muckleneuk campus of Unisa.

The cover of this publication draws on the symbolism underlying the coat of arms of the new comprehensive Unisa. The red background on which the title stands reflects the colour of the pro-vice chancellor's gown. The energy of the flames beside the sub-title is indicative of the empowerment that experiential education and work-integrated learning bring about, enabling students to soar and achieve employability, not merely theoretical knowledge. The calabash and open book together represent access to learning through work experience, as employers collaborate in providing learners with opportunities to immerse themselves in real work experience that is supplementary to theoretical knowledge. The calabash symbolises Unisa's awareness of its social responsibility and investment in people through the facilitation of experiential education. It further represents the hospitality of the regional learner centres, from where the facilitation of work-integrated learning is done.

The African cloth beneath the calabash and open book represents Unisa's vision of the African university in service of humanity. Together the cloth, calabash and open book symbolise unity and illustrate the interdependence between Unisa, commerce, industry and government organisations, and the learner – the three main parties in the work-integrated learning process. They also speak of the spirit of ubuntu inherent in the collaboration that is necessary to achieve experiential education.

The first contribution to distance experiential education practices is the paper presented by guest speaker Sam Gumbo of the Midlands State University in Zimbabwe. His paper offers the Unisa community an exemplar of institutional facilitation of work-integrated learning. This paper further emphasises the importance of a systematic, well-managed placement, supervision and assessment programme for work-integrated learning at any higher education institution.

The remainder of the publication is dedicated to papers detailing current experiential education practices at Unisa. It is not an exhaustive collection, but nevertheless offers readers exposure to various forms of distance experiential education practices. The largest number of papers emanates from the College of Human Sciences, with no less than five from the Department of Health Studies, within the School of Social Sciences.

Juanita Tjallinks, Mary Moleki and Susan Hattingh point out that the need for a systematic continuing education system aimed at adult learners stems from the need for practitioners to update their knowledge and skills while remaining employed. In their paper they assert that learner support is a key success factor, and highlight a number of considerations, namely the humanisation of the medium of support; the achievement of learner participation; the use of a range of message styles to sustain learner attention; and obtaining learner feedback. The role of the preceptor – an experienced professional nurse who serves as role model and resource person – is discussed. The preceptor is identified by the nursing services manager in the clinical setting (work experience context) and assigned to the learner for a specific period. The role of the South African Nursing Council is further emphasised, and a number of challenges presented.

Eugené Potgieter and Ria Durrheim observe that the integration of theory and practice in professional distance education programmes poses something of a challenge. They state that experiential learning is necessary to ensure safe and effective practice, as well as the professional expertise of graduates. They remark that experiential learning is about learning through experience – which is deliberately planned – and not from experience, as everything in life constitutes experience. The paper also clarifies terms such as supervisor, formal presentation of subject content, clinical lectures and laboratory work.

Michael Herbst, Heleen du Toit and Betsie Smith affirm that experiential learning prepares graduates for the world of work, and they therefore regard it as an essential educational component. They refer to Dewey's assertions of 1938 and reiterate that experiential learning must be purposeful, holistic and planned. These authors further elaborate on the role of the South African Nursing Council as professional body, as well as its authority. The term practica is used and the building of portfolios of evidence mentioned. As a result of requirements determined by the Department of Education, and in order to provide evidence that the learner is active, at least one part of the portfolio is compulsory early on in the academic year.

Martie van der Merwe emphasises that within the distance education context experiential learning materials should be comprehensive and should give clear guidance in order to take the place of the teacher. The material should foresee the problems the learner may encounter or questions that may arise. The material should further be self-paced, individualised and allow for several learning avenues. Van der Merwe's paper is contextualised within the World Health Organisation's focus on the need for primary health care education. Unisa is regarded as the most suitable tertiary education institution to reach professionals who need a specific qualification; it does not, however, have clinical training facilities or patients. Van der Merwe discusses measures to overcome a number of barriers in this regard.

Marthie Bezuidenhout, Miemie Groenewald, Ernestine Monama, Lydia Monareng and Janetta Roos draw a distinction between incidental and intentional work-based

learning. Incidental work-based learning entails unintentional or implicit learning derived as a side effect of work or exposure to the workplace. By contrast, intentional work-based learning is goal-directed and aimed explicitly at the development of expertise. The paper describes the context, system, process, barriers and challenges associated with the education of health services managers.

The next four papers also emanate from the College of Human Sciences, the first two from the School of Social Sciences, one from the School of Education and one from the School of Religion and Theology. The paper by Harry Auret, of the Department of Information Science, is the first paper in this publication by a lecturer from a former technikon programme, and also the first to report on research findings. The title of Auret's paper contains the maxim *non scholae sed vitae discimus*, meaning that we learn not for school but for life. He emphasises that students learn by doing, and in this paper shares the research instrument and reports on the findings of research conducted to explore learner perceptions of the attributes of an ideal experiential learning programme.

Ida van Dyk and Thomas Groenewald present a description of current experiential education practice within the Department of Social Work. The various elements of practical work, namely block placements and community work, casework and group work are described. Social work field placements and their supervision are discussed, as are the responsibilities of supervisors and the logistical arrangements associated with these placements.

Sonja Schoeman, of the Department of Teacher Education, discusses the amplified role of this department in teacher education. She emphasises work experience as an integral part of the curriculum and clarifies concepts such as applied competence; learning in the workplace (LiW); teaching practice; and the reflective practitioner model of teacher education. Schoeman briefly reviews literature on learning through discussion, learning through observation, learning from other individuals and from groups, and learning through experience. She further presents a case study on the didactics module of history, and provides some concrete examples of portfolios.

Callie Human, of the Department of Practical Theology, focuses on the two practical modules of the Bachelor of Theology degree specialising in Pastoral Counselling. He discusses the notion of training transfer, as well as supervision of training. Human shares views on pastoral care as ethical and as ecological care; the language, discourse, narrative and therapy of pastoral care; and deconstruction and reflective conversation in pastoral care. He presents the aims, outcomes, teaching approach and guidelines for the experiential training, and the evaluation of the experiential/practical modules.

The remaining seven papers emanate from three colleges, three from the College of Economic and Management Sciences, and two each from the College of Science, Engineering and Technology and the College of Agriculture and Environmental Sciences.

Andreas de Beer, Cama Brandt and Hannelize Jacobs describe the design and introduction by a consortium of a new programme consisting of a series of vertically and horizontally articulated qualifications. They postulate that an advisory committee promotes the quality, accountability and cost-effectiveness of qualifications. The purpose of an advisory committee is to establish an effectively organised, co-ordinated and accredited education and training system. The authors contextualise competencies and skills within the knowledge economy and indicate the pivotal role of co-operative education in the circulation of newly generated academic and applied knowledge. They point out that higher education no longer holds the monopoly on knowledge production, and argue that implicit knowledge is generated through experiential learning and that experiential learning gives learners the opportunity to integrate acquired knowledge in order to become competent.

Dirk Rossouw, André Kruger and Thomas Groenewald define co-operative education and outline the principles of the former Technikon SA education philosophy. Against this backdrop, they present the application of these principles within the Department of Business Management. They demonstrate, with descriptions and examples, the outcomes and assessment of co-operative education in two qualifications. The case study project approach is also illustrated. They conclude with the advantages of co-operative education to employers, students and the institution.

Thomas Groenewald, Florence Leshoedi, Nicola Wakelin-Theron and Carina van Zijl sketch the pedagogy of career-focused qualifications as a value-adding paradigm. They illustrate the dual nature of such a curriculum and outline the criteria of the Higher Education Quality Committee regarding work-based learning. These authors then proceed, against this background, to present the how, what and why of the experiential learning of four qualifications. They include examples of project and performance evaluation, portfolio assessment, and specific assessment criteria, and conclude by acknowledging some shortcomings, and reflecting on a possible way forward.

Some of the experiential education practices of two of the schools within the College of Science, Engineering and Technology are presented. First, Etienne van der Poel, of the School of Computing, reflects on integrated assessment in distance-based teaching through an applied project-based subject. He illustrates his argument with examples, outlines the expected outcomes, discusses the planning and execution of the assessment, and highlights practical problems as well as some questions.

Leslie Nicola, of the School of Engineering, describes the one-year compulsory work-integrated learning requirements of the diplomas and BTech degrees in Engineering. The purpose of the qualifications is to equip candidate engineering technicians and technologists with the ability to apply their acquired knowledge, understanding, skills, attitudes and values in work environments. Nicola outlines the purpose of the qualification, as well as the exit level outcomes. He also explains the statutory role of the Engineering Council of South Africa.

Last, but certainly not least, are two papers from the College of Agriculture and Environmental Sciences. In the first Antje Bartkowiak-Higgo describes the components of a co-operative education qualification and illustrates the integrated curriculum. She discusses the partners in the process and focuses on the advisory committee as key success factor, presenting the learning context structurally, historically and environmentally. Her paper differentiates between practical contact courses and work-integrated learning, and she discusses the assessment of logbooks, practical research projects and portfolios.

Distance experiential education practices concludes with Richard Hendrick's discussion of Unisa's distance experiential education expertise. He begins with an acknowledgement of the rapidity with which the economic and social environment is changing, and goes on to focus on the role of universities in response to the transformation. Hendrick speaks of the training of practitioners through on-the-job and off-the-job training, and of practical and theoretical training. He highlights the South African Qualifications Authority functions, and the objectives and principles of the National Qualifications Framework. A fascinating aspect is his suggestion regarding the deconstructing of the existing experiential training guide.

From these papers it is evident that a range of terminologies is in use to refer to various distance experiential education practices within Unisa. Thus item 2.4 of Unisa's Work-integrated Learning Policy states that work-integrated learning 'is an umbrella term, used at Unisa, to include experiential education/teaching strategies such as clinical training/teaching/practice, internship, professional practice, experiential training/learning, supervised learning/practice and work-based learning'. However, this policy excludes practicals, which form part of the theoretical curriculum, such as laboratory work. The Work-integrated Learning Policy of the new comprehensive Unisa, follows immediately after this introduction, and includes the fundamental principles involved and the implementation procedures. This policy was approved by Senate on 18 May 2005 and by Council on 29 July 2005.

Thomas Groenewald
Process Manager: Work-integrated Learning, Unisa

University of South Africa (Unisa)

Work-integrated Learning Policy

1. Aim/purpose

This policy is auxiliary to the Tuition Policy and the aim is to achieve high-quality standardised work-integrated learning practices and procedures throughout Unisa.

The objective of this policy is further to ensure that the University meets the criteria of the relevant statutory and professional bodies that are involved in the qualifications offered by Unisa.

2. Definition

Work-integrated learning (WIL), as a component of specified (see item 4) learning programmes:

2.1 focuses on the application of theory in authentic, work-based contexts

2.2 addresses specific competencies identified for the acquisition of a qualification

2.3 enables the development of skills that will make the student employable and provides a real context in which the theoretical, practical, interpersonal and reflexive competencies of Unisa's students are developed in an integrated way

2.4 is an umbrella term, used at Unisa, to include experiential education/teaching strategies such as clinical training/teaching/practice, internship, professional practice, experiential training/learning, supervised learning practice and work-based learning

3. Fundamental principles

WIL is a defining element of a holistic educational strategy that is known as co-operative education, which advocates the formal integration of structured real-life experiences (workplace or community service) into the overall programme curriculum. The following fundamental principles of co-operative education are observed:

- The appropriate vocational community (adequate representation) is a key role player in the curriculum decision-making process (see 5.1).

- Acceptance of co-ownership by the vocational community for WIL part(s) of the programme curriculum needs to be continually reinforced.
- The outcomes determined during the curriculum development process, through an analysis of the vocational context, are translated into WIL guidelines for the student, guidelines for the workplace mentor and monitoring criteria for the tutor. The learning materials include assessment tasks and criteria (see 5.2).
- Where compulsory WIL forms part of the curriculum, students, especially those who are unemployed, undergo pre-WIL orientation, briefing and preparation, in order to optimise the learning opportunity. This includes, where appropriate, work preparedness and life skills acquisition (see 5.4).
- The University actively engages in marketing co-operative education, as an element of the corporate branding, in order to secure sufficient suitable WIL placement opportunities. Learner Support staff further facilitate, where possible, the placement process of unemployed students (see 5.5).
- The planning, contracting/agreements and mentoring of the WIL of individual students are facilitated (see 5.7).
- The University manages the regular and systematic in situ monitoring and assessment of WIL (see 5.8).
- The University remains responsible for verifying the attainment of the predetermined WIL outcomes by individual students.
- The necessary administrative systems and procedures are implemented and maintained to ensure systematic, effective and reliable WIL records (see 5.9).

  The University will observe international best practices espoused by bodies such as the World Association for Cooperative Education (WACE) and the Southern African Society for Co-operative Education (SASCE), as well as actively pursue the Higher Education Quality Committee (HEQC) institutional audit criteria pertaining to work-based learning.

4. Policy statement

When a new programme is being introduced, or an existing programme revised, a conscious decision is taken in terms of the comprehensive nature of Unisa to either embrace co-operative education (becoming an integral part of the programme design, teaching and learning, as well as the assessment planning throughout the programme), or not.

The WIL division of the Directorate of Tutorial Services, Discussion Classes and Work-Integrated Learning[1] (TSDL) will provide support and advice to academics regarding the inclusion of WIL in a programme.

5. Implementation procedures

5.1 Programme advisory structure and processes

5.1.1 Each programme that adopts co-operative education introduces a process of continuous consultation, which involves adequate representation by the vocational community and all stakeholders.

5.1.2 The advisory structure and processes ensure continued relevance of the programme concerned.

5.2 Work-integrated learning materials

5.2.1 The Institute for Curriculum and Learning Development[2] (ICLD) helps academics in the overall curriculum development process, as well as the specific WIL materials development and learning facilitation. These may include:

- pre-WIL orientation of students to optimise their learning
- WIL materials, frameworks and guidelines for students to facilitate the required learning and the production of evidence of such learning, e.g. portfolio guidelines or project specifications
- documents to record learning acquired, e.g. logbooks
- guidelines for workplace mentoring facilitation
- monitoring guidelines and assessment criteria for WIL 'tutors'

5.2.2 The integration of WIL, where relevant, into the overall curriculum is essential.

5.3 Recognition and accreditation of prior WIL

Students need not repeat previously acquired learning that equates to the stipulated WIL, and may apply for recognition and accreditation in accordance with the University's Recognition of Prior Learning (RPL) policy.

5.4 Employability and life skills

Cognisant of the disadvantages many Unisa students have encountered in their lives, the University endeavours, through the Bureau of Counselling, Career and Academic Development[3] (BCCAD), to make opportunities available to students to acquire necessary knowledge and skills, for instance job seeking skills and CV compilation, self-presentation skills, interviewing techniques and workplace skills and ethics.

5.5 WIL placement opportunities

5.5.1 The University undertakes to deploy sufficient regional student support personnel to build partnerships with the respective commerce, industry and governmental organisations within the geographical area concerned. Such regional learner support staff

would endeavour to secure positions for Unisa students to undergo their WIL.

5.5.2 The University further undertakes to actively pursue service learning in order to create WIL opportunities according to the respective programme requirements.

5.5.3 The University endeavours to make available simulated WIL situations, in order to offer its students the opportunity to complete the stipulated WIL requirement, where workplace placements prove impossible.

5.6 Liability insurance

The Executive Director of Finance undertakes to ensure that the University, its staff and students are at all times adequately insured against liability claims that may emanate from work-integrated learning activities, which is regarded as business of the University.

5.7 Mentoring and learning contracting

5.7.1 Unisa undertakes to actively endeavour to facilitate the contracting of the WIL of individual students. These learning contracts will clarify the roles and responsibilities of the various parties, i.e. the institution, students, mentors and employers.

5.7.2 Unisa undertakes to ensure that suitably qualified and experienced workplace mentors are appointed that would enable students to recognise their strengths and weaknesses in their work, develop existing and new abilities, and to gain knowledge of work practices.

5.7.3 Unisa undertakes to provide training of workplace mentors, as and when required.

5.8 Monitoring and assessment of WIL

5.8.1 The monitoring of progress and the attainment of the relevant learning outcomes by individual students will be achieved through, among other things, the appointment of practitioners from the relevant occupational fields to undertake in situ visits.

5.8.2 The relevant academic department will provide the guidelines for monitoring and the assessment criteria.

5.8.3 Such practitioners will be appointed in conjunction with the academics concerned.

5.8.4 Academic departments will remain ultimately responsible for the summative assessment and to ensure that students have acquired the required competence.

5.9 Record keeping

The University undertakes to develop and maintain the necessary administrative systems to record and monitor, regularly and systematically, the content and progress of the WIL of Unisa students.

Notes

1 Former Unisa Department of Student Support expanded to include co-ordination of discussion classes and work-integrated learning.
2 Merger of the former Unisa Bureau for Learning Development (BLD) and the former Technikon SA Centre for Courseware Design and Development (CCDD).
3 Merger of the former Unisa Bureau for Student Counselling and Career Development (BSCCD) and the former Technikon SA Academic Development Centre (ADC).

The concept of work-related learning and the placement, supervision and assessment of students at Midlands State University

Samson Diniwe Gumbo
Midlands State University, Gweru Zimbabwe

The Midlands State University views the concept of work–related learning as both a philosophy and a methodology whose approach should be adaptive and developmental. As a continuous ongoing process across the curriculum, it requires clear policy guidelines for its management of student supervision and assessment. Identification of critical attributes and competencies essential to all learners underpins the success of work-related learning (WRL). To achieve quality supervision and assessment of students in work-related learning, an interactive online web-based database was developed to provide a systematic information database for the management of WRL to provide required information to all stakeholders. Work-related learning orientation together with flexible packaging assist students to choose their subject combinations which shape their career within a chosen profession.

In pursuit of its vision, mission and international challenges to university education, the Midlands State University included a work–related learning module, which others call work-integrated learning, as an integrated part of its curriculum. Since our vision is 'To be a unique, development-oriented, pace–setting and stakeholder-driven university that produces innovative and enterprising graduates', work-related learning strategies and producers developed go a long way forwards fulfilling our vision.

The core business of the University is to ensure that knowledge and skills acquired get transformed into the ability to apply them when and where it matters most, that is the place of work. Hence, the concept of work-related learning is treated as both a philosophy and a methodology. The students are introduced to WRL during their first-year orientation.

Initial student orientation to work-related learning

The initial purpose of student orientation on work-related learning is to ensure a focus on the relationship between theory and practice right from the onset. It is important to introduce students to the value and significance of WRL as an integral part of their academic studies. As they read, interact and discuss with their lecturers, they should reflect on the implications of what they learn for real-life situations. The orientation

process also encourages students to take up voluntary vacation jobs in areas of interest to acquire experience of working in the environment of perceived careers.

The orientation also presents a challenge to lecturers to schedule and integrate quality work-related learning into existing programmes which have an established curriculum format. Lecturers without experience of working in commerce and industry may experience problems in creating an appropriate conducive environment for contextual learning in the classroom setting. The University encourages such lecturers to spend vacation time in industry and commerce.

The work–related learning information management system

In order to get the best out of the time when students are in industry, it is critical to have systematic well-managed placement, with supervision and assessment. It is in this respect that a web–based online interactive database for the management of work–related learning was developed. The objective of the interactive database is to manage WRL by leveraging technology of the 21st century. The online database simplifies the management process by improving the availability of information to lecturers, captains of industry and the students themselves. The system ensures that students have tools to help them find placement and communicate with the University once they are placed.

The work-related learning information system consists of information modules on the student, lecturer, company, faculty, assessment, accounting and curriculum vitae.

Figure 1 below shows the home page of the Midlands State University Work-Related Learning Website. The bullets on the left are clickable when one accesses the site. The website address is www.msuWRL.co.zw or one can go to the Midlands State University, which is www.msu.ac.zw, click on thework-related learning module, and this will lead to the same home page below.

The student information module

This module is the first call for students in their introduction to using the interactive online database. Before students go for WRL, they have to register with the WRL office. The students capture their personal details including their names, student registration number, faculty and department, the degree programme and contact details. Figure 2 below shows the form that students fill in. The form can also be downloaded for those who have no access to the internet.

When students have registered for WRL, they go to look for jobs. Once they are employed, they download a second form, on which they enter their personal details and those of the company, including contact details of the company and the personal details of the mentor. This online process of data capture distributes the workload among the students, who are responsible for ensuring that their information is in the database.

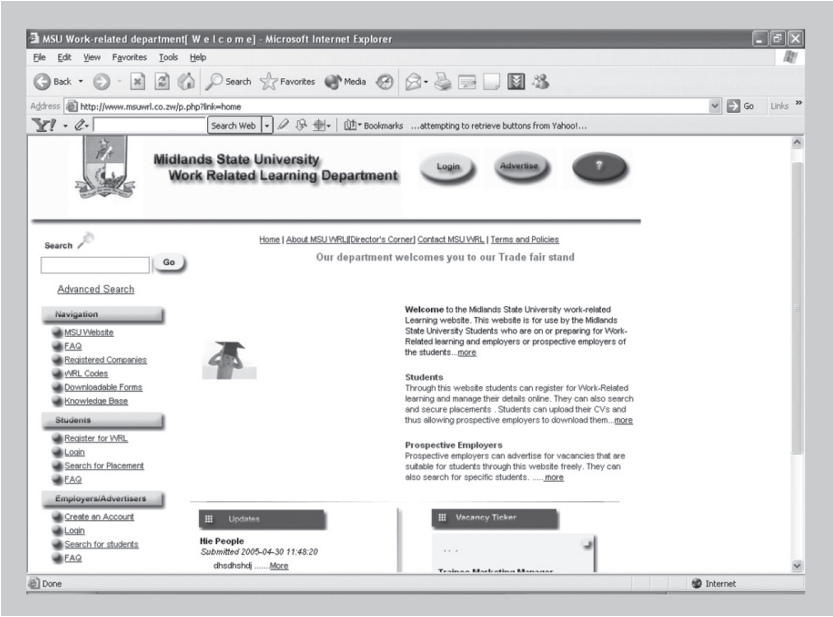


Figure 1: Midlands State University Work-related Learning home page

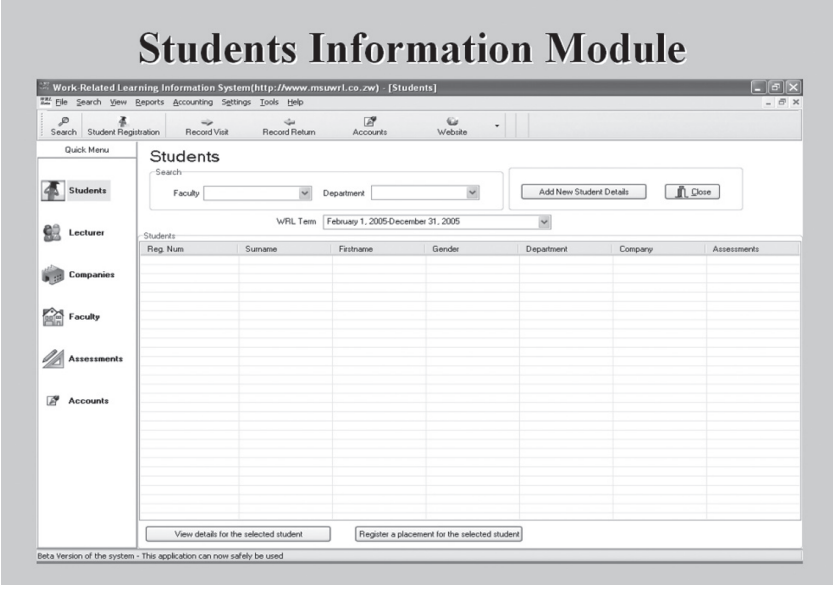


Figure 2: Student information module

Lecturer information module

The lecturer information module stores all information relating to all lecturers who supervise students. The information is used to track which lecturers would see which students. This module is linked to the accounting modules.

Company information module

The company information module stores the names of all companies where students are registered for their work–related learning. Each company is identified by a company code linked to the city where it is located, which makes data capture much easier. Company names originate from the students' registration form. The company information is available to students who are looking for employment for their work-related learning placement. Figure 4 shows a list of companies in Mutare which registered with the university WRL placement.

The work-related learning information system database is synchronised with the WRL website so that students always have access to the latest company information.The WRL office is able to communicate effectively with companies through information extracted from the database. Companies are also encouraged to register on the University database so that they become partners in the training of human resources for the country.

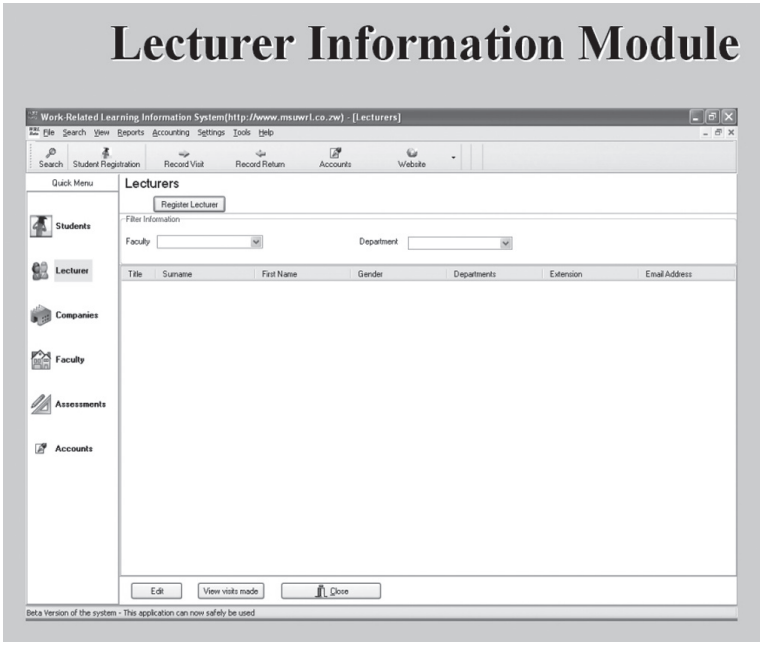
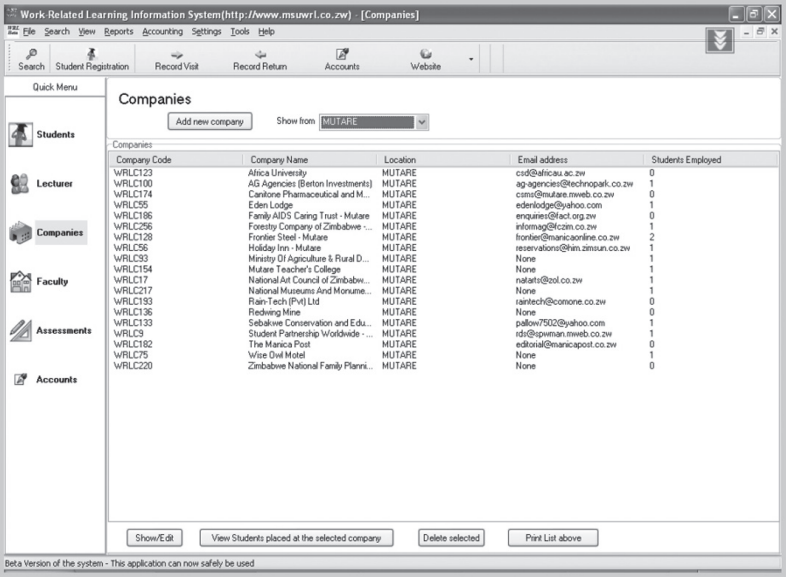


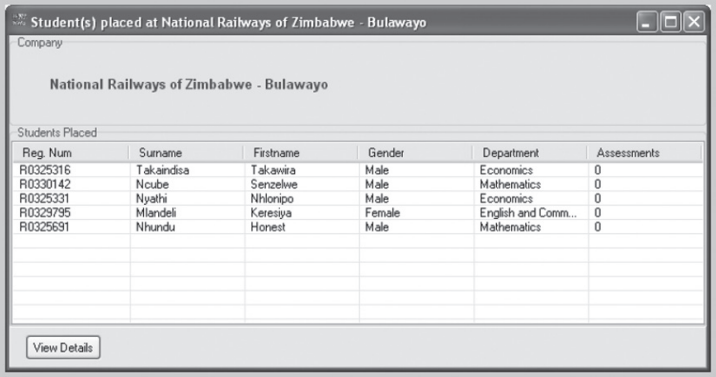
Figure 3: Lecturer information module



Viewing Company Information: A list of companies in Mutare

Figure 4: Company information module

- From the listing of company data, it is possible to find out how many students are placed at a particular company. This makes it easier for lecturers to assess students as they have all information at their fingertips.



List of students placed at National Railways of Zimbabwe - Bulawayo

Figure 5: A list of students placed at one of the companies

Since companies have codes, all students placed at the same company will be displayed without repeating the name of the company.

Faculty information module

This module captures and stores all information from faculties, including the departments. Personal and departmental details of lecturers who go for work-related learning are captured and stored in this module. This module is linked to the accounts information and assessment modules. Any new departments which are established can easily be added to the existing information database by the institution.

Assessment module

The assessment module is used by the WRL office to manage the supervision and assessment of students on WRL. When lecturers decide to go out and assess students, they first need to record a visit. Once the the lecturer has specified the subject area such as economics as well as the city, the WRL database administrator will print a list of all students of economics who are placed in that specified city. The lecturer can then go and assess the students.

On figure 8 below, the lecturer can tick off the names of students to assess. When this process is completed, the lecturer returns the list to the adminstrator, who ticks of on the computer the same names that have been ticked off by the lecturer.

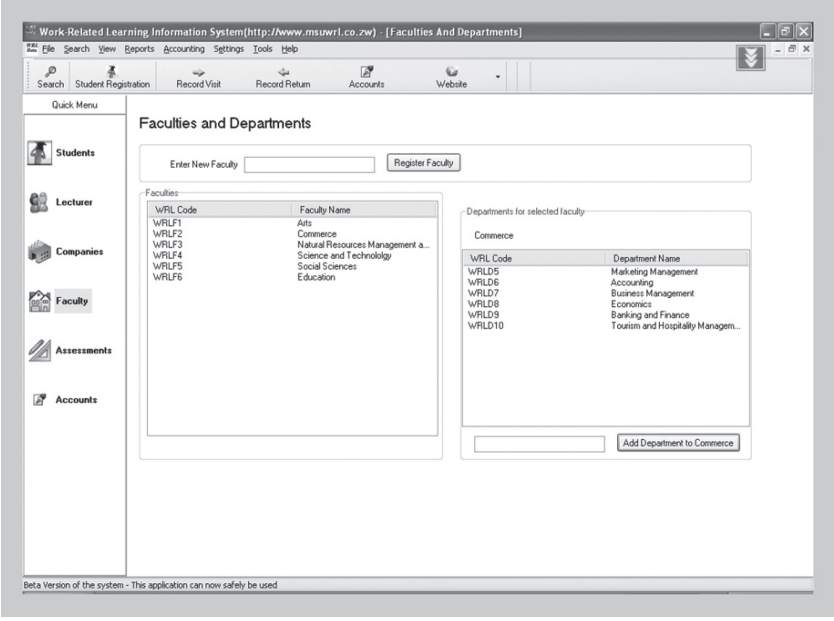
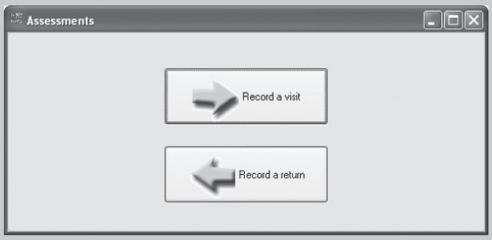


Figure 6: Faculty and department information module

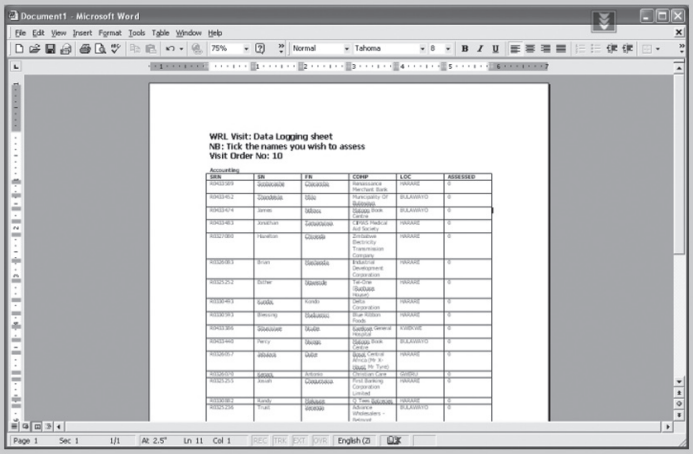
Assessments Module

• The assessments module is used by the WRL Department to Administer the supervision of students.
• Using this section, lecturers will first need to record a Visit.



• The Assessor specifies what departments she is able to assess. Once this is done, the WRL Department prints out a list of students on WRL from these departments. This print-out is known as a Visit Order.

Figure 7: Lecturer recording a visit



- On this list, the lecturer ticks which students she is going to assess.
- The lecturer submits this list to the WRL Department, which then enters the data into the system, ticking the same students ticked by the lecturer. The screen capture below demonstrates:

Figure 8 (a): List of students to be assessed

The submitted list is shown below, indicating that the lecturer's list is the same as that of the computer record.

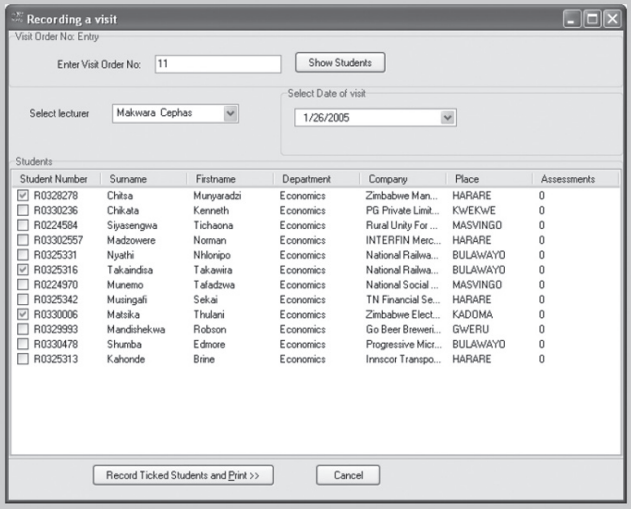
On returning from the assessment of students, the lecturer goes back to the Work-related Learning Department to confirm which students have actually been assessed. This information is important, in that the Work–related Learning Department will advise faculty deans and chairpersons of the status of each student regarding assessment.

Assessment – Accounting module

When lecturers go out to supervise students, they claim for travel and subsistence. These fees received by the lecturer are deducted from his/her departmental vote. The system automatically deducts this from the departmental vote to which the lecturer belongs.

When a lecturer returns from an assessment, a return must be recorded. Such a return captures data on how much was actually spent on the visit. If there is any surplus the amount will be returned–but if the lecturer has used more than she had been given, she will be reimbursed. The reimbursement amount will be taken from the lecturer's departmental vote.

The accounts module synchronises all accounts according to departments and faculties. The WRL Office advises departments of their balances from time to time.



- The visit list is printed, now showing the students details, including physical addresses of where their companies are located. Contact details of the students' supervisors and/or HR Managers are also available for liaison prior to the visit.

Figure 8 (b): List of students and their physical addresses

Assessments - Accounting

- The lecturer can then claim the amount required for the visit from the department's budgetary allocation.
- If the lecturer has 2 or more departments that she can supervise, the amount can be divided between those departments.

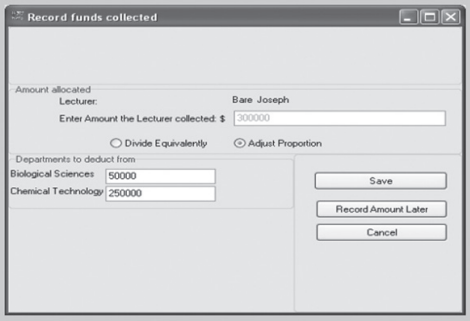


Figure 9: Accounting module

Accounts

- The accounts section keeps track of all budgetary allocations made and all transactions made. The information is presented according to faculty and then, under each faculty, by department. The screenshot below illustrates.
- Any refunds and amounts returned are recorded using this section.

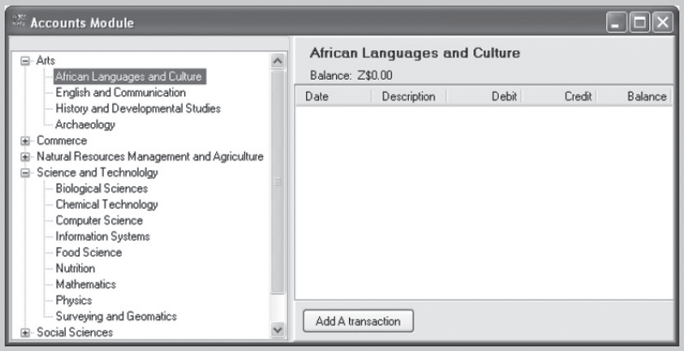


Figure 10: Accounts module with the lists of departments

Web components – curriculum vitae

Students can upload their curriculum vitae (CVs) onto the website after they have been registered and their accounts confirmed. When employers search for students, they can make decisions based on a wide range of CVs available on the website instead of the usually three or five that universities send to a company when requested for CVs. Students receive news items from the University through the updates section of the website. From time to time, companies submit their vacancies directly to the WRL office. These vacancies are added to the Website Vacancy Ticker on the website page.

Quality supervision and assessment

The ideal situation is that the first visit by the lecturer is supposed to be a familiarisation process, to assist the student to settle and adjust. The subsequent visits are for assessment. The lecturers assess students jointly with the mentor in the workplace. The duration of WRL is ten to twelve months. The first five months are meant for students to familiarise themselves with operations of the company while the remaining months provide the students with the opportunity to reflect on theories and principles of their discipline and how these apply to their workplace. When they return, they are given the opportunity to evaluate their curriculum.

Funding

Supervision and assessment of students spread all over the country is an expensive exercise. Each student pays a work-related learning levy every semester although only those on level three or in third year go out for WRL. This means that payment is spread over four years.

Organisational structure

The Office of WRL is headed by a Director who is assisted by a database administrator and a secretary. Coordination of all supervision of WRL is centralised and computerised. Vehicle allocation, planning for visits and approval of travel and subsistence is done in the WRL office.

Advisory Board

The Office of WRL, supported by an Advisory Board is made up of representatives of government, industry and commerce and academics from the University. Since all our students go for WRL, all faculty deans are members of the Advisory Board.

In conclusion, it must be noted that systematic information management, clear policy guidelines, and involvement of all stakeholders from the initial stages of the WRL programme form the basis of a successful supervision and assessment of

students. The Midlands State University work-related learning interactive web-based information management has laid a solid foundation for quality WRL supervision and assessment.

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Post-basic clinical nursing programmes: a distance education experience

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The South African Development Community (SADC) Agreement aims at social upliftment of SADC countries, via collaborative education, health services and human resource development. In accordance with the SADC Agreement's aims for health, the Department of Health Studies at Unisa realised that the development of post-basic clinical nursing programmes in advanced midwifery, intensive nursing care and pre-hospital emergency care offered through the medium of distance education holds benefits for the health care services in the SADC countries. Learners could remain in their countries and continue with their work and family responsibilities while studying towards these advanced qualifications. Learners could also obtain the required clinical experiences within the context of available resources relevant to the country they reside in. Clinical competencies and expertise are however not compromised by distance. This paper endeavours to discuss how the Department of Health Studies maintains baseline expertise and quality assurance within these diverse fields of clinical experience as well as the challenges relating to the accompaniment of learners in the clinical field facing educators offering these programmes. The ultimate aim of these programmes is to empower nurses and midwives to function as leaders, educators and researchers in their fields of specialisation, in socio-political areas where there are persistent limited medical resources.

Introduction

Post-basic clinical nursing programmes are practice-based programmes. The need for nurses and midwives to update their knowledge and skills while maintaining their employment highlighted the need for a systematic continuing educational system which will provide learning opportunities to nurses while practicing nursing. Educational institutions such as Unisa answered these challenges by offering clinical post-basic nursing programmes through the distance learning mode.

In 1995 the Department identified the need to introduce a master's degree in Intensive Care as a result of the terms of reference of the World Health Organisation Collaborating Centre (WHO CC) for Africa. In 2000, two further structured master's programmes were introduced in the Department, in the fields of Trauma and Advanced Midwifery and Neonatal Nursing Science. These would enable nurses to further their clinical qualifications and act as experts in the field of intensive care, trauma and advanced midwifery and neonatal science without leaving their homes and work. Prior to the

introduction of these programmes at Unisa, they were offered at residential universities only and not through the distance education mode.

These programmes were not only developed for the nurses in Africa, but also for South Africa and learners abroad.

The main purpose of the qualification is to empower nurses to specsialise in a specific clinical field and thus act as leaders and educators in the clinical area to be studied.

The objectives of the qualification further include:

- The learner will be able to practise independently within the ethical, moral and legal framework of the country and enable the learner to apply theory into practice.
- The learner will be able to conduct research in the field and thus use the results to base the care of the clients on substantiated evidence.

Following is an outline of the structure of the Department, the statutory bodies, the type of learners in post-basic clinical courses, the curriculum and the process.

Overview and structure of the Department

The University of South Africa (Unisa) pioneered distance education at university level in the Western world when it established its Division of External Studies in 1946. The growth of its learner numbers over the decades and the international recognition of its qualifications have highlighted the effectiveness of this method of education. Unisa is the oldest university in South Africa. It was established in1873 as the University of the Cape of Good Hope, which was purely an examining body. Its name changed in 1916 to the University of South Africa, and under its umbrella several colleges became full autonomous universities. In January 2004, the new Unisa was established, with the merger of the Technikon SA and the distance education leg of Vista University.

The Department of Health Studies is located in the School of Social Sciences within the College of Human Sciences. It was established in 1975, as the first department offering nursing courses in the distance education mode in the world. The Department also offered the first post-registration bachelors', masters' and doctors' degrees through distance education in South Africa. Opportunities for nurses to advance their academic and professional nursing careers while staying at home or continuing to work were created. By 1992, the department was the largest Department of nursing in the world in terms of learner numbers.

The Department of Health Studies is a WHO CC for Nursing and Midwifery in Post-graduate Distance Education and Research Development. This was awarded in 1999. The terms of reference of the Department as stated by the WHO CC are as follows:

- Development of distance education to countries in Africa
- Strengthening of the capacity of tertiary institutions in Africa

- Strengthening of capacity to conduct appropriate research
- Providing advisory/expert services
- Developing courses which are relevant to the needs of countries, appropriate to their infrastructure
- Capacity building/establishment of partnerships
- Establishment of an *African Journal for Nurses and Midwives*

The Department has 29 full-time academic teaching staff and 7 full-time administrative staff. Due to the large number of learners (9577 registrations for 2004), the Department also employs part-time staff, such as external markers and clinical preceptors.

Programmes offered in the Department

The Department offers a variety of programmes, in which learners can choose either to further their academic qualifications or to further their qualifications in the clinical field. Some of the programmes offered are certificate, diploma, bachelors', BA honours, masters' and doctoral degrees.

Most of the programmes offered are bachelors' and masters' degrees in Nursing Services Management, Community Health Science and Health Sciences Education.

The Department also offers a structured master's degree in clinical courses, such as Intensive Care, Trauma and Advanced Midwifery and Neonatal Nursing Science.

Statutory bodies

The South African Nursing Council has set the minimum requirements for experiential learning. All programmes offered by the Department are accredited and acknowledged by the South African Nursing Council, which is an Education and Training Quality Assurance Body (ETQA) for nursing. Within the South African context, the National Qualifications Framework (NQF), the outcomes-based education (OBE) system, the South African Qualifications Authority (SAQA) and the needs of the public in general all have a prescriptive impact on higher education curricula in general, and on learning material and teaching methods in particular (Wessels 2001:217-224).

Who is the Unisa nursing learner?

Unisa nursing learners probably have different characteristics from other Unisa learners. When learners enrol for a nursing programme at Unisa, they already have at least four years of study experience because of their basic nursing training, which enables them to become registered nurses. The Department of Health Studies only offers post-registration programmes. The learners are thus not school leavers and have study experiences different from many other Unisa learners. Their previous study experience will bring along unique learning needs. These adult learners have often practiced academic skills of their own. They probably need to learn independently and

according to their learning-readiness (Van Rensburg 1999). Unisa nursing learners, like other Unisa learners, have a need to organise their learning to suit their specific professional and personal needs (Steyn 1994:48). These learners usually also have extensive experience of life and many aspirations for self-fulfilment.

Seidl & Sauter (1990:14-15), describe the learners who are older than the traditional college learner and who have significant or work experience as non-traditional learners. These learners, who have assumed the social roles associated with adulthood, and who have perceived themselves as being responsible for the conduct of their lives, are classified as non-traditional learners. Seidl and Sauter (1990:13) describe non-traditional learners as returning adult learners, highly motivated with a breath of work experience. They were also described as typically older than 25 years, with previous tertiary education experience and holding full-time posts.

The Unisa nursing learner can thus be identified as a non-traditional adult learner. Since these older learners are less positively orientated towards the conditions and modes of learning commonly associated with formal education settings, distance education could be expected to suit them well (Van Rensburg 1995: 45).

The curriculum

The curriculum consists of five theoretical and clinical practice papers and a dissertation of limited scope. Four of the papers cover theoretical aspects and one paper covers the practical aspects which the learners need to complete. The programme is offered over a two-year period and holds 240 credits. On completion of this qualification, the learner will be able to register a professional qualification with the South African Nursing Council (only South African nurses) and also be conferred with a master's degree in Health Studies.

The curriculum of the practical part comprises a first tutorial letter specifying the outcomes for the module. Competency is required in a number of clinical procedures, and for each of the procedures an evaluation instrument has been developed. The workbook consists of all the procedures the learners have to complete in the specified time (SANC stipulations) before and during the course. The skills involved cover areas in management, education and research.

Part of the workbook is a log book in which each skill must be signed off by the preceptor and institution where the skill took place. An official stamp of the institution is also required.

A second tutorial letter contains the guidelines for the preceptor on the use of the workbook and the assessment of the learner. It is expected of the learner to hand in assignments during the year and a portfolio of the completed work.

Where possible the needs of the country are taken into account, and the outcomes are changed according to the information supplied in the situation analysis.

Learner support

In order to guarantee the success of a programme in post-basic clinical programmes, learner support is of the utmost importance. Armstrong, Gessner and Cooper (2000:69) have identified different types of methods used for distance education. These include:

- Audio conferencing, which provides the two-way interaction support needed when one-way communication technology like videotapes or live satellite are used.
- A computerised slow scan or compressed system that provides real-time simultaneous voice and graphic interaction via telephone lines.
- CD-ROM, which has multimedia for distance education purposes.
- Chat conferences or online discussions, conducted in real time so learners can receive immediate feedback. Chats may be between lecturers and learners or learners and learners.
- Email, an effective computer-based method to store and forward messages, present stimulating questions to learners, and attach files for interchange.
- Fax, a low-cost approach using a fax machine to electronically reproduce visuals and text. The information is transmitted quickly, or faxed, over telephone lines.
- Interactive television, lecturers using an electronic podium to access sites via telephone, closed circuit, cable, satellite. It may be a one-way or two-way video, with audio monitors displaying projected images to learners at designated sites, facilitating computer-based online classes or courses, simultaneous conferences with lecturers and learners, and links to informative Web sites.
- Print materials, a way to disseminate information which still yields effective learning outcomes. These may include hard copies from World Wide Web sites.

In order for learners to successfully use these learner support methods, the following should be considered by the lecturer when designing interactive support methods:

- Humanising the medium: This starts with the process of creating a good learning environment. Providing education for distance learners is about motivating the learners as well as the delivery of information, such as sending a welcome letter, using one's own personality to make the content come alive, and incorporating time during the educational experience to get to know the learners. An important aspect to take into consideration is the uniqueness of the individual learners' needs to be acknowledged.
- Getting learners to participate: Activities which can be considered are employing a warming-up exercise, asking the learners practice-based or experience-based questions, using case studies, and personalising the

instruction. Learners can be divided into groups with computer-based conferencing tools, such as chat room formats, to have small group discussion and then be reassembled as a larger group. These types of strategies may assist the learners to overcome the obstacles of isolation, intimidation and insecurity, factors which in the past have been associated with distance education (Larson & Dunkin 1997:298).

- Using the right message style: Using a variety of approaches helps capture and hold the attention and interest of learners. Additionally, while the style of teaching is always important, careful organisation of content and logical sequencing is also crucial in teaching at distance.
- Getting feedback from learners: Feedback both during and after the presentation of the programme is very important. It can take place using different techniques, such as assessment forms, written evaluative comments, faxes, and telephone sessions between and after presentation of the course material. Planning the use of these techniques is very important, so that institutional material can be changed if necessary.

Where possible all of the above methods are used to support the learners during their clinical practice module.

The process

The admission criteria for these programmes are as follows: the learners must possess a four-year diploma/or an equivalent in nursing; must have at least one year of experience in the field of study; must be working in the field they are to specialise in for the duration of the course; and must be registered with a nursing/health statutory body in the country where they reside, as a registered nurse.

On registration, the learner/manager of the institution where the training is to take place is requested to complete the situation analysis form of the institution where practical is to take place. This form was specifically designed for each programme and its purpose is to indicate the clinical learning facilities that the learner will be exposed to. Its second purpose is to ensure that there are qualified nurses who will be able to guide the learner in the clinical area.

On completion of the situation analysis, the lecturer concerned evaluates the clinical facilities and assesses whether they comply with the minimum requirements set by the SANC and the Department for the qualification. In South Africa, the clinical facilities must be registered with the SANC as institutions which have complied with the necessary standards and been accredited with the status.

A preceptor

A preceptor is identified by the nursing services manager of the institution where the practical part of the course is done. Preceptors are experienced professional nurses

within clinical settings who act as role models and resource persons for learners who are assigned to them for a specific period of time. Preceptors are unit-based and assigned to specific clinical settings in which they are experienced and competent (Brink 1989:63; Quinn 1999:189). Mashaba and Brink (1994:129) refer to preceptors as persons who facilitate learning in practice while promoting and participating in the delivery of nursing care. This notion is supported by Myrick (2002:154), who maintains that preceptorship might be defined as a one-to-one reality-based clinical experience in which the learner is taught directly by a professional nurse specialist. According to Stevenson, Doorley, Moddeman & Benson-Landau (1995:160–165), preceptors are experienced practitioners who teach, instruct, supervise and serve as role models for learners for a set period of time in a formalised programme.

The selection criteria for preceptors are prescribed in a tutorial letter which is sent to the nursing services manager. According to Mellish, Brink & Paton (1998:217–218), many preceptors who participate in the accompaniment of learners, are experienced and they are not required to rotate shifts. This promotes some stability in the programme offered. This notion is supported by Burke (1994:60–66), who claim that preceptors need to have at least twelve months' experience within a clinical field. Preceptors are to take very active roles in the development of the learners and should be selected on the basis of their expert clinical knowledge, ability and willingness to accompany the learners in the clinical settings. The willingness of preceptors to accompany learners might be shown by the interest displayed by preceptors in learners' needs for professional and academic development, and in the way preceptors feel about the preceptorship as a means of job enrichment and professional as well as personal growth. Stevenson et al (1995:166) assert that preceptors are selected for preceptorship roles as they are perceived by their supervisors as authority figures and as knowledgeable and skilled in guiding learners in clinical settings.

The role of the preceptor

The preceptor sets guidelines for the learner. Where possible, the lecturer concerned may have a telephone/video conference with the learner and the preceptor together, and may visit the preceptor and learner in South Africa. The major responsibilities of preceptors are clinical supervision of learners, which involves verifying the learners' competencies in performing selected clinical skills, and facilitating learners' development in synthesising the responsibilities of professional nurses (Stewart 1993:3). Preceptors are expected to fulfil their preceptorship role in mutual negotiation with learners and the lecturer responsible for teaching the theory for that particular area of practice. They do not function as formal teachers; however, they do assume great responsibility in this area. Preceptors assist in the identification of learners' learning needs, providing feedback to the learners and communicating with the lecturer regarding the progress of learners in the clinical settings. In addition, they evaluate the learners and identify resources for clinical learning (Myrick 2002:162).

The Unisa lecturer is in constant communication with the preceptor with regard to the progress of the learner.

Assessment

Assessment of the learner's progress is done by means of regular telephone/video conferences. Continuous assessment is done by requesting learners to send in assignments of the expected outcomes during the year. Regular reports of the learners' progress are expected from the preceptor. Practical procedures are assessed by the preceptor.

The learner sends in a portfolio of the work stipulated in the workbooks sent to the learner on registration, and this serves as the summative evaluation. Each workbook has the outcomes of the practical to be done, for each of the procedures; an evaluation instrument has been developed for each of the procedures. The preceptor sends in a final report on the learner's progress (Kirsching, Fields, Imle, Mowery, Tanner, Perrin & Steward 1995:401-410).

Challenges

With the above academic mechanisms in place, many challenges face the Unisa lecturer involved with the offering of clinical post-basic programmes.

- Quality assurance: Although all mechanisms are put in place so that a high standard of clinical practice will be upheld by the preceptor and the learner, in hospitals and clinics out of South Africa, the quality of the teaching and assessment lies solely within the integrity of the preceptor and the learner.
- Accreditation of clinical facilities: In South Africa, the clinical facilities are accredited by the South African Nursing Council. Where learners are outside of the borders of South Africa, they are requested to send in a detailed situation analysis of the clinical facilities. The Unisa lecturers judge the facilities on the information of the situation analysis as well as conversations with the preceptor and nursing services manager of the hospital where the clinical practice is to take place.
- Appropriately trained preceptors: In South Africa, it is possible to visit the learners and the preceptor at the facility where the practical is taking place. Abroad this becomes complicated and the Unisa lecturer is not sure whether the preceptor does have the qualifications to ensure that the learners' competency in the field is at a high level. In most areas in Africa, where there are no nurses trained in the fields offered, medical doctors are identified as preceptors, which could be complicated by the fact that the physician does not have the interest of the nurse at heart. In some countries, physicians are also of the opinion that nurses cannot act independently and are not capable of following a clinical master's programme (King 2000:64).

- Inadequate facilities: In some clinics/hospitals outside of South Africa, the equipment is outdated or there is no equipment to ensure that learners get the best training and at a level which is expected of them. If possible, learners should come to South Africa and spend some time in an institution which offers that part of the training facilities where equipment and technology are available.
- Financial constraints: Preceptors are not paid for their role in the teaching of the learners; preceptorship is seen as an honorary position. Unisa should make some finances available for the preceptor, as otherwise the commitment of the preceptor to this position may not be taken seriously.
- Travelling to the learners in South Africa: This may be costly, as the learners registered are widespread throughout the country.
- Training of the preceptors: If at all possible, the preceptor in far-off hospitals and clinics should be brought to an academic hospital to receive training in the clinical aspects which are not available at the institution where he/she is working. The preceptor should also receive training in the teaching and assessment of the learner.
- State of the art regarding procedures: Where possible, learners should be exposed to the latest procedures in the field they are studying.
- Lecturer competency in the field: It should be possible for the Unisa lecturer to gain experience in the field and be competent in the field of practice (King 2000:63).
- Learner support: It is still not possible to utilise learner support methods such as video conferences, email and any computer-assisted techniques where learners are living and working in areas lacking satellite systems or where telephone lines are not effective. Most of the teaching is still done via the written mode.

Conclusion

The adult distance learner is a special kind of learner who, given his/her particular situation in life, is entitled to education of the highest quality and deserves all the preparation and dedication that the university can offer.

The lecturer teaching post-basic clinical courses serves as an essential link between the teaching institution and its learners. For the learner to be successful in these programmes, the lecturer must make a significant contribution to the learners' learning, and try to eliminate some of the negative features of distance teaching (Oosthuizen 1997:69-85).

The Department of Health Studies, as a WHO CC, strives to uphold the terms of reference as stated to empower nurses in South Africa and Africa to act as competent leaders in the various clinical fields. This is also in line with the new Unisa vision:

'Towards the African university in the service of humanity'.

Distance education is seen by some theorists as an entirely separate form of education, by others merely as taking place on a continuum of types of education which has at one end the totally supportive one-to-one, face-to-face situation and at the other end a process of learning from materials which is devoid of human interaction. Stewart (1993:11) highlights the characteristics of distance education as proposed by Peters (1973) as follows:

- The division of labour in the teaching process itself, which allows a rationalisation of the elements of the teaching process
- The use of technical equipment to ensure a product of constant quality in theoretically unlimited volumes
- The applications of organisational principles to cut down unnecessary effort on the part of those teaching and those learning
- The use of technical media such as television and radio to replace teachers and cater for volume
- The testing of the product, the teaching package, to eliminate mistakes and guarantee a high standard of practitioners
- The monitoring of the teaching system by scientific methods to maintain quality and standards

In general, most institutions in the world offering distance education would agree with this definition. One such university is the University of South Africa (Unisa).

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An experiential learning module for training health sciences educators through distance education

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Distance education poses a challenge to theory/practice integration in professional programmes. Nursing is a practice discipline as are many other health disciplines, which therefore necessitates the utilisation of experiential learning to ensure safe and effective practice of newly graduates.

The Department of Health Studies at the University of South Africa offers two programmes to train health sciences educators, an advanced diploma and a bachelor's degree. Both these programmes allow students to register as nurse educators with the South African Nursing Council (SANC), the statutory body for the nursing profession. An experiential learning module was developed for the practica component (as required by the statutory body), for the mentioned programmes.

The experiential learning module consists of prior preparation during which class room and clinical lesson plans have to be prepared. Thereafter students have to attend a one week practica session during which they present ten classroom lectures. The presentation of six clinical lectures has to be offered within the health service where students are employed. Students also have to complete a workbook on health sciences school management which includes problem-based and cased-based learning activities. The one week practica session involves a lot of interaction, discussion, self-assessment and peer assessment, and individual student activities.

The challenge for academic staff remains to produce competent health sciences educators through innovation, continuous revision of health educator needs, new developments ineducation and health care delivery, and adequate assessment of students.

Introduction

The Department of Education regards the integration of knowledge and skills as essential to the achievement of competence in any field of study and refers to the importance of reflection during theory/practice integration in the National Curriculum Statements (Department of Education 2002:6). The Council on Higher Education states that students should be encouraged and given the opportunity to perform in authentic or simulated real-world contexts (Council on Higher Education 2001:112).

Integration of theory and practice has always been a point for debate in the professions because of the need to combine cognitive, affective and psychomotor skills in the

development of professional expertise and vocational competence. Experiential learning is the answer for training in the health professions.

In experiential learning the focus is on learning *through* experience and not *from* experience, as everything in life constitutes experience. Learning *through* experience encompasses deliberately planned experiences to facilitate learning (Quinn 1995: 143). Professional expertise can only develop from learning that is gained through experience as this necessitates full involvement in an experience (concrete experience), reflection afterwards, followed by abstract conceptualisation of theory and practice.

The purpose of the **Health Sciences Education practica module** is to prepare and develop competent health sciences educators who are able to apply the didactics of health sciences education.

The **outcomes** for this module include that students should be able to do the following:

- Prepare lesson plans
- Implement a variety of teaching strategies in the lecture room, clinical field and community setting
- Apply self- and peer assessment in the lecture room
- Demonstrate creative and critical thinking aswell as problem-solving and decision making skills with reference to the management of teaching in a health sciences education institution

This paper will describe the process used to facilitate the development of health sciences educators with the abovementioned skills to enable them to teach others in the health sciences professions.

Context

The context of this experiential learning module includes the South African Nursing Council (ETQA for nurse training), distance education and the adult student who has already completed a tertiary education qualification.

South African Nursing Council

The controlling body for nursing education in South Africa is the SANC. The Nursing Act 50 of 1978, as amended, provides for the institution of a body, the South African Nursing Council, to protect the public by regulating nursing practice.

The philosophy of the SANC states the importance of developing nurses on a professional and personal level leading to behaviour changes in the cognitive, affective and psychomotor dimensions within a caring ethic. Specific reference is made to developing the abilities of critical and creative thought. It is further stipulated that theory and practice must be integrated, which requires from all nursing programmes a theoretical as well as a practica component.

The minimum requirements for a programme leading to registration as a nurse educator are contained in the SANC Regulation No. R 118 (South Africa 1987).

With regard to a programme leading to registration as a nurse educator, the following requirements pertain to this specific module (SANC 1987:7):

- Ten formal presentations of subject content
- Five clinical teaching presentations
- Development of a mini learning package
- Development of teaching aids
- Evaluation of tutors and teaching.

Distance education institution

The focus of the Department of Health Studies at the University of South Africa is to develop leadership in nursing and public health. Apart from honours, masters' and a doctoral degrees it offers the following undergraduate programmes pertaining to the training of health sciences educators:

- Bachelor of Arts degree in Nursing Science (majoring in Health Sciences Education and Health Services Management)
- Advanced University Diploma in Health Studies (Health Sciences Education)

Each one of the above programmes contains the same Health Sciences Education practica module, which students have to complete to enable them to register with the South African Nursing Council as nurse educators. The educational institution must ensure that the minimum requirements of the SANC, as the nursing education controlling body, are met.

Students

Students who register for the mentioned two programmes have to be registered with a nursing council as professional nurses (South Africa 1987). This implies that they have already completed a three- or four-year tertiary diploma or degree in basic nursing. These students are usually employed in the health services where they are familiar with the clinical field. They are therefore working full-time and have families to care for. Distance education provides an opportunity for nurses working all over the country and abroad to further their education on a part-time basis.

Terminology

The following terms are used with regard to the offering of this module:

Supervisor: a professional nurse registered as a nurse educator with the SANC and appointed on a one-year contract by the University.

Formal presentations of subject content: lectures presented in a lecture room through the use of any teaching strategy.

Clinical lectures: lectures given within a health service in the clinical environment, which could be a health clinic, outpatient department or hospital ward (SANC 1987).

Clinical field: refers to any setting or environment where health services are delivered to clients/patients, for example hospitals, clinics and in the community during home visits.

Process

Curriculum

The curriculum for the Health Sciences Education practica module consists of parts 1, 2 and 3. It includes more than the minimum requirements set by the South African Nursing Council (SANC).

Distance education: Part 1 consists of ten formal presentations of subject content. Complete lesson plans have to be written out for three formal lessons (one anatomy, one physiology and one nursing care lesson on any chosen disease condition); one health education lesson; a group discussion; demonstration; role play; learning package; personal analogy; and a case study. Students have to select one theme from a clinical field (general nursing, midwifery, psychiatric nursing, community health nursing) and base lectures on this theme. This will involve choosing suitable teaching strategies to focus on either affective, cognitive or psychomotor skills development; for example different strategies will be used to teach anatomy or health education on HIV/AIDS.

Experiential learning: The ten formal presentations of subject content are offered by students during a one-week practica session. Thereafter students have to present six clinical lectures within the health services where they are employed. The clinical lectures must include three demonstrations of nursing procedures, one culturally sensitive health education lecture, one utilisation of a teachable moment to teach students on the spot and one presentation of evidence-based practice to be offered during a nursing care conference

Distance education: Part 2 consists of information on Health Sciences School Management including the nature and processes of course management - financial management, organisation, policies, procedures, control; decision making and leadership; human resource management; quality assurance and management of learner assessment. Each section contains problem-based and case-based learning activities which students must complete.

A **workbook** on these management skills must be completed by students and submitted before the end of the year. The activities in the workbook are problem-based and case-based to stimulate the development of creative, critical, problem-solving and decision-making skills. The completion of the workbook involves **experiential**

learning. Students have to make an appointment with a nursing college to visit and have discussions with the principal and some of the nurse tutors regarding educational management aspects before they can complete the workbook.

Distance education: Part 3 consists of various documents to be submitted as evidence that a student has completed all the practica requirements for the module and include the following:

A register for practica with proof of educators' signatures that the following were assessed:

- Ten lecture room lessons presented
- Six clinical lectures presented
- A compiled Manual for Professional Nursing Practice
- Workbook for Health Sciences School Management

The final responsibility is with the lecturer offering the module, to ascertain that all requirements for the practica module have been met. She/he will check students' registers, assess the content of the workbooks and calculate the final mark for the student. The various sections mentioned in the register and the workbook as such, all have different weights which contribute towards the final mark. These are entered on a special computer programme for the practica component of the diploma or degree leading to registration as a nurse educator.

Learning material

The students are provided with the following learning material:

- a tutorial letter containing information and guidelines with reference to all requirements for the practica, including detailed instructions regarding the requirements for lesson plans, as well as examples
- a study guide with examples of different teaching strategies' lesson plans; evaluation forms for each; an example and evaluation forms for clinical teaching sessions; information on health sciences school management; prescribed reading; a workbook for management skills; and a register for recording of completed practica

Prior preparation for practica

The aim of the prior preparation is to ensure that students are prepared for the activities during the one-week practica, as well as to comply with the *active student requirement* of the Department of Education (South Africa. department of Education 2003: 1-6).

A compulsory assignment has to be submitted containing students` planning of a theme and topics for each classroom lesson to be presented, and an outline of the content of one formal lecture.

Students are informed via the first tutorial letter that they need a six-week period to prepare before they attend the one-week practica session.

Students are also offered an orientation day at least two months before practica commences. During the orientation day students receive information on the preparation and presentation of their classroom and clinical lessons.

For the classroom lessons students have to write out ten lesson plans and design the accompanying teaching media. They also have to prepare ten questions pertaining to the SANC regulations, which they will use in a game (as teaching strategy) during the one week practica session.

A Manual for Professional Practice must be compiled containing the following documents:

- The Nursing Act
- General regulations pertaining to professional nursing practice
- Regulations concerning minimum requirements for registration of additional qualifications (basic and post-basic nursing programmes)
- The teaching guides/directives pertaining to each of the nursing programmes

Practica (one-week session)

The aim of the practica is to provide the students with the practical experience of implementing different teaching strategies in order to master the technique of presentation, as well as to give them the opportunity to evaluate the teaching of their peers (future educators), which is one of the requirements of the SANC.

The practica is offered in one-week sessions at different centres throughout South Africa. Students book well ahead at a centre for a time slot which suits them. A maximum of six students per supervisor are booked. The students are divided into groups of six per lecture room with a supervisor, which means that four supervisors and four lecture rooms are available for each one-week practica session as a maximum of 24 students can be accommodated.

Students submit the ten written lesson plans on the first day of the one-week practica session. These are assessed and returned to them with feedback during the week to grant them the opportunity to do the corrections before they present the lectures in the class.

On the first day students are orientated with regard to the format and activities for the week. A video on the presentation of a formal lecture and a micro lecture is then shown to the students. An orientation on each different teaching strategy is given during the week before students have to present a particular teaching strategy to enable them to prepare appropriately for their presentations.

Students present their lectures within the smaller groups to their colleagues and the supervisor. Each student has to present one formal lecture of 40 minutes duration,

and three micro lectures of 15 minutes duration each. The other teaching strategies including the demonstration, group discussion, role play, personal analogy, and case study are presented to the whole group, and in each case a number of students will get the opportunity to present their lectures.

They learn a lot from observing their colleagues' teaching styles, conduct in front of an audience, attitudes, and ways of transferring knowledge. Outcomes-based education is believed to be based on the principles of cooperation, critical thinking and social responsibility. Through cooperative learning students are stimulated to develop critical thinking skills and social responsibility (Jacobs, Gawe & Vakalisa 2000:197). The students pick up cues from the role modelling of the supervisor as well as their colleagues. Educators have to be good role models to influence their students positively.

Dialogical teaching occurs during the one-week practica when students enter into dialogue with the supervisor and their peers after each lecture has been presented. According to Gravett (2005:41), dialogue is marked by reciprocity among participants where mutual trust, respect and concern prevail as all are in the same situation and need to come out of the situation successfully.

Each student's presentation is followed by peer and self-assessment and the supervisor's feedback, in a discussion session. According to Billings and Halstead (1998:5), peer assessment is a vital aspect of faculty development, and lecturers' teaching performances need to be reviewed regularly. Students often express their amasement at their own progress from the one lesson presentation to the next as a result of feedback from their colleagues, the supervisor, and their own self-assessment.

Assessment

Students are assessed on the following:

- Ten written lesson plans
- Presentation of ten lecture room lessons
- Presentation of six clinical teaching sessions
- Compilation of a manual containing the Nursing Act and the regulations and directives of the SANC
- Health Sciences School Management workbook

Formative assessment aims to improve the competence and standard of professional practice (Mellish, Brink & Paton 1998). This is accomplished in this module during the one-week practica session through assessment of the ten written lesson plans which students submit on the first day of the practica week. These are assessed by the lecturer and/or supervisors and returned to the students with feedback pertaining to the corrections which need to be done. Students have to incorporate the corrections and submit the lesson plans again for evaluation by the supervisor before they present the lectures.

Peer and self-assessment are applied during the presentation of the ten lecture room presentations. A fellow student is asked to assess a colleague during the presentation of a lecture and present a summary of the assessment after the lecture. During the discussion that follows, the student, peers and supervisor all give their impressions of the lecture.

The students' manuals are assessed during the one week practica, discussed with them in a group, and feedback given as to the required documents not included, in which case such a manual must be re-submitted.

Summative assessment commences as follows:

- During the one-week practica, students present their lessons to their peer group and the supervisor completes the assessment instrument and enters the final mark on the student's record. Students must pass this section as it reflects their teaching potential.
- The clinical teaching sessions are assessed by registered nurse educators at the health service institutions where students present these. An assessment instrument compiled by the lecturer is used and the supervising nurse educator has to complete it and sign the student's register. Due to the fact that these assessors are not appointed or supervised by the Department, the same mark is given to all students who performed satisfactory for this section.
- The workbook on Health Sciences School Management skills is assessed by the lecturer after the student has submitted it together with all the required documents for completion of the practica, by the end of the year.
- The register, which contains the evidence of completion of all sections of the laboratory work, is finally checked by the lecturer and a final mark is calculated.

Barriers

The barriers to the one-week practica session include the following:

- Students book for a practica session and without cancelling do not turn up. This influences the sizes of the smaller groups, which impacts negatively on the learning experiences.
- Students who arrive unprepared or submit substandard lesson plans are not allowed to continue with that specific practica week.This causes unhappiness and creates the feeling that they are being discriminated against. These students then have to book for another week later during the year.
- Students initially experience the one-week practica session as threatening because of the peer and lecturer assessment, and very tiring, so they are often exhausted by the end of the week. However, all of them are usually very appreciative towards the end because of the tremendous amount of learning and personal and professional growth they have experienced.

- According to students' and supervisors' evaluation of the practica, one week for experiential learning is not adequate. Students need at least three weeks: one week to learn how to prepare teaching media, and two weeks for lesson presentations. Unfortunately, due to financial restraints, this cannot be implemented.
- Health sciences have various speciality fields, which requires students to do research and consult recent textbooks on these fields. Students are often not willing or able to do research, which results in lesson presentations of substandard quality.
- Students are sometimes not willing or able to spend money on media preparation.
- Due to a lack of good role models during their previous education exposure, some students have not yet conceptualised what competent teaching entails.
- Students find theory and practice integration difficult to apply during teaching.
- Students who fail the one-week practica session often react negatively. This requires supervisors to keep thorough records of student performance.
- Student assessment is currently done by 21 supervisors, and the question therefore arises of whether the assessment criteria are applied in a consistent and objective manner.

Challenges

The challenges faced by academic staff include staying abreast of new developments in education and health service delivery, improving and finding innovative ways to facilitate learning and stimulate students' self-activities, and revising and adjusting the curriculum to meet current and future needs of the health professions and health service providers.

Conclusion

Assessment of the one-week practica session has indicated that students regard it as an empowering and rewarding experience. The interaction between students, their peers, academic staff and the supervisors has proved to be very valuable for the students' professional, academic and personal growth. Not only are they being provided with professional role models whom they can observe and learn from, but they also get the opportunity to practise the required skills in a supportive and cooperative learning environment. The learning environment is specifically organised to cultivate respect, trust, and authenticity and therefore encourages psychological openness, to enable students to learn and grow optimally.

According to Carl Rogers (1983, in Quinn 1995:101-102), the relationship that exists between the educator and student is of fundamental importance to facilitate genuine and valuable learning and growth. Apart from emphasising the necessity for trust, acceptance, genuineness and empathic understanding in this relationship, he views

learning as a continuum, with meaningless material (referring to many curricula) at one end, and significant or experiential learning at the other. The qualities inherent in experiential learning, including personal involvement, self-initiation, pervasiveness, self-evaluation and meaningfulness, not only encourage cognitive functioning but concern the whole person.

Experiential learning is therefore an essential component of any programme offered for the health professions, especially because in a human science such as nursing the ultimate aim is to produce a competent person who can function as a whole person in delivering a service to humankind.

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Practical training of community health nurses at the University of South Africa (Unisa)

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Unisa is the leading South African university which provides distance education programmes for nurses to register as community health nurses with the SA Nursing Council. Their education and training aims at the delivery of health professionals who can provide a comprehensive health service to communities within South Africa. They are expected to function professionally, effectively and within the boundaries of existing South African legislation. Furthermore, they are expected to be skilled in ethical decision making and moral reasoning in the delivery of their services.

The purpose of this paper is to detail how the Department of Health Studies at Unisa interprets and executes the prescriptions of the SA Nursing Council, the SA Qualifications Authority and the University of South Africa to produce well-qualified and experienced community health nurses in an effort to satisfy the legal, professional and societal expectations that exist for this essential category of health professionals.

Introduction

Experiential learning is an essential component of learning, especially because it prepares candidates for the world of work. Experiential learning (experience) was already seen way back in 1938 by Dewey (1938:20) as a necessary component in education. Auret (2003:1), quoting Dewey, states that experience, to be valuable, must be purposeful and holistic and should be planned with forethought. He (Dewey) was of the opinion that the quality of the experience, and how that experience influences later experiences, is critical. Dewey says experience is a necessary component of education; and for it to be puroseful as part of education, it:

- must be of high quality; and
- must have continuity: it is referenced to the past and shapes the future.

The nursing profession represents more than 50% of the total professional human resources of health services in South Africa. Moreover, nurses provide the bulk, by far, of health services in the public sector (Van Rensburg 2004:335). The South African Minister of Health recently confirmed this statement and said that nurses are called upon to be proud of their profession as they form the backbone of health service delivery in South Africa (*Pretoria News* 2005).

The role and responsibilities of the community health nurse can best be described by making use of the five principles of 'health for all', a concept used worldwide to provide quality health care to all. These five principles are (Acutt & Hattingh 2003:18):

The protection and prevention principle: protecting the health of the community
The adaptive principle: adapting the environment to the capabilities of communities
The health promotion principle: promoting the physical and psychosocial wellbeing of communities
The curative and rehabilitative principle: minimising the consequences of ill-health, disease. accidents, and injuries
The primary health care principle: providing general healthcare services for communities from nearby facilities

The education and training of community health nurses in South Africa

The education and training of community health nurses in South Africa takes place at accredited universities, colleges and private nursing schools under the authority of the South African Nursing Council (SANC). The curriculum of courses, in addition to accreditation by the SANC, must also be approved and registered with the South African Qualifications Authority (SAQA).

The objectives of the SANC are to promote the health standards of South Africans and to control and exercise authority in respect of all matters affecting the education and training of community health nurses, as well as the manner of practices pursued by this special category of nurses (Van Rensburg 2004:333).

The SANC sets minimum standards pertaining to the course content for both theoretical and practical training (practica) of community health nurses.

For the SANC to effectively fulfill its responsibilities, specific powers have been granted to it. The powers of the SANC, amongst others, are to inspect, accredit and approve nursing education institutions and nursing education programmes, so as to apply educational standards in nursing; to conduct examinations and issue qualifications; to register community health nurses; and to remove from, or restore to, a register any name, in order to maintain professional discipline (South African Nursing Council 1993a).

The education and training of community health nurses at Unisa

The University of South Africa (Unisa) is the leading African university which educates and trains community health nurses through a programme of distance education. The training of this very important category of health professional comprises both a theoretical component and a practical (experiential learning) component which is

referred to by the SANC as 'practica'. The experiential learning (practica) comprises the building up of a portfolio of evidence by students, who have to provide proof of exposure to, and participation in, actual work experiences.

Students at Unisa who complete the Community Health Nursing programme, apart from being able to register as community health nurses, can select additional modules to also register with the SANC as occupational health nurses or gerontological health nurses.

Exposure to the actual workplace, as part of students' learning, provides students with built-in opportunities to learn and to change. According to Kornbluh and Greene (1989:258) experiential learning can only be effective if the workplace to which individuals are exposed fosters an environment that is conducive to the development of real capabilities. Students at Unisa are, therefore, required to submit to the University for approval a list of the actual working sites where they intend to complete their prescribed practica prior to engaging in any form of experiential learning.

On successful completion of the required practica and the necessary theoretical component, candidates should:

- be able to function effectively as community health nurses
- have developed skills in ethical decision making and moral reasoning with particular reference to community health nursing
- be competent in skills necessary to practise as community health nurses according to the scope of practice as prescribed by the SANC, and with specific emphasis on:
    - identifying the critical aspects of international, national, regional and local community health
    - identifying the need for, and nature of, a comprehensive community health service to satisfy the needs of communities
    - identifying, evaluating and controlling those factors that influence the health of communities
    - working as a primary health care practitioners in the multidisciplinary, intersectoral health team
    - establishing and utilising relevant referral systems
    - identifying and using applicable community resources
    - effectively fulfilling the management, clinical, administrative, educational, advocacy and research roles of the community health nurse.

Prescribed activities (experiential learning) which students are expected to participate in and complete to the satisfaction of Unisa and the SANC cover a very wide range. Such activities take extensive planning by lecturers and students and need to be done

in a manner which facilitates the building up of a portfolio of evidence. The work-integrated learning required of community health nursing students includes exposure to the care of individuals throughout the life span – from cradle to grave. It furthermore includes aspects affecting various communities. A community, in this instance, can be defined as a specific group of individuals who share a specific geographical space at any given time. The following are examples of such populations: the total population of an urban area, the total population of a rural village, and the total population (labour force) of a particular industry.

Community health nurses, upon completion of their training, are expected to be able to provide a comprehensive health care service (promotive, preventative and therapeutic) to the communities they serve. The best (and only) way of acquiring this expertise is to be exposed to real-life situations.

Challenges faced by students

Students are required to make arrangements at suitable health establishments for their own experiential learning. The University provides students with letters of introduction which students then use in their negotiations to be accepted into the various health establishments so as to gain the required practical exposure. This has the added advantage that students acquire additional skills in taking responsibility for their own training and exposure to prescribed expertise which is required of them. Students must also ensure that their experiential learning is signed off by a competent person such as a registered professional nurse or registered medical practitioner.

In addition to this, students are required to make provision for their own professional indemnity in the event of any possible claims that may arise out of, and in the course of, the work-integrated learning they are involved in. This, however, is not a major stumbling block at all, because all nurses ultimately must have professional indemnity cover (insurance). This is usually obtained by means of a group insurance policy through one of the professional nursing organisations, such as the Democratic Nursing Organisation of South Africa (DENOSA).

A final challenge to students is the fact that they need to make use of some their annual leave to complete the prescibed practica. Certain experiential learning can fortunately be completed by some students in their regular places of employment.

Assessment of experiential learning completed by students

Assessment of experiential learning (practica) completed by students is done towards the end of the academic year. Special sessions are arranged throughout the major centres in South Africa where Unisa has regional offices including the Muckleneuk campus. This creates its own problems especially where students from other countries are involved. In this respect special permission is granted to students to forward their portfolios by courier or by post.

There are two other critical aspects which influence the planning, completion and assessment of the portfolio of evidence:

- The National Department of Education decided in May 2003 that, in future, institutions would have to have direct evidence that each student was being active during his or her period of study. The practice of assuming, particularly in the case of distance education programmes, that students had necessarily been active in the course of study because they wrote the final examination in that course would no longer be acceptable. This decision directly influences possible subsidies received by Unisa from the Department of Education.

  Previously students were granted the opportunity to submit their completed portfolio of evidence at a particular session. This provided students sufficient time to plan and complete all the practica required to satisfy the requirements of the University and the SANC. However, students are now compelled to submit at least one portion of their portfolio of evidence at an earlier date so as to indicate (for subsidy purposes) that they have been actively involved in their practica throughout the whole of the academic year.

  This has resulted in the Department of Health Studies taking the decision that each student will, in future, have to submit at least one compulsory assignment during the course of the year.
- The assignment submitted by students in the form of a compulsory assignment must be selected very carefully. Because specific requirements for some of the practica involve the availability of specific categories/types of individuals (patients) during the time that students visit various health institutions to complete their practica, a section of the practica for the compulsory assignment has needed to be selected in such a manner that students would not be penalised for being unable to secure the presence of the required patients for a particular portion of the practica.

  Lecturers, therefore, now prescribe experiential learning which does not require the availability of patients. The following are examples of practica which are now given to students for purposes of successful completion of the compulsory assignment:

  - analysis and interpretation of the population of South Africa at national, provincial, regional and community levels
  - analysis and evaluation of the demographic and ecological profile of urban and rural communities and the factors which have an influence on there
  - evaluation of community health services in urban or rural context and analysis of the factors which have an influence on there
  - conducting an epidemiological field research project
  - compilation of a report comparing a rural and an urban community

- planning and initiation of a programme to motivate the community to become involved in their own development
- carrying out a field survey as a research project with a view to setting up an occupational health service

This new approach should have a positive outcome as far as the experiential learning part of the education and training of community health nurses is concerned. Not only does it provide evidence that students have been active during the course of study, but it also obliges students to commence with the completion of their portfolio of evidence much earlier in the academic year. Experiential learning is not a totally separate component of the education and training of community health nurses. It should be integrated with the theoretical portion of the course. Hopefully students will benefit more from their experiential learning as they are now compelled to commence with it earlier in the course of the academic year.

Conclusion

Work-based experiential learning (practica) has always been the norm in the Department of Health Studies at Unisa. It has proven itself over the years to be a valuable contributory learning experience to prepare community health nurses who can function professionally, effectively and within the boundaries of existing South African legislation. This approach has also been found to be of a nature that satisfies the legal, professional and societal expectations that exist for this essential category of health professionals

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Hands-on training through distance education

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There is a great need for primary medical care in the remote areas of developing countries. As medical practitioners and pharmacists are in short supply to render these services, professional nurses have been trained to fill this gap.

The University of South Africa (Unisa) does not have a medical school or clinical facilities where the experiential learning can be offered, but Unisa has the benefit of reaching the learners in these areas who are in need of the qualification.

Identified issues, brought about by the separation of learner and teacher, have had to be addressed to facilitate the implementation of this hands-on training programme through distance education.

Introduction

Significant health problems in Africa and other developing countries were the reason for the development of the philosophy of primary health care (PHC) by the World Health Organisation (WHO) (Van Rensburg 2004). One aspect of this global strategy is the rendering of primary curative or primary medical care, which includes the assessment of the patient, the diagnosis of the condition and the prescribing of the appropriate treatment for the patient. Traditionally this service is rendered by medical practitioners on a daily basis.

Unfortunately there is a shortage of medical practitioners and pharmacists in the remote rural and impoverished urban areas of Southern Africa. The South African Nursing Council (SANC) identified this need and decided to design a framework for the training of professional nurses who could render these services in the absence of medical practitioners and/or pharmacists.

South African training institutions, with hospitals and medical personnel on campus, experience few problems in implementing this practical training programme. Unisa being a distance education (DE) institution, on the one hand, is most suitable to train learners throughout the world who need this qualification, but it has no medical school and has therefore needed to solve some problems to make this training, comprising both theoretical and practical aspects, possible.

Main issues identified that needed to be addressed

It was clear from developments in the fields of health and education globally as well as in Southern Africa that there was a need for a learning programme in curative PHC.

Professional nurses, already working in rural communities, needed to be trained. Many of these professional nurses, due to the great need of patients and shortages of medical practitioners and pharmacists, often had to render curative PHC without the necessary qualifications and therefore also without any legal support.

These potential learners could not, for logistical reasons, travel to a residential university in South Africa or elsewhere and therefore needed to study through distance education. Due to the separation of learners and teachers, many challenges were identified which made the offering of this distance education training programme difficult. Learners would have to obtain the knowledge and skills within a relatively short period of time compared to medical personnel. Quality training and good control over the training process were therefore of the utmost importance to ensure that the qualified practitioners would be capable of rendering competent care to their patients/clients.

Six main issues were identified that had to be addressed.

No medical school or health facilities attached to University

One of the first issues the Department of Health Studies at Unisa faced during the development of the training programme was that Unisa had no medical school, patients, hospitals, clinics or any clinical facility where the learners could do their practical work. Teachers could also not accompany learners to health facilities as these learners came from various regions of South Africa and from neighbouring and other countries (mainly African).

The training programme had to involve practical work

The training programme needed an experiential learning component by which the learner could develop the skills of *inter alia* taking a patient's medical history, conducting a physical examination, making a correct diagnosis and prescribing the appropriate treatment. This could only be done in the actual PHC setting, in the rural areas on patients with real health problems. During the experiential learning period the learners therefore needed not only to develop new skills and apply the learnt theoretical knowledge in the real situation, but also to become *competent enough* to stand in for a medical practitioner and pharmacist when they were unavailable.

The design of a training programme had to be suitable for communities of diverse backgrounds

The third issue was to design a training programme that would be comprehensive but generic. Learners, coming from various cultural groups and countries, would have to

manage patients who belong either to their own culture or to cultures different from their own.

To ensure that the PHC rendered would be accepted by members of the community, knowledege of the culture would be necessary, such as how it affeced health-seeking behaviour, how the patients experienced disease and other cultural beliefs. Nurses would have to become sensitive to cultural issues and how these could affect the management of patients.

It was, however, impossible for the developers of the training programme to design a curriculum and study materials that would cover the cultural beliefs, endemic conditions and other serious health problems prevailing in all thecommunities of foreign countries from which the students would come. The programme could therefore not be country- or culture-specific, but had to be applicable to different countries.

The knowledge and development of new skills of the learners had to be assessment

The fourth issue that had to be addressed was the assessment of learners. Assessing the level of cognitive learning done posed no problems. The challenge was to determine to what extent the learners had indeed become competent practitioners.

The learners had to integrate their theoretical knowledge and newly developed skills to apply these in the clinical setting. However, they also had to develop problem-solving, decision-making and divergent thinking skills which would prepare them for unpredictable occurrences in clinical settings (Lekalakala-Mokgele 2005; Chabelli 1999; Mashaba 1994).

It was essential to determine what method of assessment would be the most appropriate and who would assess the learners, operating in numerous areas in a number of different countries.

The extent of the learners' involvement with experiential learning during the academic year had to be established

When learners register for a module that involves experiential learning, they receive their study material with detailed instructions about the required practical work, and they are expected to do their prescribed practical work during the year. It is often only at the end of the academic year that a teacher comes into contact with the learners when they submit their portfolio files and other proof that they have done their experiential learning. It is only then that a teacher realises that many learners had decided to cancel their registrations, and had not really been active during the year – perhaps because of some problems encountered with the required practical work.

It was therefore necessary to implement a method to distinguish between the active and the non-active learners pursuing this PHC course.

Recognition for the training programme had to be obtained from the role players

Another issue that needed to be dealt with was to obtain formal recognition for the training programme. It is the role of the SANC to provide guidelines for minimum criteria for registration, so the SANC needed to approve the training programme and ultimately register the qualified learners.

Opposition to the offering of this very practical (hands-on) training programme offered through open and distance learning was expected from health professionals, as they might have considered the programme inferior to in-house programmes. Recognition, respect and acceptance therefore had to be fostered with the very people the qualified learners had to represent.

Learners also had to know that their training programme would prepare them for PHC practice and that it would be money and time well spent.

Measures implemented to address the identified issues

Some of the measures implemented to address the challenges encountered in offering a PHC course by distance education had other spin-offs.

Learners seen as professional adult learners

The only way the problem of not having a medical school and other health facilities on campus could be solved was to assume that nurses were professional, self-directed adult learners capable of teaching themselves and taking on the responsibility of finding the appropriate facilities themselves (Kloppers 1999). This would mean finding willing trained professionals who would share their knowledge and spend many hours in their busy schedule to facilitate these learners' learning processes in the clinical setting. The next step was to obtain permission from PHC institutions with facilities these PHC learners could use. Finally, the learners had to obtain permission from patients, and find sufficient patients who would allow the students to practise doing physical examinations until they could perform them competently.

To ensure that the facilities and professionals identified by the learner, would indeed be suitable for the experiential learning, the learners have had to submit assignment 01, indicating the following:

- An analysis of the health institution(s) where the learner has planned to spend her/his experiential learning periods.
- A declaration of willingness of a committed medical practitioner, or trained PHC nurse, to facilitate the learning on behalf of the teachers at Unisa.
- Confirmation of a second medical practitioner, who would not be involved in their training, to conduct the learners' final practical examination.

- Contact particulars of the learner to facilitate student-lecturer communication during the academic year.
- Information about the personal circumstances, work and study load of the learner that would enable the teacher to advise the learner about identified and potential problems
- Information that would help in the planning of the activities for the year, such as evaluation sessions, future development and improvement of the programme and information for research purposes.

To overcome the separation of learner and teacher and other role players in the training process, effective and continuous communication would be necessary as well as the development of good relationships between all the stakeholders involved in the learners' training. [6, 7]

This could be achieved by doing the following:

- Prescribing comprehensive relevant learning material
- Designing specially structured, self-pacing, individualised tutorial matter that would answer the learners' common problems (Garrison & Baynton 1987)
- Providing the stakeholders with information on the outcomes of the training programme and guidelines that would enable them to create a learning environment fostering increased self-directedness and autonomy (Kasworm & Yao 1997; Garrison & Baynton 1987)
- Strengthening relations and communication during the year through taking a personal interest in the progress and development of each learner, maintaining regular contact with the facilitators of the experiential learning and practical examiners, and solving problems as they appeared (Rumble 1989).

Developing competent professional PHC nurses through experiential learning in clinical facilities

The training programme has a firm theoretical basis, integrating the practical skills required to develop competent PHC professionals. There is, however, a very large component of this learning programme that requires hands-on involvement in the clinical setting as learners need to develop skills to inspect, palpate, percuss and auscultate a patient's body to detect pathology.

It is also in the clinical setting where learners develop clinical and diagnostic reasoning and learn how to make the appropriate clinical decisions, which they need as qualified PHC practitioners (Kataoka-Yahiro & Saylor 1994).

Again the responsibility of proof of the level of the competency developed during the experiential periods is placed on the shoulders of the learner. Clear guidelines are provided for learners in the study material, such as how they should organise their experiential learning, the minimum number of patients they need to manage, and how

they should report on the knowledge and skills they have gained. They have to ensure that they are exposed to enough patients and relevant health conditions to enable them to develop into professionally independent PHC practitioners.

The learners are required to submit a portfolio file which contains the following:

- Proof of attendance at the health facilities
- A number of case studies of patients managed
- The steps they have taken to develop new knowledge and skills
- The strengths and weaknesses they have identified in their learning process
- Steps taken to remedy the identified gaps in knowledge and skills development

The learners are also required to submit a register with information of all the patients they have managed. The term 'managed' in this training programme includes the following actions:

- Taking of a comprehensive history
- Making differential diagnosis
- Conducting a physical examination
- Diagnosis of the condition
- Rendering of emergency care
- Prescribing of the appropriate treatment
- Referral of the patient to the next level of health care delivery
- Provision of health education
- Writing of the clinical notes

These are also the main outcomes of the training programme.

The facilitator of each student's experiential learning component must support the information provided in the register by allocating a mark to it and signing it off.

Designing a training programme and study material based on principles rather than on facts-based diagnoses

Even after thorough research, before planning a learning programme, it might remain impossible to assess all aspects related to the learning content. For instance, it is impossible to include complete knowledge of the common diseases, endemic conditions, available health facilities, legislation, cultures and the role of these cultures in the diagnosis and treatment of diseases in all the developing countries represented by the students, to ensure coverage in the training programme.

For this reason this training programme teaches principles which the learners must apply to their unique situations. This programme adopts a patient-centred, problem-based approach. Learners should assess patients as they present at the health institution,

and the learners should indicate that they have assessed the patient comprehensively, keeping all variables in mind, such as age, gender, socio-economic status and culture. The cases managed by the learners from various regions will therefore differ, since in one region a cough could be due to tuberculosis or parasitic infestation, and in another community it could be due to an aneurysm, cancer of the oesophagus or larynx, or heart failure. The learners are therefore required to report extensively on their findings in writing their case studies included in their portfolio files. Learners therefore discover information that they need, with guidance from the teachers and medical practitioners and pharmacists, who accompany them in their respective clinical settings.

Assessment of learners and of the training programme

Assessment of learners' theoretical knowledge

Formative and summative evaluation of the learners' theoretical knowledge is done through a number of written assignments, objective item assignments and the theoretical examination at the end of the academic year. The questions included in these assignments are problem-based, mostly in the form of scenarios in which the learners are required to make a diagnosis, prescribe treatment or criticise the actions taken by an imaginary PHC nurse whilst managing a patient.

Assessment of learners' experiential learning

During the experiential learning periods, the medical practitioner who accompanies the learner in the clinical setting conducts formative assessment on a regular basis to allow the learner to improve his/her performance. The learner receives a register in which the patients managed are recorded together with the formative assessment of the medical practitioner.

The learners are also required to write a required number of case studies of patients managed by them. Case studies are used as a teaching strategy as they stimulate ideas through complex problem analysis of actual situations and provide a means of applying theoretical principles to practice (Davis & Harden 1999). The medical practitioners are requested to read some of the case studies, comment on each one and guide the students, as the portfolio files are only marked by the teacher during an evaluation session in August/September of a particular academic year.

At the beginning of the academic year, the learner also has to identify, approach and receive the commitment of a second medical practitioner, who is not involved in the experiential learning of the learner. This second medical practitioner conducts the practical examination of the learner on behalf of the teacher at Unisa. For this purpose the teacher prepares an assessment instrument, which is then posted to each examiner together with instructions. The student's evaluation report has to be sent back to the teacher in an addressed envelope provided for this purpose.

A tutorial letter is sent to learners which contains information on the arranged evaluation sessions to be conducted by the teacher of Unisa at the regional offices. On these occasions, learners are evaluated personally or in small groups. The learners are evaluated by conducting an oral examination and photo OSCE (objective systematic clinical evaluation) in which photographs of certain selected conditions are presented to them. They then need to identify/diagnose the condition, indicate how the condition would be treated, and so forth. In future this will be done through a specially designed computer programme using a laptop computer.

While the learners are involved in the OSCEs, the portfolio files are marked. However, if this is impossible due to time constraints, the learners are requested to post these files to the University to be marked at a later date.

The portfolio file has a number of advantages for the development of a professional nurse. Firstly, it contains the following:

- Evidence of the learning that has taken place
- Case studies which demonstrate to what extent clinical reasoning skills have developed
- Self-evaluation, the identification of weak and strong points, and the identification of further educational needs
- Remedial measures taken to improve performance
- Reflection by the learner on the value of the learning that has taken place
- other evidence of learning that might be relevant

Secondly, compiling the portfolio provides the learner with the opportunity to be creative and to take part in the learning and evaluation processes. It also allows adult learners some freedom and they feel important because their opinions and views are sought on certain matters on a regular basis (Keegan 1992). Another aspect that is important for the training of professional nurses is that the portfolio file not only contains evidence of the integration of knowledge and skills, but also portrays the learners' attitudes and values (Muller 1998).

A predisposition in the learners for life-long learning could also be developed by the portfolio-file reporting system, as the emphasis of the training programme is not only on the attaining of the programme outcomes but also on the process of learning.

Assessment of training programme and learning material

During the planning process a medical specialist (holding a master's degree in family health, known as an MPrax Med degree), and senior lecturer at a residential university advised the teacher on the clinical training of learners.Discussions were also held with medical practitioners and pharmacists. Based on their experience, they indicated how many clinical hours learners would require to become competent practitioners. A

pharmacist, who was a previous director of Pharmaceutical Services of the Department of National Health of South Africa, compiled a section of the study guide for the pharmacology module and helped with the design of the experiential learning that would have to be accomplished in pharmacies. Both these professionals were critical readers of the study guides and were pleased with the end product.

The feedback from facilitators of learners' experiential learning is very valuable as it enhances quality training by ensuring that the requirements and content of the training programme meet contemporary needs in the clinical PHC field.

Feedback obtained from health institutions where the learners spent their experiential learning periods, and also where the learners are employed, has been positive.

Assessment by learners

Feedback obtained from learners as reflected in evaluation activities in the portfolio files is also noted and seems to be consistently positive.

Reflective research has been conducted on two occasions. The data obtained from the analysed questionnaires, completed by learners, are incorporated into tutorial letters written for a subsequent academic year or into study guides when they are revised.

Methods applied to determine the learner's active involvement in the experiential learning

It is sometimes assumed that 'active' students are those who provide regular feedback. However, this is not necessarily a correct assumption because highly active autonomous adult learners might not provide any feedback as they are too busy discovering and learning. Putting the non-starters aside, there are often students who are very active, submit work as required but then do not complete the course. In any system where there is no obligatory feedback, it would be difficult to know with which of these categories one is dealing (Fritsch & Ströhlein 1989).

In this training programme, however, some measures have been put into place to obtain some form of control over the experiential learning process. As mentioned previously, the learners are required to submit a compulsory first assignment, which contains *inter alia* the situational analysis of the clinical setting where the learner plans to do the experiential learning, as well as the arrangements made with facilitators and examiners.

In a second compulsory assignment, learners are required to submit a framework which could be used for a comprehensive patient history and for the integrated physical examination of the patient. In completing this assignment, the learners have to consult their prescribed books and decide on the most appropriate questions that should be included to elicit the information they need, and to decide what manoeuvres

they have to execute or what to look at to detect any abnormalities during a physical examination. A whole framework or only sections of it can then be used when managing patients.

The third compulsory assignment involves the portfolio files, OSCE and an oral examination conducted by the teacher, and the practical examination conducted by the external examiner. The average marks of these tests comprise the final mark of the experiential learning. This mark is entered onto the University's computer network.

Lastly, continuous communication between teacher and learner in the form of feedback in assignments, personal letters, e-mail messages or telephone calls from time to time not only help to narrow the gap created by distance education but also make the learning process more personal. Personal communication is also a way to motivate learners and determine whether they are actively involved in the experiential learning process.

Recognition by stakeholders for the training programme

Important stakeholders of this training programme are the SANC, medical practitioners, nurses, authorities responsible for the health services, learners and Unisa.

Due to a longstanding and good relationship with the SANC, communication with officials, presentation of the necessary documents and implementation of their suggestions, recognition of the training programme has been obtained, and future qualified learners can register PHC as an additional qualification with the SANC. This is an important accomplishment, because such a registration is desirable when applying for PHC positions.

Initially the theoretical and practical components of the various modules were integrated with one course code. Although this approach promoted the integration of theory and practice, it posed problems for the computer system of Unisa as well as for the SANC. The SANC required a final mark for the theoretical work and a separate mark for the experiential learning. With the integration of the theoretical and practical components under one course code, this was not possible. It also posed problems for the examination department as well other administration departments within Unisa that were required to provide the SANC with these separate theoretical and practical marks.

The Department of Health Studies has since separated the theoretical component from the experiential learning components, which has solved the administration problems. Due to the approach followed in respect of these two components, the theory and practice could remain integrated.

The involvement of the medical practitioners and pharmacists in the training and assessment process of the learners provides a number of advantages for the learner as well as for the training programme:

- The medical practitioners and pharmacists tend to take ownership of the training process, and this enhances the quality of the students' PHC training.
- Facilitators and examiners have to recognise the training programme and learning processes as they are actively involved in this process.
- Respect for the knowledge and skills of both parties is fostered, which should benefit future teamwork.
- Their feedback is acknowledged as well as their involvement, which promotes positive future relationships.
- Their positive motivation and interest in the learner and learning process makes the experience positive and enjoyable for all involved in this process.

The health services also take ownership of the training of the learner by endorsing the information included in the situational analysis and by granting permission for the experiential learning to take place in their clinical facilities.

The learners have indicated that they have compared their knowledge and abilities to those of practitioners trained at other institutions and feel confident about their training and about themselves.

Conclusion

The training of PHC nurses is a hands-on process that develops complex knowledge and skills to assess and manage patients. The trained professionals are required to fulfil the functions of medical practitioners and pharmacists when necessary. This training can only be done successfully through ODL by sharing the training responsibility between the teacher at the institution, the learners and the professionals in the field. These professionals are asked voluntarily to become involved and take on the responsibility of the training and evaluation of the learners on behalf of the teacher and the learning institution. The separation of learner and teacher, which could be impersonal, is overcome by maintaining continuous and effective communication, and is done in the form of well-prepared study material, personal interest in the learner, and personal contact with the learner, facilitators and examiners. Learners are also required to submit compulsory assignments. These assignments not only strengthen communication between teacher and learner but provide a way of determining whether learners are actively involved in their experiential learning during the year. The most important method used to ensure quality training is to involve the health professionals in the field in the training. Requesting the health professionals to determine the competency of the learners, including whether the learners could be trusted to function in the PHC practice on their behalf, when they are not available, proves to be an effective way of obtaining and maintaining health care professionals' active involvement with the students' development.

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Preparing health service managers by distance education

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The quality of health service delivery is strongly related to the skills and competencies of the management cadre of an institution. The preparation of nursing service managers has long been an outcome of the Department of Health Studies, and large numbers of students have completed their management training through this institution. The integration of theory and practice is essential in the quest to develop specific management skills, and remains a challenge within the distance education milieu.

Both the Advanced University Diploma and the BA Cur degree contain an experiential learning component as required by the statutory body for the nursing profession, namely the South African Nursing Council. Experience has shown that the best results for achieving success in the mastering of certain skills are derived from personal interaction between the student and the lecturer or expert clinical practitioner. In order to achieve this through distance education, a system has been devised by which the students are obliged to perform certain home activities in a prescribed format as preparation for a week-long laboratory session during which specific management skills are explained, demonstrated and enacted.

Introduction

The integration of theory and practice has been recognised as one of the key questions in the development of professional expertise and vocational competence. The integration of knowledge and skills across subjects and terrains of practice is crucial for achieving competence, and to this end the National Curriculum Statements seeks to promote an integrated learning of theory, practice and reflection (DoE 2002:6). Instead of simply writing about performance, students should be required to perform in authentic or simulated real-world contexts (CHE 2001:112).

Work-based learning can roughly be divided into two forms: firstly, **incidental learning**, which entails **unintentional** and implicit learning taking place as a side effect of work; and secondly, **intentional** and goal-directed learning aiming explicitly at the development of expertise (Collin & Tynjälä 2003:338). The latter can be informal as well, but often also involves formal, on-the-job learning. In particular, work-based learning related to students' degree programmes includes specific learning tasks, formal

guidance or supervision and assessment, while full-time employees' learning at work is for the most part informal. Whether formal or informal, explicit or implicit, the aim of learning is the development of vocational or professional expertise.

The aim of Health Services Management practica is to prepare students for their management role in the health care industry by providing opportunities for skills development based on the theoretical content of the Health Services Management course in a simulated environment. Students are guided and supported to demonstrate, as critical and reflective managers, their knowledge and skills pertaining to the management of a health care service in the following ways (Unisa 2003:vii):

- Applying the principles of management theory to the management process
- Developing skills in the practice of modern management techniques
- Analysing the role of the nursing department in a health care service
- Examining and defending the role and functions of the health service manager

The aim of this paper is to describe the system we have in place to provide the students with an opportunity to develop some management skills and competencies for their role as health service managers in health care service delivery.

Context

The context for this paper relates to the Education and Training Quality Assurance Body (ETQA) for nurse training, namely the South African Nursing Council, distance education and the type of student involved in this particular programme.

Statutory body: South African Nursing Council

The training of all categories of nurses depends strongly on the correlation of theory and practice. With regard to the learning process in nursing science, the South African Nursing Council (SANC) (1983:3) emphasises that education and training shall be directed specifically at the development of the nurse on personal and professional levels and that the principles of learning shall be observed, namely that learning leads to behaviour change in the cognitive, affective and psychomotor dimensions, through active involvement of the student. The development of the capacity for analytical, critical and creative thought and independent evaluation of scientific data is of the utmost importance.

The SANC policy in respect of clinical practica stipulates that the student shall function as a member of the health team, with certain responsibilities for patient care, from the commencement of her/his training. This level of functioning shall be in accordance with the stage and terminal objectives of the specific programme (SANC 1985: 4). The minimum requirements and guidelines for the presentation of a post-basic qualification in Unit Management for Registered Nurses are contained in SANC Regulation no. R 203 of 1987, and those for the Diploma in Nursing Administration in SANC Regulation no. R 1501 of 1983 as amended by Regulation no. 2554 of 1985.

Distance education institution

When considering students as distance learners, it may be concluded that they vary considerably in terms of age, culture, environment, occupation, gender, qualifications and skills, and experience. Adult distance learners must also be considered in terms of adulthood and the general characteristics of adult learners. Most learners in distance education programmes are adults and are studying part-time. The demands of distance learning require atransition from conventional to distance learning. The challenge to the organiser of a distance education course, therefore is to provide all the support the learner needs, and to help the learner to accept and use the unfamiliar media for contact and interaction (Oosthuizen 1997:71).

In terms of Health Services Management training, the Department of Health Studies presents the following programmes:

- BA Cur (Bachelor in Nursing Science), which is a three year full-time degree with 30 modules
- Advanced University Diploma, which contains 20 modules and requires two years of study

Both these programmes contain the same practica module by which the educational institution must ensure that the minimum requirements of the SANC are met before the students may register their qualification with the statutory body.

In developing specific competencies in students, the challenge of distance education lies in the integration of theory and practice, taking cognisance of the fact that students registered for this course may be situated anywhere in the world.

Type of student

The BA Cur degree and Advanced University Diploma programmes are only offered to nurses who have completed their basic training and who are thus registered with the statutory body as professional nurses. This implies that our students have undergone a tertiary educational programme for at least three or four years, after which they have acquired either a diploma or degree respectively in nursing science. As most of the nursing students are working in health care services while they are studying, they have practical experience of the field and are familiar with the problems encountered in health service institutions.

Process

The SANC sets certain minimum requirements regarding experiential learning for different courses of which those for a qualification in Health Services Management is 90 hours. In order to accommodate the working students and the health care institutions, and to ensure that time is used effectively, the activities encompassed in these 90 hours are divided into three specific components:

- compilation of a file containing the nursing practice and training regulations (5 hours)
- situational analysis (10 hours)
- laboratory work consisting of:
  - home preparation for laboratory work (40 hours)
  - attendance of a laboratory session (35 hours)

Compilation of nursing practice and training regulations file

The students are required to compile a manual in the form of a box file, which contains the Nursing Act as amended, the statutory body practice and training regulations, and the teaching guides. This activity is considered essential to ensure that the students as potential managers are aware of the relevant legislation and regulations which guide their training and practice. A tutorial letter is provided containing guidelines on compiling this file in respect of its index and content.

Situational analysis

Students should make arrangements with a health care institution of their choice to conduct an administrative situational analysis of that particular service provider which encompasses:

- General aspects related to the institution/service (i.e. authority, legal framework, purpose and demographics of the community)
- Health-related administrative aspects within the institution (i.e. who is in charge, accountability, communication with personnel, policy formulation, goals and objectives, budget, patient care, etc.)
- Personnel development and student education (i.e provision of training, orientation, in-service education)
- Health management and patient care (i.e assignment of staff, health care standards, scientific method)
- Research aspects (i.e. current research, evidence-based practice)

The aim of the situational analysis not only relates to the acquisition of information pertaining to a specific organisation, but also serves the purpose of achieving the critical cross-field outcomes such as communication, teamwork, problem identification and analysis and organisation of information (ICLD Discussion Forum Series 2005: 4).

Laboratory work

Laboratory work is presented in week-long sessions in different centres in the country. Students book for a location and time slot that suits them, and they then attend the session without interference from their work. At the beginning of the session the group is oriented with regard to the format and activities of the week, the roster, rotation of

tutors, teaching aids and group work (active participation, reinforcement, videos, role play, feedback) and the summative assessment at the end of the week.

The laboratory work is aimed at giving the students an opportunity to acquire specific managerial skills. Often one needs a few guidelines or an idea of where to begin in dealing with managerial functions and tasks, and that is what the laboratory session attempts to achieve. For a week, a group of students work with their lecturers, getting to know each other, their practice disciplines and the problems encountered at their places of work.

The approach to the laboratory session is fairly informal, and much work is done by means of group work, discussion sessions, role play and video material. A positive and co-operative relationship between the lecturer and the students (who are potential managers for the purpose of the laboratory session) is to their mutual advantage and encourages an enquiring attitude in the students, enabling the lecturer to deal with the how and why questions raised.

In determining the content of the laboratory session, it was necessary to consider the effective correlation between theory and practice. Even though the health service manager functions in a predominantly practical situation, fundamental knowledge of and insight into the theoretical basis of management and practice is essential. The lecturer must be able to facilitate the experiential learning of the learner in such a manner that the theory and the clinical situation can be seen as an integrated and not as two separate entities (Meyer, Van Niekerk & Naudè 2004: 94). Doing this helps the learner's thinking and reasoning abilities to develop. Learners realise that they do not merely perform 'tasks' in practice, but apply theoretical knowledge acquired in the 'classroom' situation to the practical hands-on nursing of patients and the management of their units or services, again enhancing the critical cross-field outcomes. Having the opportunity to observe and interview a peer partner can allow potential leaders to become more knowledgeable and reflective about their practice as managers (Barnett 1990:2). The programme encourages the integration of theory and practice as students compare conceptual frameworks with the observed realities of their jobs.

Management is the process followed by managers to accomplish an organisation's goals and objectives. It can be said that management is a series of activities that are carried out to enable a business or enterprise to accomplish its goals by employing human, financial and physical resources for that purpose. Therefore, Cronjé, Du Toit, Motlatla and Marais (2004: 122) define management as the process whereby human, financial, physical and information resources are employed in order to reach the goals of the organisation. Management does four things: it decides **what** has to be done (planning) and **how** it should be done (organising); it **orders** that it should be done (leading) and then **checks** that the orders have been carried out (control).

In order to provide the students with skills to handle specific situations within the manager's realm of work and the management process, it was decided to include the following topics in the laboratory session (Unisa 2003:iv-v):

- Job analysis, job evaluation, job description and job specification
- Staffing
- Assignment of staff
- Self-development: reaching peak performance
- Motivation
- Assertive behaviour
- Performance appraisal
- Budgeting procedures and cost containment
- Nursing care standards and criteria
- Nursing care plans
- Nursing audit
- Incident report
- Team building
- Communication
- Meetings
- Conflict management
- Problem solving and decision making
- Labour relations
- Discipline
- Grievances

The laboratory work is divided into two sections, namely home preparation and class activities.

Home preparation for laboratory work

The aim of the home preparation is threefold. Firstly, the activities are aimed at preparing the students for the class activities. Secondly, it is estimated that students will spend approximately 40 hours in completing the compulsory home activities, which form part of the SANC requirements. Thirdly, it provides the department with a measure to ascertain whether the students comply with the 'active student' requirement of the Department of Education (DoE 2003:2). By doing the home activities in their own time, the students do not have to take two weeks' leave to attend the laboratory session, but only one week instead.

Class activities

The purpose of the class activities is to provide students with hands-on experience in doing certain tasks, procedures and activities that they will have to perform as a manager. Peer assessment is implemented, which facilitates the students' learning from one another. Active participation and interaction in groups and as individuals take place under the guidance of the lecturer.

Mechanisms in place

Mechanisms in place to guide and assist the students in their preparation and to manage the whole process areas follows:

- A study guide in the form of a workbook, which contains the instructions for the home activities and the situational analysis
- Tutorial letters informing students of the requirements, dates, venues and arrangements for foreign students as well as a booking form
- Venues, audio-visual aids and supervisors, which are planned and arranged
- Entering of the attendance and marks acquired into the student system by means of a computer in the department, upon completion of a session

Assessment

The different components of the experiential learning process are assessed by means of checklists containing specific criteria for each component.

Formative assessment is achieved in three ways. Firstly, the home preparation is evaluated during the first semester. A minimum percentage for this section is set as a prerequisite for students to attend the laboratory session. This enables the Department of Health Studies to vouch for the hours spent in terms of SANC requirements and provides evidence for ascertaining students' active involvement in their experiential learning course. A second form of formative assessment relates to the situational analysis which students are required to complete before they attend the laboratory session. And thirdly, their nursing practice and training regulation file is assessed at the beginning of the laboratory session.

Summative assessment is applied at the end of the laboratory session by means of a multiple-choice test which deals with the content of the week's session. In compiling a final mark, the assessment of all the different components are taken into account.

Student assessment of the laboratory session content and presentation takes place on a pre-compiled checklist. This information is utilised for improvement and revision of course content and teaching aids.

Barriers

A number of barriers negatively impact upon the effective planning, organising and presentation of the laboratory sessions:

- Substandard home preparation by some students denying them entrance to the laboratory session
- Students who do not do their own home preparation but copy the content from previous years' students and textbooks (study guides run for a period of three years)
- Large numbers of students in some groups delaying group work and feedback
- Insufficient lecturers to assist with presentations
- Lack of appropriately equipped supervisors to assist in far-off places
- Cost and time constraints that allow only one laboratory session per year to be offered at centres outside Pretoria (students there who are unable to attend that particular practica session then have to attend a session in another centre or re-register for the next year)
- Small numbers of students at some centres outside the main campus

Challenges

The challenges we are currently faced with as a team of Health Service Management lecturers arise from our continuous quest to:

- Renew and improve the home and class activities
- Find appropriate videos to assist the lecturer in teaching the topic
- Find better ways of assessment
- Present the laboratory sessions for non-student managers as a means of updating and professional growth and development
- Offer the contents of class and home activities in such a way that students from both the private and public sectors, and working in primary health care clinics and sophisticated health care institutions will be able to integrate and apply the principles in their workplace

Conclusion

Experience has shown that the best results for achieving success in the mastering of certain skills is derived from personal interaction between the student and the lecturer or expert clinical practitioner. In order to achieve this through distance education, a system has been devised by which the students are obliged to perform certain home activities in a prescribed format as preparation for a week-long laboratory session during which specific management skills are explained, demonstrated and enacted.

Assessment of the laboratory sessions by students has indicated that they experience the practica module and contact session as a very meaningful experience. However, the challenge for academic staff remains the final successful implementation of these skills in the practical field.

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Experiential learning in the education and training of information professionals: *Non scholae sed vitae discimus*[1]

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As part of an evaluative study of the role of experiential learning in the education and training of information professionals, alumni of graduate programmes in library and information studies at all South African institutions of higher education for the academic years 2000 to 2004 were asked to construct an ideal experiential learning programme based on a number of dimensions identified by the researcher. The dimensions examined were the role of the training institution, the student, the workplace mentor and the programme of activities. The collective responses of the responding students are presented, comparisons drawn, common themes and problems identified and discussed and recommendations made.

Surprising as it may seem to many people in the world of education, students don't learn much by sitting at the feet of a master. In addition, they don't learn much just by reading the fine words of experts. Students learn by having a go themselves. **They learn by doing**. They learn by getting things right. They learn even more by getting things wrong, **and** getting feedback on what went wrong.

Introduction

Various philosophers and educators have viewed experience as an essential component of learning, the most prominent of whom was John Dewey, one of the most influential educational theorists of the twentieth century.

Dewey nurtured and advocated the educational philosophy that there must be unity of theory and practice in the educative process. His ideas, initially developed in *Democracy and education* (Dewey 1916) and later reformulated and clarified in *Experience and education* (Dewey 1938:20), emphasise that "the fundamental unity of the newer philosophy is found in the idea that there is an intimate and necessary relation between the processes of actual experience and education". Dewey believed that experiences contribute to the learning process, but he advises us to be selective in our choices of experiences. Not all experiences, he counsels (Dewey, 1938:25), are educational: 'The belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other.'

The type of experience Dewey advocates is one that is purposeful and holistic, and is developed with forethought and planning. He emphasises that the quality of the experience, and how that experience influences later experiences, is critical. The general tenets of Dewey's educational philosophy are as follows:

- Experience is a necessary component in education.
- The quality of the experience is vital.
- Experience has continuity; it is referenced to the past and shapes the future.

Aim

Higher education institutions are under increasing pressure to better prepare their graduates for the world of work; and within professional courses, experiential learning programmes continue to be an important means by which this expectation is addressed.

The *aim* of the research on which this paper is based was to explore library and information studies students' perceptions of the attributes of an ideal experiential learning programme.

Problem

Since the formalisation of the training and education of library and information workers, experiential learning has been a widely canvassed issue and remains one of the favoured means of actualising the link between theory and practice. In the literature this topic has frequently been addressed from a theoretical or management angle, with little reference either to student perspective or to empirical evaluative evidence about the effectiveness of this mode of learning in the total educational programme (*cf*. Chivers *et al*., Flatten, Nankivell & Reid 1995). Recent innovative research into ways in which students learn, *inter alia* Entwistle (1997) and Prosser and Trigwell (1999), has prompted an interest in student perspective, particularly since researchers have demonstrated the value and validity of adopting this approach. It was decided, therefore, that *an investigation of students' attitudes to and evaluation of experiential learning* might contribute to an understanding of its role and value in the overall educational and training programme.

Sample

The alumni of graduate programmes in library and information studies at all South African institutions of higher education for the academic years 2000 to 2004 constituted the sample for this longitudinal survey.

Methodology

The *interpretative research approach*, which offers access to subjects' understanding of their experience, was considered the most appropriate paradigmatic choice for this

study. The interpretative paradigm, as distinguished from the positivistic, is associated with attempts 'to understand the meaning of events and interactions of people in a particular situation' (Taylor & Bogdan 1997:2) and to understand a phenomenon from their point of view and the meaning they attach to the experience.

A combination of methods was used to establish students' perspective on the role and value of experiential learning in the overall training programme. The *main data collection instruments* were a self-administered *questionnaire* and an *interview*, both developed following the principles of social survey research as explicated by, amongst others, Babbie (2001), Fowler (1993), and Oppenheim (1992)[2]. The questionnaire was designed to discern valence of attitudes and to seek opinions, expectations and assessments of the programme, and was keyed to an interview schedule designed to supplement, check and probe more deeply information and opinions gathered from students by means of the questionnaire. Out of a population of 437 students, 396 completed questionnaires were returned (for a response rate of 90.6%), while 378 (or 86.5%) participated in the interviews.

Conventional analytical techniques were used in the scoring of responses in those sections of the questionnaire that warranted it, *viz*. the closed-category questions, which incorporated predetermined categories. In this way it was possible to compute frequency scores; distribution patterns could be considered; the valence and strength of attitudes could be determined; and a conclusion could be drawn about the tendency towards positive or negative attitudes. *Simple descriptive statistics* were employed in those areas of the questionnaire that required it.

The method of *content analysis*, defined by Holsti (1969:14) as 'any technique for making inferences by objectively and systematically identifying specified characteristics of messages', was used to process the open-ended questions and the interview data.

Analysis

In this section findings with respect to attitudes uncovered and some of the major dimensions of the programme associated with the attitudes measured are presented.

Attitudes to experiential learning: An analysis of Part A[3] of the questionnaire designed to test students' attitudes to experiential learning revealed a generally favourable response on the whole, with the top score being 130 and the lowest 42 - that is, an attitude index ranging from 4.81 to 1.56 respectively. With 27 items in the pool, the maximum possible score was 135 and the minimum possible score 27 (that is, an index of 5 and 1 respectively). **Table 1** shows the frequency and distribution of attitude indices according to degree of positivity.

Table 1

Range of positivity/negativity of attitude indices				
Very positive 17 (4.3%)	Positive 257 (64.9%)	Mildly positive 109 (27.5%)	Negative 13 (3.3%)	Very negative 0

From **table 1** it can be seen that nearly 70% of the respondents had a positive to a very positive attitude and that a further 27.5% had an attitude that can be described as mildly positive to neutral. Only 13 respondents, or 3.3%, had a negative attitude, due mainly to unfortunate work placements for which neither appropriate tasks nor competent supervision were available.

Dimensions of experiential learning: Part B[4] of the questionnaire examined a variety of aspects of the programme that might have influenced students' attitudes as measured by their responses to the statements in part A. **Table 2** displays the results of a question, which required students to comment on the value of experiential learning in shedding light on various professional matters. The dimensions have been ranked according to the degree of support given to each statement.

Table 2

Ranked order of satisfaction with dimensions of experiential learning programme			
Dimension	**Yes**	**No**	**Uncertain**
Organisation of library and information services (LIS)	358 90.4%	12 3.0%	26 6.6%
Relationship between LIS and users	348 87.9%	28 7.1%	20 5.0%
Practical skills	337 85.1%	34 8.6%	25 6.3%
Current practice in LIS	335 84.6%	42 10.6%	19 4.8%
Career prospects	289 73.0%	68 17.2%	39 9.8%
User needs and behaviour	286 72.2%	78 19.7%	32 8.1%
Information technology	272 68.7%	107 27.0%	17 4.3%
Relationship between theory and practice	212 53.5%	150 37.9%	34 8.6%
Professional values	180 45.5%	170 42.9%	46 11.6%

It is constructive to juxtapose the picture revealed in **table 2**, which reflects the actual experience of the students, with the results of a later question that required them to rank the possible aims of an ideal experiential learning programme (that is, the way in which they conceptualised the programme). Mean scores were computed for each aim. **Table 3** shows in ranked order the amount of support for each aim.

Table 3

Possible aims for an ideal experiential learning programme in ranked order	
Aim	**Mean score**
To provide the link between theory and practice	4.83
To familiarise students with tools and routines of library and information work	4.73
To learn about the organisation of libraries and information centres	4.47
To expose students to various working environments	4.45
To perform basic vocational skills	4.42
To illustrate material taught in formal course	4.38
To learn about user needs and behaviour	4.35
To instil confidence	4.33
To instil professional attitudes	4.16
To practise communication skills	4.16
To observe good practice	4.09
To develop problem-solving skills	3.80
To observe good librarians and information workers at work	3.14
To develop independent learning	3.11
To provide students with professional contacts	3.02
To test students' practical ability	2.67

The discussion that follows will focus on some of the dimensions measured and compared in **table 2** and **table 3** and a number of other important issues that emerged from an analysis of data derived from other sections of the questionnaire. These can be categorised into two broad areas, which can in turn be subdivided as follows:

Learning or gains in the experiential learning programme:

- Link between theory and practice
- Exposure to the working environment
- Career relevance
- Inculcation of professional values

Process variables:

- Programme of activities
- Supervision
- Communication

Learning or gains in the programme

The researcher questioned whether the programme led to desired effects, and the relationship between programme activities and observed effects. A related issue was whether the processes and activities caused or affected the behaviour, attitudes and skills of the participants. It is in this light that a few outcomes and effects are identified and discussed.

Theory and practice:

Although the provision of the link between theory and practice is ranked by the students as the most important aim in their conceptualisation of experiential learning in **table 3**, it is noteworthy that this aim gets one of the lowest rankings in **table 2**, with only 53.5% of the students being satisfied that the experiential learning programme had shed light on the relationship.

Exposure to working environment:

Comparison between the high rating of the theoretical aim of learning about the organisation of libraries/information centres, and students' satisfaction with the actual achievement of this aim shows a good correlation between the potential and actualisation. Those aims which relate to the practical concerns of the programme, namely, exposure to the organisation, procedures and working environment, all of which are considered important aims in the literature, were met with a very reasonable degree of success in the programme. A good correlation is also evident between the aim of learning about the relationship between libraries/information centres and their users and its realisation. This was identified as both an important aim and a dimension with a high rating of satisfaction - 87.9% of the students being satisfied with this aspect. There is also quite a strong correlation between the aim of learning about users and their needs and the realisation of that aim, with 72.2% of the students registering satisfaction with this aspect. Likewise, there is a positive correlation between the identification of the importance of the aim of being exposed to current practice in library and information work and its achievement, with 84.6% of the students being satisfied with this dimension of the programme.

There was unanimous appreciation of the opportunity to learn by doing. Clearly, many of the benefits of involvement in an experiential learning programme accrue primarily from the authenticity of the experience.

Career relevance:

Career relevance emerged as a strong feature of the programme. Responses to a cluster of questions that probed this aspect revealed that for an overwhelming majority of students the programme had exercised an influence on their career plans. For students reporting this influence, the programme exercised a positive effect with regard to career plans in the following related ways:

- It revealed career possibilities and defined options of which students had been unaware.
- It strengthened their resolve to pursue a particular branch or speciality.
- It allowed them to refine their career choices by identifying what to avoid, what particular branch or speciality to follow or what environment was compatible with their needs.

Professional values:

Whereas the transmission of professional values is identified by the students in **table 3** as an important hypothetical aim, in **table 2** only 45.5% of the students were satisfied that this aim had been met in the programme. The experiential learning programme is usually conceptualised as an important vehicle for the transmission of professional values in the process of socialisation. In this study professional beliefs and ethical orientation appeared less well defined to students in the field than the structural and functional attributes of library and information work, with very little evidence of direct transmission of professional values via introduction by or discussion with the workplace supervisor and other staff members of the hosting library/information centre. The mode of transmission was indirect: through observation of actions and behaviour of those with whom students came into contact.

Process variables

The process variables are the unique internal dynamics of a programme and those factors that are instrumental in producing the results of the programme.

Programme of activities:

An area that was explored in both the questionnaire and the interview related to the programme of activities and the effect that this had on the attitudes of the students. In a question that sought to uncover what the students liked least about the programme, the results showed that the type of activities and tasks assigned was the most dominant concern.

Not all activities, simply because they engage the student in an activity, can be described as learning opportunities. A number of students reported that being overprogrammed was counterproductive and interfered with learning. Their experience points to a paradox of competing demands for order and structure in the programme on the one hand, and flexibility on the other.

In a question soliciting suggestions for the improvement of the programme, a significant number of responses clustered around the programme of activities for the students. Major related aspects of this were the following:

- Better articulation between tasks assigned and the curriculum
- Better balance between tasks with educational value and routine tasks of value to the host institution
- Care by the training institution to ensure that a reasonably uniform programme of activities is offered to each student
- Activities that offer genuine growth and experiential learning, not just practice, or doing

Supervision:

Workplace supervision emerged as a major indicator of the success of the programme. The vast majority of students were satisfied with their supervisors because of the effort made by the supervisors, their availability and helpfulness; and the clarity of instruction and demonstration.

In the interview schedule one of the questions related to the attributes of the ideal supervisor. The clear profile that emerged from the voluminous responses can usefully be reported here: The attributes with the highest frequency rating were approachability and a sympathetic disposition towards students (362, or 91.4%, of the respondents). The attribute with the second highest frequency rating was that of being a good teacher (345, or 87.1%, of the students).

The quality of enthusiasm or being highly motivated was identified by 310 (or 78.3%) of the respondents as a desirable attribute. This would be manifested in an enthusiasm for the profession, for their work and their task of supervision. Three hundred and one (or 76.0%) of the students thought that the ability to communicate effectively was very important for effective supervision. Sharing a frequency rating with this attribute was the ability and willingness to give feedback to students. Another highly rated attribute of a good supervisor was the ability to allow the student latitude and a certain amount of independence (280, or 70.7%, of the students). This attribute was frequently described in terms of its undesirable oppositional characteristic, namely being overvigilant, checking up constantly, "breathing down students' necks", and hovering.

Professional competence and expertise was identified by 209 (or 52.8%) of the students as a desirable attribute. Sharing a frequency rating with it was a requirement of an administrative rather than a personal or professional quality, namely, that the supervisor should have time to spend with the students. The final category was the ability to understand and respond to students' learning and other needs. This attribute incorporated sensitivity and insight so that the supervisor could judge how much the

student understood, and also an awareness of how much choice would be appropriate (154, or 38.9%, of the students).

What emerges from this composite picture of effective supervisory behaviour is the prominence given to human qualities such as sympathy, enthusiasm and sensitivity. A simple tally of the distribution of attributes according to three broad categories into which the qualities tended to fall reveals the following pattern:

- 319 statements, or 55.1% of the total, dealt with personal qualities
- 181 statements, or 31.3%, concerned teaching and professional skills
- 79 statements, or 13.6%, referred to other considerations, usually of an administrative nature, for example, available time

These findings accord with results reported by other researchers who have attempted to characterise the qualities of the 'good teacher' according to students' conception of that role. For example, Biggs (1999), Cullingford (1995) and Prosser and Trigwell (1999) have reported students' high rating of personal qualities and positive attitudes of teachers, in comparison to techniques and methods.

Communication:

There were 437 statements identifying the responsibilities of the training institution that the students associated with an ideal experiential learning programme. Although the classification of the statements could be subsumed under the generic category of communication, greater clarity is achieved if a more detailed analysis is presented. The consensus was that the major responsibility of the training institution is to arrange and control the programme and to establish and maintain contact with workplace supervisors.

The following stated responsibilities support this finding:

- The need for thorough preparation and briefing of students prior to their embarking on the experiential learning programme
- The drawing up and making available of guidelines to supervisors to inform their guiding, supervising and assessing of students' work
- Organising of a seminar after the completion of the programme so that students might give feedback, share and discuss experiences and learning outcomes

Conclusions

The intention of this final section is to establish broad patterns, to identify enabling conditions and outcomes of the experiential learning programme and to make recommendations arising from the above.

Communication emerged as the dominant theme linking many of the responses and concerns identified by students, who judged it to be inadequate as a major

implementation variable in the programmes being evaluated. This finding is consistent with findings reported in the literature which stress the importance of close liaison to minimise inadequate comprehension, communication and co-ordination, which are frequent sources of difficulty in the triadic relationship between training institution, student and supervisor (Alderman & Milne 1998). There was consensus on the need for careful briefing, clearly defined guidelines and adequate feedback.

The opportunity to reflect on or to examine experience in the light of an individual's existing knowledge and understanding has been identified as of vital importance to authentic experiential learning. The more one engages in reflection and practice, the deeper one comes to know. Understanding develops, as one becomes more engaged and concerned, through repeated experience, interaction with the issue in the real world, and reflection. This circularity of understanding was best captured in what the philosopher Martin Heidegger termed the hermeneutic circle (*vid*. Tully 1990). Thus, experiences do not lead to profound learning unless reflection is involved; in the words of the celebrated English novelist, Aldous Huxley, 'Experience is not what happens to you; it is what you do with what happens to you'.

Students were united in the suggestion that the *programme of activities* be devised as a collaborative exercise between the training institution and a representative collective of supervisors so that the programme might be articulated with the curriculum. The programme should be structured and sequenced in such a way as to obviate unproductive repetition and provide for diversity and representativeness. The students' general disinclination to perform clerical or routine tasks was mirrored by the majority rejection by the body of supervisors of using students as an extra pair of hands.

Overall, the results provide evidence of the programmes' high *career relevance*. The experiential learning programme was important because it offered the first opportunity for students to raise questions about the worth of what they were doing by attempting to relate the activities to a professional ideology and to assess whether they could envisage themselves in a future career. It allowed them to check their expectations and image of the career against reality and gain an awareness of the demands, rewards and satisfactions involved. The action environment provided the bridge between the world of actual practice and academic study.

Although it was found that the programme exercised a socialising influence, the subject is so complex as to require special analytical treatment, which space does not permit here. The area of affective learning in experiential learning, including the inculcation of professional values in the process of socialisation, should receive focused attention from both practitioners and educators. Educational processes designed to inculcate a sense of professional identity, ethics and a commitment to service have enjoyed little attention in the literature of professional education for library and information studies.

The empirical results of this study confirm the significance of the role of the supervisor/workplace mentor in occupational socialisation, which is one that requires careful analysis, having been identified by the students as a critical factor.

There was remarkable unanimity about the dimensions of effective supervisory behaviour. Mentoring, as a type of non-judgemental and non-threatening guidance, was perceived as an excellent way of facilitating experiential learning for prospective library and information workers. Supervisors teach skills, give advice, provide encouragement by example, and help those they supervise to develop judgement and gain confidence. The greatest value was attached to human qualities such as sympathy and approachability.

Recommendations

Finally, a number of issues will be briefly noted which, due to the paucity of their treatment in current literature, require further consideration and investigation.

The role of supervision during experiential learning: Studies have shown that the quality of workplace supervision is usually the key factor in determining the quality of the student's experience. A range of questions which appear not to have been conclusively answered yet include the following:

- Which model of workplace supervision provides the best experience for students?
- How important is it that workplace supervisors understand the educational curriculum into which the experiential training programme fits? If they are familiar with the curriculum, does this make a difference in helping students integrate their educational and workplace experiences?
- To what extent can activities and structures put in place by the educational institution (e.g. goal setting, opportunities for reflection, learning contracts) compensate for inadequacies and unevenness in workplace supervision?
- What impact do students, and participation in student placements, have on the workplace? Are there any positive transfers from students to educational institutions and to the workplace?

The kinds of learning outcomes that are best achieved through experiential learning: In studies undertaken to date, there is a considerable weight of evidence that suggests that experiential learning is effective in giving students insight into the world of work and helping them integrate into the work environment. What has yet to be demonstrated is that work placement offers the best environment for developing skills or is effective in helping students integrate theory and practice. These are often suggested as goals within the experiential learning programme (*cf*. table 3), but the evidence on whether such goals can be consistently achieved is mixed.

Where an experiential learning programme does seem to have been used effectively to develop skills, a very high degree of structure has been introduced to ensure that all students have adequate learning opportunities, and workplace learning has been supplemented by concurrent formal instruction in the form of lectures and seminars (Alderman & Milne 1998).

Some of the questions raised here might well be addressed by future research. They include the following:

- Are skills learned more efficiently in the workplace or in the more controlled environment of the educational institution or a simulated setting?
- To what extent should there be a curriculum for the experiential learning programme – that is, a specified and sequenced set of learning experiences, which all students on placement undertake? At present some programmes and some disciplines structure their experiential learning to a far greater extent than others do. Can different outcomes be shown to result?
- Do additional educational activities designed to help students analyse and reflect on their workplace experiences make a difference in the learning outcome and particularly in the ability to integrate and apply in the workplace what has been learned in the lecture hall?

The length and structure of experiential learning: Questions regarding the ideal length and structure of the experiential learning programme are obviously of concern to educational institutions. Finding sufficient places for students is an ongoing problem for most institutions, but very little evidence can be found in the literature to indicate what is the optimal length or whether the extended single placement should be preferred to the concurrent model.

As the question of ideal length and structure cannot be considered outside the context of the goals and objectives of experiential learning, the questions for researchers must be as follows:

- In attempting to achieve a specified set of educational outcomes through learning in the workplace, can one model be shown to be of greater benefit than another?
- What is the impact of the length of time spent in the workplace on achieving the specific goals of a particular programme?
- Can supplementary educational activities (such as seminars, which provide opportunities to discuss and analyse workplace experiences) increase learning and reduce the amount of time which is spent on placement?

Notes

1 In English translation: *We learn not for school but for life* (*cf*. Berry, 2000).

2 The various *dimensions* of the experiential learning programme being analysed in the questionnaire and interview schedule were derived from a logical analysis of the literature of experiential learning and learning theory. These dimentions are:

- Value of learning: knowledge, skills and attitudes
- Interest
- Workload and difficulty
- Interaction with supervisor
- Organisation of the programme
- Clarity of the objectives and goals
- Feedback
- Assessment

The *items* representing these dimensions have been derived from a pool of items generated from the following sources:

- Literature on experiential learning
- Literature on the means of testing the effectiveness of educational programmes
- Available instruments that have been used in evaluating higher education programmes

3 Part A of the questionnaire attempted to establish students' opinions of the experiential learning programme *as a whole*. Students were requested to indicate their opinion of each of 27 statements by circling one of the following:

SA = strongly agree
A = agree
U = uncertain
D = disagree
SD = strongly disagree

For example:

1	In my opinion my time and effort were well spent on this learning experience	SA	A	U	D	SD
3	The experiential learning programme was an unrewarding learning experience	SA	A	U	D	SD
6	The experiential learning programme was a meaningful experience	SA	A	U	D	SD
9	I would like to have spent more time on the experiential learning programme	SA	A	U	D	SD
11	If experiential learning were an optional component of the course, I would choose not to go	SA	A	U	D	SD
13	Participating in the experiential learning programme made little difference to me	SA	A	U	D	SD
19	The experiential learning programme should be withdrawn from the course	SA	A	U	D	SD
21	The experiential learning programme was a challenging learning experience	SA	A	U	D	SD

25 Experiential learning is less useful than the other components of the course SA A U D SD

27 I am more interested in the course as a whole as a result of the experiential learning programme SA A U D SD

4 Part B of the questionnaire was designed to establish students' opinions of *particular aspects of their experiences* during the experiential learning programme. In this instance, students were encouraged to add explanations, qualifications or comments to their choice of response to the 26 statements given. For example:

2 Has the experiential learning programme changed your opinion of what a library and information worker does? Yes No Uncertain

PLEASE EXPLAIN

.....

.....

.....

4 Has the experiential learning programme had any effect on your career plans? Yes No Uncertain

PLEASE ELABORATE

.....

.....

.....

5 Have your expectations of experiential learning been fulfilled? Yes No Uncertain

PLEASE GIVE REASONS

.....

.....

.....

14 What do you consider to be the most beneficial feature(s) of the experiential learning programme?

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20 The workplace supervisor suggested specific ways I could improve my performance Yes No Sometimes

PLEASE ELABORATE

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26 If there is any aspect of the experiential learning programme not covered in the questionnaire that you would like to comment on, please do so by writing about it in this space.

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Social work – the nature, scope and responsibilities of practical work

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This paper describes the experiential education practices employed by Unisa in Social Work studies. Underlying principles are contextualised briefly, such as human rights, social justice and a person-centred approach. The various elements of the practical work for Social Work are outlined, followed by a discussion of field placements – the various forms of field placement; the methods of supervision; and what is expected of contact persons in organisations offering learners placements. The responsibility of supervisors is set out in general terms, and more detail is given regarding the responsibilities of supervisors of second-, third- and fourth-year learners. The paper concludes with a discussion of a number of logistical issues, including the registration of learners with the SA Council for Social Service Professions.

Social work focuses on the interaction between individuals, groups and communities and their social environments. It enables people to resolve problems stemming from their social interactions, and empowers people to improve their own welfare and develop their own abilities, resources and potential. The principles of human rights and social justice are fundamental to social work, the mission of which is to empower people to enrich their own lives and to prevent dysfunction. Social work responds to crises and emergencies, but also to everyday personal and social problems. It uses a system of knowledge based on research and practice, and implements a variety of skills, techniques and processes by means of casework, group work and community work methods, as well as social work management and research to attain its objectives.

The Department of Social Work at Unisa believes that all people have the right and capacity to direct their own lives. Members of the department have confidence in our clients' ability to find their own solutions, and we actively facilitate processes that help clients to achieve these in their own ways. We link our clients to, or lobby for, or create the resources needed to initiate these processes. This belief in people is the cornerstone of the person-centred approach (PCA), which embraces the beliefs, values, assumptions, norms and standards that serve as the philosophical and moral foundations of our teaching, training and practice in the Department of Social Work at Unisa.

Learners studying Social Work are exposed to various forms of learning material and processes. These include written material, case studies, workshops, individual and group supervision, video-conferences, videotapes, and individual evaluation. Practical work is structured in such a way that the required learning outcomes are achieved.

The various elements of practical work in Social Work

As part of the professional training of social workers, all learners studying to obtain a degree in Social Work participate in prescribed practical work, which they must complete successfully in order to be admitted to the examination. Ideally, all practical work for the year is carried out in one organisation, but under exceptional circumstances it may be necessary for the learner to do the practical work at more than one organisation. Once the placement has been finalised, the contact person at the organisation at which the learner has been placed will also receive the practical work manuals used by the learners to complete the practical work. These contain more details on how learners are expected to complete their practical work.

Practical work for Social Work comprises block placements, community work, casework and group work. Learners are expected to spend at least one day per week from the beginning of February to the end of September at the organisation on scheduled days, in addition to further time that may be needed to have contact with clients for casework, group work or community work. On the scheduled days, learners may also complete some of their casework, group work and community work tasks, but this time should not be used to complete theoretical assignments. Learners must keep a logbook as a record of time spent at the organisation and the activities undertaken. This logbook must be signed by the contact person at the organisation. The fourth-year placement is continuous from January to September of each year. Each of the four elements of practical work is briefly discussed below.

Block placement

The block placement is a week that the learners spend at the organisation. It is preceded by a workshop in the different centres to orient learners with regard to the effective utilisation of the block placements. Block placements should always take place after the orientation workshops, and should include the following:

- Orientation to the organisation, its mission, goals, functions and programmes, and the management of the organisation
- Planning for the nature of learning opportunities and assignments
- Identification of the community with which learners will be working
- Preliminary discussions about group work
- Preliminary preparation for casework

Community work

Learners are expected to implement a small community development project, and experience the process of facilitation. The project should be in line with the vision, mission and goals of the organisation. It should also be developed from a person-centred and participatory development perspective. The project should be of an ongoing nature and not a single event such as a youth day, women's day or HIV/Aids

day. Learners may be placed with an existing project as a facilitator, but not in an organising, controlling or supervisory role.

Casework

Casework should ideally be undertaken with adults, children and families, but this will depend on the availability of clients at the organisation accommodating the learner. Each learner is required to conduct ten casework interviews between February and May, and another ten between June and August. The person-centred approach (PCA) to casework is a requirement.

The Department of Social Work at Unisa upholds the PCA in affirming that individuals have within themselves vast resources for self-understanding and for altering their self-concepts, basic attitudes, and self-directed behaviour. These resources can be developed in a facilitative climate which empowers the person.

Group work

Group work should ideally be conducted with children, youths and adults. However, this will also largely depend on the availability of groups at the organisation at which the learner is placed. Two groups may be run. The first one is expected to run from February to June, and the second from July to August. If it is possible to run two short-term groups, this can take the form of two groups of four group work sessions to make a total of eight sessions. If, on the other hand, a learner can participate in one long-term group only, eight sessions must be arranged, i.e. one group of eight group work sessions. In all instances, it is of the utmost importance that the Code of Ethics for Social Work be adhered to in the execution of practical work.

Social work field placements and supervision

The placement at organisations provides an opportunity for learners to acquire practical skills, knowledge and professional values and to develop a sense of professional identity. The practical work makes an important contribution in preparing learners for the professional world of social work.

During their placements, learners also perform significant services and make a contribution to service delivery at the organisation at which they are placed. The organisations involved in field placements range from government departments to private welfare organisations and non-governmental organisations (NGOs).

Field (block) placements for Unisa learners

One academic staff member and one administrative staff member from the Department of Social Work are responsible for co-ordinating, managing, and negotiating placements with organisations. They are supported by other staff members in visiting organisations and preparing organisations for placements. In rural areas learners are

often involved in negotiating placements in their areas. Organisations, government institutions and NGOs are approached and asked to make available opportunities for practical work for Unisa learners. These placements are specifically for fourth-year learners, for a period of one year. The Department of Social Work currently has 27 learners placed at the Department of Social Development. These learners receive a monthly salary.

Organisations that agree to offer placements are also asked to identify a person who will serve as a contact person with whom the placement can be negotiated and who will assist learners by orienting them to the organisation, planning their practical work, providing learning opportunities, assigning tasks and being the person to whom learners should report back regularly. However, the contact person is not usually expected to provide supervision.

The Department of Social Work has co-ordinators for practical work in Durban, Cape Town and Pretoria/Johannesburg. Co-ordinators are the link between the University, the supervisors, welfare organisations and learners. Co-ordinators represent the Department of Social Work and act on behalf of all the parties concerned. Because of their physical accessibility, they are able to deal effectively with crises and problems.

Co-ordinators' responsibilities include the following:

- Preparing welfare agencies to accommodate learners for practical work
- Orientation of learners, supervisors and contact persons for the current year's practical work
- Placements of learners in practical work settings
- Matching placements, learners and supervisors
- Attending regular meetings and consulting with supervisors to assist them with their supervision task
- Facilitating workshops in Durban and Cape Town

Although placements can take a number of forms, the Department of Social Work at Unisa prefers multiple placements and group supervision. It has been established that group supervision results in more meaningful learning, as it encourages positive interdependence and dialogue amongst learners, creates positive group norms and places emphasis on the value of the group, which in turn leads to improvement in academic performance. Furthermore, it is cost-effective.

Forms of field placement

Field placements take three forms: multiple, single and placements.

Multiple placements

A group of learners are placed with a contact person within an organisation and a Unisa supervisor outside the organisation provides group supervision. Alternatively,

several learners are placed with a supervisor from an organisation, and this person provides group supervision.

Single placements

A single learner is placed with a contact person at an organisation and a Unisa supervisor is allocated. Alternatively a single learner is placed with a supervisor/contact person at the organisation.

Combination placements

The supervisor at the organisation provides supervision in the case of certain practical work elements, and learners attend Unisa group supervision for the other elements.

Supervision of learners

Supervision is intended to increase awareness and ongoing self awareness on the part of the social worker. Supervision is about guiding the social worker to become what he or she needs to be; it is an activity in building the profession. The practical work is usually supervised by an appointed Unisa supervisor. There are two forms of supervision, namely Unisa group supervision and organisation supervision.

Unisa group supervision

In Pretoria, Johannesburg, Durban and Cape Town group supervision is provided by a Unisa supervisor, outside the placement organisations. The organisation appoints a contact person who is the link between the learner and the organisation, and between all concerned parties. This is the arrangement preferred by the Department of Social Work.

Organisation supervision

This takes the form of group or individual supervision by a supervisor made available by the organisation and formally appointed by the vice-chancellor of Unisa. The supervisor is required to meet the requirements set out by the Department of Social Work.

Expectations regarding contact persons at organisations

The contact person at the organisation fulfils an important role, which may well prove to be time-consuming. The contact person is a very important link between the Department of Social Work at Unisa, the supervisor and the organisation during the course of the learner's practical work and is responsible for arrangements for practical work during block and concurrent placements.

The contact person is responsible for making arrangements for the following:

- Orientation regarding organisation policy, practice and general functioning during the block placement

- Appropriate learning opportunities for community work, casework and group work, for example by assisting in identifying a community with which to work, putting together possible groups for group work and allocating clients for casework
- Feedback to the Department of Social Work on learner performance during mid-year and final evaluation
- Regular consultation and feedback to ensure accountability

Responsibilities of supervisors

Learners do their practical work under the guidance of supervisors, whose tasks are to assist learners to develop and refine their professional skills, to integrate knowledge and theory in the practical work, and to promote the values and attitudes required by the profession. Supervisors fulfil an educational, supportive and administrative role, and it is through supervision that learners become socialised in the profession.

All supervisors receive a manual for supervision as well as course material. An orientation programme for new supervisors is offered annually, during which attention is paid to administrative matters, supervision/facilitation in general, the process of supervision/facilitation and the theoretical content of the relevant modules. Workshops during which theory and practice are integrated are presented during the year for learners enrolled for the different modules. New supervisors are invited to attend these sessions.

Lecturers keep contact with supervisors throughout the year and give guidance where necessary in order to ensure a uniform standard of practical work. There is regular personal, telephonic and/or written communication between lecturers and supervisors, the practical work reports are regularly monitored, and feedback on these is regularly given.

Learners who register for the degree have the benefit of hands-on practical work experience by way of workshops, group discussions, supervision and practice sessions at first-, second- and third-year levels at a Unisa centre under the guidance of the lecturer or supervisor. Fourth-year learners continue with the practical work at a Unisa centre, and in addition undertake practical work at a welfare organisation with individuals, groups and communities. They also do practical work in social work management and undertake a research project. The responsibility of supervisors of learners at second- and third-year levels (general) and fourth-year level is discussed in more detail below.

Responsibilities of supervisors of learners at second- and third-year level (general)

In accepting their appointment, supervisors commit themselves to the training of learners according the Unisa's goals and ideals. They thus take on a tremendous

responsibility. Supervisors must be available for the duration of the learner's practical work. Moreover, they have to undertake to contact the Department of Social Work immediately should any problems arise.

During learner training the Department of Social Work makes every effort through study guides, assignments, workshops, workbooks and tasks to convey to learners the core concepts, theories and techniques which are regarded as foundation practice. The practical work is regarded as an opportunity for learners to apply and integrate the knowledge and skills taught in the above ways.

The task of the supervisor is not only to assist learners to become familiar with and understand the theory, but also to facilitate the application of this theory to specific situations in practice. Exposure to actual situations provided through workshops and practical work placements offers an excellent opportunity for learners to link theory and practice. Learners learn by doing, seeing and experiencing. Through identification, imitation and modelling and reflecting, they incorporate and integrate the new knowledge and skills.

To achieve the above, supervisors must be familiar with the theoretical content of the course and with all requirements in this respect. As it is their task to help learners integrate the theory when undertaking practical work, they must study all the relevant material, such as the following:

Tutorial letter 101 for the relevant module

This tutorial letter is the first one for every module and contains an explanation of the assignments (and tasks) to be done by learners and a list of the prescribed and recommended books for each module. Theoretical assignments are set on this work. During practical work supervision learners must be assisted to integrate this theory, and they can be referred to these assignments and the theory on which they are based for integration and use.

Theoretical study guide

Supervisors receive the theoretical study guides, which set out the theoretical approaches and methods to be used for the particular module. They must be familiar with the content of these guides and must be able to refer learners to the appropriate sections for the purposes of integration and use in the practical work.

Study guides for practical work

Detailed information is given regarding the nature, requirements, extent and curriculum of the practical work as well as the due dates for the completion of the various activities, and the tasks and activities that learners need to complete for purposes of the practical work.

Prescribed and recommended texts

Recommended books can be obtained on loan from the Unisa library, as sufficient copies are available. A limited number of prescribed books are also available from the library. Learners must be assisted to use and integrate the knowledge contained in their prescribed and recommended books in the execution of their practical work.

Responsibilities of supervisors of learners at fourth-year level

Fourth-year learners register for 10 modules, 3 of which involve practical field instruction. The total time spent per practical work module is 120 hours.

Contact and liaison

Supervisors should be available to learners once the block placement has been made and spend time providing orientation regarding the welfare organisation and the practical work requirements.

If the supervisor is not attached to the welfare agency, he or she will have to liaise between the contact person at the agency, the learner and the Department of Social Work at Unisa. Regular communication with the contact person at the agency will therefore be required if supervisors are to remain aware of circumstances at the agency or to be alerted to problems that may become an obstacle to the learner's practical work. Formal meetings must be arranged:

(a) after the learner's block placement,
(b) before the mid-year evaluation of the learner's practical work, and
(c) again before the final evaluation to give and receive the contact person's input regarding the learner's performance.

Supervisors must acknowledge the contact person as an important role player in the training of the learners, and regularly communicate with him or her.

Supervisors are responsible for providing one or two hours of individual and/or group supervision per week. Learners need a fixed time to meet with their supervisors, and supervisors must contract with learners in this respect. Group supervision sessions usually last two or three hours. The number of group supervision sessions is specified in Supervision 11 (Exposition regarding Remuneration). Supervisors are responsible for offering a listening ear and responding to learners' needs, and for providing suitable learning experiences and guidance. A learner may not receive supervision unless the necessary reports have been submitted. Should a learner fall behind on practical work or on report writing, the relevant lecturer must be informed immediately. To assist supervisors in the execution of their tasks, regular (roughly monthly) consultations are arranged for the group of supervisors per area (Johannesburg, Pretoria and Durban).

Marking of reports

When reading through the reports, supervisors should do the following:

- Select important areas to be discussed. Less time then needs to be spent during actual supervision on aspects that learners can deal with on their own.
- When the process report is studied, more detailed comments for the learner's attention should be made separately in triplicate. This means that during the supervisory interview supervisors do not have to repeat information already given on the report. The learner will be better able to integrate the guidance offered during the hour spent in supervision. Supervisors should insist that the learner tape record the supervision session in order to listen to it again before the next supervision session.

Learners should be requested to do additional reading to supplement their knowledge of particular aspects, and to consult the prescribed and recommended books. Learners are required to accept more responsibility for their own development and to expand their knowledge of the theory. During the next interview, they must provide an indication of their progress with regard to completing the set tasks. Learners can be given specific reading assignments and must prove their ability to integrate theory and practice.

Monitoring of practical work reports

Supervisors are requested to provide feedback, route questions to lecturers, ask for guidance and/or bring matters to the attention of the lecturer and the consultant on the face sheets of learners' reports. They will receive feedback either telephonically or in writing or by way of consultations with groups of supervisors per module and method.

If monitoring is required as a matter of urgency, this will be done on request; in other cases it will be done routinely. The purpose of monitoring is to assist with the integration of theory and practice, to assist supervisors to enable learners to achieve the goals formulated for the specific course and method, to provide support and to ensure that a fairly uniform standard of training is maintained.

To provide meaningful monitoring of learner performance and to determine the agendas for the consultation meetings, supervisors are requested to submit all reports immediately following supervision, as this will enable the lecturer to identify problem areas in learner performance in good time. This is impossible if lecturers receive all the reports together, months after the actual contacts actually took place. Reports must therefore be submitted weekly.

Evaluation

Supervisors are responsible for evaluating learner performance and for involving the learner in this process. Deadlines for evaluations must be met. Besides the informal evaluation, there will be a mid-year and final evaluation.

Logistics

Manuals and recording of learning

Learners at all levels receive manuals that stipulate the requirements for recording their learning. These manuals are available should any further information be needed. From 2005 learners also receive a manual in which assessment criteria, outcomes of courses and ethical criteria are clearly explained.

All learner records are submitted via the supervisor. Both the supervisor and the lecturer are responsible for keeping learner records, process reports and evaluation reports. All records, process reports, tasks, assignments and evaluation records become part of the learner's portfolio, which is submitted during mid-year and end-of-year evaluations.

Learning contracting and documentation

The Department of Social Work recommends that the organisation negotiate a contract with learners during block placements regarding dress code, time spent at the organisation, tasks to be performed, attendance of meetings (case conferences, staff meetings), office hours, feedback to contact person and other related matters. Learners should also inform the contact person about dates for workshops and supervision, when they will not be coming in to the organisation.

In finalising practical work opportunities organisations need to complete the PRACM4/2005 form, which they send back to the Department of Social Work. On receipt of the completed form, the co-ordinator in the area will do the following:

- Acknowledge receipt of the form
- Make an appointment to discuss the practical work placement, should this be requested
- Make preliminary arrangements during October for meetings between learners and the welfare agencies in November to enable learners and organisations to decide on the suitability of possible placements and learners, after which the learner and the organisation will inform the co-ordinator about their decisions
- Forward final documentation regarding the placement arrangements as confirmation

Formative and summative assessment

Formative assessment is built in to all courses. In the beginning learners receive various practical work manuals and annexures that guide the process of formative assessment. (This includes mid-year self-evaluations, mid-year feedback from organisations, evaluations from supervisors, feedback on tutorial letters, workshops, evaluation of modules and feedback on portfolios.) Time management schedules and programmes guide the processes. Assessment is done weekly/monthly and yearly. Fourth-year

learners are also individually evaluated. Mid-year and end-of-year evaluations are scheduled in all centres.

Summative assessment is done on different levels. Interactive assessment involves the following parties:

- Learners in groups
- Learner and supervisor
- Learner, supervisor and lecturer during evaluations

A written record of these processes becomes part of the learner's portfolio. By studying the written and personal feedback received from learners, supervisors, and organisations on courses, modules, course content and learner performance, lecturers are able to evaluate and assess the outcomes of courses holistically. These aspects are recorded and discussed during staff meetings.

Locality requirements: Area of residence

Learners resident in areas other than those listed below are required to contact the Department of Social Work to determine whether arrangements can be made for them to study for the degree. Those living for the duration of their studies in the areas mentioned below and their immediate surrounds may register:

Bloemfontein	Gauteng
Cape Town	Kimberley
George	Polokwane
Nelspruit	Pietermaritzburg
Durban	Port Elizabeth

Currently workshops are presented only in certain cities. Those who cannot attend these workshops have to make alternative arrangements with the Department of Social Work. No guarantee can be given that the workshops will be presented in cities other than Pretoria, Johannesburg, Cape Town, Port Elizabeth, Durban, Kimberley and Polokwane.

Foreign countries

Due to the practical training involved, it is not possible for persons residing outside South Africa to enrol for the Social Work degrees. However, those who plan to return/relocate to South Africa within a year or two may begin with certain theoretical modules required for the degree.

Registration with the SA Council for Social Service Professions (SACSSP)

In their second year, learners enrolled for Social Work must register with the SACSSP as student social workers. The Council will send the registration forms to all second-

year Social Work learners, who must send the completed forms, together with the stipulated amount payable, to the Council. Each learner is subject to the stipulations of the Social Service Professions Act (Act 110 of 1978), which, *inter alia*, describes ethical behaviour. Learners who fail to comply with this specification will not be allowed to continue with their practical work.

Student history teachers[1] at unisa learning their practical competence by discussing, watching and doing

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Learning from teaching in the classroom is one of the most useful ways of learning to be a teacher. The aim of this paper is to review scholars' views on the mechanics of student teacher development during teaching practice, and to put forward a case study: the BEd or PGCE (Senior Phase and FET) Subject Didactics History module. Special reference is made to the teaching practice component of the module to illustrate how student History teachers at Unisa learn their practical competence by discussing, watching and doing to become effective and reflective FET practitioners.

Introduction

Since the ANC government came to power in 1994 all aspects of social policy in South Africa have undergone transformation. Few spheres of policy have received more public and political attention than education, reflected in a vast number of education-related reforms passed by government. Reform initiatives include, among others, state-determined norms and standards for teacher education (specifying what student teachers should know and be able to do); alignment of teacher certification; emphasis on contextual and applied learning; the fundamental right of government to involve itself more directly in schools; a greater say for parents and industry in debates over education policy and practice, etc. (Education Labour Relations Council 2003). At the heart of the reform process was a desire to make teachers and education more accountable (Department of Education 1997). Although professionals at the time criticised aspects of the reforms, scholars suggest that the reforms to teacher education have been for the most part beneficial (Bam & Visser 2001; Burger (Die) 2000; Mazabow 2003).

Teacher education in South Africa is currently well regulated. Requirements for the regulation of teacher education are set out in *Norms and Standards for Educators* published in 2000 in terms of section 3(4)(f) and (1) of the *National Education Policy Act 27 of 1996.* The *Norms and Standards for Educators* (2000) govern the orientation of teacher education programmes in South Africa, as well as the qualifications that will be recognised by the Department of Education for purpose of employment (Education

Labour Relations Council, 2003). The above policy represents a culmination of the desire to improve standards by ensuring that government plays a more proactive role in influencing the ways in which teachers are trained (Hutcheson 2005).

One of the central features of the policy was to increase the role of schools in teacher education. Central to this notion was the establishment of the concept of teacher education partnership between schools and higher education institutions. Universities and the former teacher training colleges have long accepted relevant work experience as an integral part of the curricula in teacher education, but this involvement is now expanded to provide student teachers with direct linkages to the work place and measurable skills and outcomes; to prepare student teachers for instruction in applied learning pedagogy; to enhance the education of student teachers; and to ensure that student teachers graduate with the skills needed for career success (Hutcheson 2005).

Schools now play a central role in the training, observation and assessment of student teachers (Hutcheson 2005). Essentially, partnership involves according to Booth, Furlong and Wilkin (1990) the following features:

- Student teachers work closely with experienced teachers in schools who mentor their school-based progress.
- Student teachers are not 'thrown in at the deep end' as they very often used to be on teacher education courses; they observe experienced teachers 'in action' before embarking upon teaching themselves.
- Student teachers are given feedback on their progress by experienced teachers.
- Student teachers are encouraged to evaluate their own progress.

Thus higher education institutions, in partnership with schools, determine whether student teachers reach what is termed qualified teacher status. In order to achieve qualified teacher status, students have to demonstrate to the partnership that they have reached a level of competence in the requirements as set out in the *Norms and Standards for Educators* (2000; Phillips 2002).

According to Phillips and Furlong (2001) the partnership system has considerable advantages. Prior to the introduction of the system, many student teachers complained about what was termed the 'theory/practice' divide, where much of the work done in the higher education institutions was irrelevant to the practical context of the school. Teachers played little part in the training process, and for many student teachers the courses on offer provided inadequate preparation for full-time teaching. By contrast, partnership can provide a very effective means by which student teachers can learn the complex craft of teaching, with the professional experience gained in school being enhanced by the analytical environment of the higher education institutions. Both are seen as essential in the partnership. Scholars such as Baumann, Bloomfield and Roughton (1997), Capel, Leask and Turner (1995), Dean (1996), Dillon and Maguire (1997), Hayes (1997) and Phillips (2002) suggest that learning from teaching in the

classroom is the most useful way of learning to be a teacher, but in order to learn most effectively (and to become 'E&R', that is effective and reflective) all modes are highly relevant and important. As Flores (2001:146) stresses:

> ... learning to teach entails a constellation of complex factors. It is a process that goes beyond the mere application of a set of acquired techniques and skills. Not only does it imply the mastery of practical or more technical issues, but it also encompasses the construction of knowledge and meaning in an ongoing and challenging dialogue with the practice.

Methodology

Statement of the problem

The problem that underlies this paper is based on the findings of a research project done over a five-year period, from 2000 to 2004. The purpose of the research project was to assess how student History teachers at Unisa cope with the compulsory teaching practice period. The information was obtained from discussions with student History teachers enrolled for the BEd or PGCE (Senior Phase and FET) Subject Didactics History module. The discussions took place during the mid-year day seminars which were held on the Sunnyside campus. Additional information was also obtained from the students' teaching practice record booklets which were submitted for assessment at the end of each year. A discussion of the identified problems follows.

The first problem centres on the question of what motivates and concerns student History teachers when they embark upon their five weeks' teaching practice at a secondary school (grades 10, 11 and 12). When student History teachers enrol for, among others, the compulsory teaching practice components of the BEd or PGCE (Senior Phase and FET) programme, they do so for a range of reasons: from genuinely wanting to work with learners, to not knowing what else to do, or basing their decision making upon their experiences as learners, particularly in relation to their teachers ('I want to be like Mrs X'; 'I don't want to be like Mr Y'; 'I want the kids to like me and enjoy History'). Early days on the programme reveal that students have certain fears about the prospect of teaching: 'How will I possibly be able to control my classes?' 'What if they ask me something I don't know?' On the other hand, they do not realise the significance of other challenges - such as meeting the needs of a range of individual learners; the importance of properly managed authentic assessment procedures; the need for managing group work in certain ways, etc., which turn out, through experience, to be very important indeed.

The second problem centres on the question of how student History teachers experience their teaching practice period in the History classroom. After a period of observation and discussion with the History teachers and other teachers in the school, student History teachers start to teach for the first time and reality soon sets in. As they gain some experience, they start to use 'tried and tested' teaching strategies, which work for them. Whole-class teaching with a degree of teacher exposition is the favoured mode

of teaching in the classroom. Teaching strategies that involve the minimum of 'risk' are also favoured, such as asking learners to individually read from their textbooks and then complete a list of written (low-order) questions on a worksheet. Moreover, student History teachers at this stage frequently tend to 'teach to the class' and see little need to get to know their learners as individuals. Consequently, they tend to teach to the middle ability range, with very little awareness of particular individual learning needs. They also tend to favour teacher folklore or common sense ('go in there hard' or 'don't smile before Christmas'). This is because the sheer complexity and difficulty of teaching, as well as their own limited knowledge, skills and experience in comparison, force them to rely upon coping strategies.

The third problem centres on the question of whether student History teachers become effective and reflective practitioners (or 'E&R') at the end of their teaching practice period. The vast majority of student History teachers progress to a stage of basic competence. At this so-called 'plateau' stage, they realise that they have adequate subject knowledge to teach learners fairly well. They can plan lesson units, but often these lack clarity in relation to learning outcomes and assessment procedures. The student History teachers have mastered 'tried and tested' teaching strategies in the class, but at the same time the lessons and teaching strategies lack variety, creativity and originality, and it becomes clear from their teaching practice record booklets that the learners get rather bored and restless with the repetition, which has a knock-out effect in terms of classroom control. On the other hand, classroom control is generally satisfactory but certain learners cause problems, which student History teachers feel powerless at times to do anything about. They assess learners, but the comments they are able to offer learners are limited, and therefore assessment bears little relationship to teaching and learning. Learning in History undoubtedly takes place but is sometimes inconsistent: with the less able not being consistently catered for and the more able not really stretched (Phillips 2002).

Aim of the paper

The aim of this paper is to review scholars' views on the mechanics of student teacher development during teaching practice, and to outline how the teaching practice component of the BEd or PGCE (Senior Phase and FET) Subject Didactics History module instils the competence as required by the *Norms and Standards for Educators* (2000) in this regard, and utilises the mechanics of student teacher development as set out in the literature review (deat with later in this paper).

The outcomes of the paper may be used to do the following:

- Demonstrate to policy makers, public bodies, education administrators, curriculum developers and university leaders how the BEd or PGCE (Senior Phase and FET) Subject Didactics History module is designed to meet the requirements of the *Norms* and *Standards* for *Educators* (2000) with regard to work-integrated learning (WiL)

- Empower student History teachers who engage in learning in the workplace and who graduate at Unisa to become effective and reflective FET practitioners

To this end the paper intends to provide scholars' views on the mechanics of student teacher development during teaching practice, and to put forward a case study: the BEd or PGCE (Senior Phase and FET) Subject Didactics History module. Special reference is made to the teaching practice component of the module to illustrate how student History teachers at Unisa learn their practical competence by discussing, watching and doing to become effective and reflective FET practitioners.

Clarification of concepts

Any paper on teacher education and work-integrated learning for FET History teaching has to start with defining the core concepts that are frequently used in this regard.

History teaching

The concept History teaching comprises two components, namely, History and teaching. Two scientific fields are thus involved: on the one hand, the science which occupies itself with the discipline History, and on the other, Didactics, the science which studies teaching and learning (Rüsen 1993). According to Mathews, Moodley, Rheeder & Wilkinson (1992:1-5) the concept of two History teaching entails the following:

> a teaching methodology inside and outside the History classroom in which knowledge, skills, concepts and attitudes play a dominant role ... a learner-centred and skills-based approach where learners in effect become young historians carrying out in an uncomplicated way the methods of the historian ... analysis and interpretation ... to serve the interest of present-day society.

Applied competence

The cornerstone of the *Norms and Standards for Educators* (2000) policy is the notion of applied competence and its associated assessment criteria. Applied competence is the overarching term for three interconnected kinds of competence:

- Practical competence: Practical competence is the demonstrated ability, in an authentic context, to consider a range of possibilities for action, make considered decisions about which possibility to follow, and to perform the chosen action.
- Foundational competence: Practical competence is grounded in foundational competence by which the learner demonstrates an understanding of the knowledge and thinking that underpins the action taken.
- Reflexive (reflective) competence: Foundational competence is integrated through reflexive (reflective) competence in which the learner demonstrates ability to integrate or connect performances and decision making with

understanding and with an ability to adapt to change and unforeseen circumstances and to explain the reasons behind these adaptations.

Applied competence also refers to the ability to integrate the discrete competences which constitute each of the seven educator roles: learning mediator; interpreter and designer of learning programmes and materials; leader, administrator and manager; scholar, researcher and lifelong learner; community, citizenship and pastoral role; assessor; and learning area/subject/discipline/phase specialist. In turn, the seven roles should also be assessed in an applied and integrated manner. The seventh role, that of a learning area/subject/discipline/phase specialist, is the overarching role into which the other roles are integrated, and in which competence is ultimately assessed. The list of roles and their associated competences is meant to serve as a description of what it means to be a competent educator. Ultimately, the educator should reflect an applied and integrated competence; the ability to integrate theory and practice in teaching (Education Labour Relations Council 2003).

Learning in the workplace (LiW) or work-integrated learning (WiL): teaching practice

Learning in the workplace (LiW) can be defined as customised training negotiated with a partner organisation to provide students with opportunities to improve their professional and vocational practice through training delivered at the workplace. LiW is characterised as a curriculum that:

- specifies some or all learning outcomes in terms of work practices and processes
- includes learning and teaching activities that utilise work as a site for learning and locates learning activities in the workplace
- involves assessment of learning outcomes for work-related elements

The term 'work-integrated learning' (WiL) is used by many higher education institutions to emphasise the academic nature of the learning at the work site. Work-integrated learning therefore is an educational approach that integrates learning at approved work positions with learning in higher education institutions (Victoria University 2003).

In the *Norms and Standards for Educators* (2000) time spent in the workplace is considered to be very important and should provide the authentic context within which student educators experience and demonstrate the integration of the competences developed in the entire curriculum. Teaching practice is therefore recognised as an essential feature that should be included in all educator programmes. No competences are specifically associated with it and there is no prescribed period of time. Teaching practice is seen as a mode of delivery through which all the different roles of the educator should be developed and assessed (Education Labour Relations Council 2003).

Reflective practitioner model of teacher education

The partnership system (see the introduction of this paper) is actually based upon a reflective practitioner model of teacher education (Schön 1983; Edwards & Brunton 1993). The above model, as its name suggests, refers to the ways in which professionals 'make sense' of their own practice through evaluation, analysis and experience (Brown & McIntyre, 1993). Moon (1999:4) defines it as a way of thinking 'that is applied to relatively complicated or unstructured ideas for which there is not an obvious solution'. (p. 4) Reflection provides a means for understanding teaching. An essential feature of this involves equipping the emerging teacher with the capacity to understand why certain practices are effective and others are not. For this to take place, a wide variety of professional knowledge is required, which is acquired through discussion, experience and sharing with others. A fundamental principle behind the reflective practitioner model of teacher education is the belief that in order to progress as professionals, students need to know not only how to teach in certain ways but also why those methods are effective. Thus, in order to make sense of professional practice, emerging teachers need to be able to conceptualise and this involves a degree of theorising (Phillips 2002).

Literature review: the mechanics of student teacher development – learning by discussing, watching and doing

This section reports scholars' views on the mechanics of student teacher development during teaching practice. Edwards and Healy (1994), in a useful introduction to teacher education, argue that student teachers go through the following phases, which are then reflected in the teacher education process: induction, teaching collaboratively, flying solo, bringing it all together and moving on. Research by Furlong and Maynard (1995) on the development of professional knowledge shows that student teachers go through six stages on the way to becoming 'E&R' (effective and reflective) teachers: idealism, myth making, reality, coping mechanisms, basic competence (the 'plateau') and reflective practice (the 'post plateau'). Dean (1996) identifies the following ways that student teachers can learn to teach: learning through discussion with teachers (taking advice from experienced teachers); learning through observation of teachers (including non-historians); learning from other individuals and groups (including experienced teachers and student teachers); and learning through experience (hands-on teaching in the classroom). The emphasis in the remaining paragraphs of this subsection is on Dean's (1996) teacher education model, with special reference to the development of student History teachers. An elaboration of each of the stages of the model follows, also using the views of scholars such as Booth *et al* (1990), Capel *et al* (1995), Croll (1996), Edwards and Healy (1994), Phillips (2002), Shaw (1992), Tilstone (1998), Wilkin (1992) and Wragg and Wood (1984).

Learning through discussion

Talking to History teachers provides the first step in building up much of the student History teachers' craft knowledge as well as being introduced to ideological aspects. Thus, student History teachers' 'first encounters' with History teachers, for example, during a pre-visit to the school or during the early days of teaching practice, provide opportunities to explore and discuss general views and beliefs on history and History teaching, and on the planning process such as learning outcomes, teaching strategies, the most useful textbooks, the nature of classroom control and issues relating to the organisation of the classroom. A little later there may be opportunities to develop knowledge of the institution, not only from History teachers but also from other members of staff such as head teachers, deputy head teachers, and other subject teachers (Dean 1996; Phillips 2002).

Learning through observation

Researchers such as Croll (1996) and Tilstone (1998) recognise that observation is fundamental to the learning process in teaching. This is where all aspects of the professional craft knowledge can be observed at first hand, particularly the nature of routinisation of organisational knowledge. It provides the first opportunities to evaluate how learners learn History. However, Shaw (1992) argues that unfocused observation can be boring, and actually not constructive, and that structured observation, with a particular focus, is vital for effective learning. Wragg and Wood (1984) suggest that during their first encounters with classes through watching, student History teachers usually find the following useful to focus upon:

- Rules and regulations (e.g. entry and exit procedures, discipline: control and management).
- Classroom (physical appearance, layout, resources).
- Lesson beginnings (teaching strategies, expectations, timing, response of learners).
- Lesson organisation (tasks, amount of teacher talk/learner talk, balance between written work and oral work).
- Lesson endings (conclusions and summaries, exit from classroom).

The above relate mainly to organisational knowledge. Later, as student History teachers become more experienced and aware, so the focus of attention can shift to other aspects of the craft knowledge, including technical and specific issues. These include the following:

- Lesson beginnings: How, precisely, does the teacher gain learner interest at the start of activities? What techniques and resources are used? What types of questions are asked by the teacher? What is the optimum length for a lesson introduction? When and how are lesson outcomes communicated to the learners? Do the learners know what is expected of them?

- Lesson organisation: How are transitions and tasks managed? How long should be spent on tasks? What does the teacher do to ensure that most learners work on-task? What kinds of instructions and explanations are provided? How are less able learners supported and the more able challenged? How is feedback obtained from the learners and what is done with it? How are outcomes assessed?
- Lesson endings: How, precisely, does the lesson end? How much time is allocated to the conclusion? Is time allocated for assessing learning outcomes? Do the learners understand what they have been doing? What needs to be considered for the next lesson?

Not only does it help to adopt a specific focus and a progressive line of observation, but it may also be useful to use different ways of observing in order to promote reflection and evaluation (Phillips 2002). Capel *et al* (1995), for example, describe the advantages of paired observation (e.g. done with another student), which involves three steps:

Step 1: Agree on the focus area of observation: questioning technique, task management, etc.

Step 2: Observe each other teach, concentrating on the agreed focus area.

Step 3: Give each other feedback on the area chosen for the focus of observation.

Learning from other individuals and groups

Student History teachers, then, need to learn from a range of individuals. According to Phillips (2002) some PGCE programmes adopt the policy of actually placing student teachers in pairs, so that they can learn from each other. Edwards & Healy (1994) encourage a so-called developmental or phased approach to student History teacher learning:

Phase 1: Observation by student History teachers of experienced teachers.

Phase 2: Collaborative work with an experienced teacher, with the student History teacher taking responsibility for a section of the lesson (e.g. management of group work, explaining a task, starting or ending the lesson).

Phase 3: Paired teaching, whereby student History teachers plan, teach and evaluate lessons together, each taking responsibility for particular parts of the lessons.

Phase 4: Individual teaching, with paired observation and continuation of some collaborative and paired work.

Student History teachers provide an abundant source of useful feedback and mutual support, which could profitably be used as opportunities to provide for reflective

analysis and sharing of ideas (Phillips 2002). However, the teacher is a vitally important figure in teacher education, and research (Booth *et al* 1990) confirms that the quality of mentoring has a vital impact upon the development of student History teachers. According to Wilkin (1992) the nature of the student-teacher relationship needs to change as the training process proceeds. Capel *et al* (1995) and Phillips (2002) provide a useful list of words to describe the changing student-teacher relationship: colleague, protector, consultant, helper, reviewer, expert, guide, motivator, assessor, diagnoser, facilitator, challenger, appraiser, teacher, listener, trusted guide, counsellor and critical friend. Some of the roles are more relevant at different stages or phases of the teacher development process: at the beginning of the teaching practice period, when the student History teacher lacks experience and skills of the craft knowledge, it is appropriate that the experienced teacher takes the role of diagnoser and facilitator; towards the end of the teaching practice, however, the focus shifts towards assessor, challenger and critical friend (Phillips 2002).

Learning through experience

Student History teachers learn from experience, but unless that experience is organised in certain ways, learning can actually be inconsistent. Unless student History teachers take the role of evaluation, diagnosis, analysis and reflection seriously they will not progress at the rate they want. Student History teachers should ask some fundamental reflective questions such as: Where am I now? (self-evaluation); Where do I want to be in a year's time? (action-planning); How am I going to achieve this? (outcome-setting)(Phillips 2002).

According to Phillips (2002) student History teachers should also analyse their present situation and future development in terms of a number of key self-evaluative questions: How do learners learn? What have my learners learned? How can I challenge my learners? The challenge is to ensure that the above translate into the following key outcomes: Being aware of learners' learning needs; using a range of teaching and learning strategies; developing effective monitoring, evaluative and assessment strategies; providing diagnostic evaluation and feedback to learners; and continually setting targets for future development. Reflective practice will therefore involve: revisiting knowledge and experience already gained; rethinking how subject knowledge is used and packaged; reshaping lesson planning; restructuring lessons; revisiting thoughts on how learners learn History; rethinking how assessment can inform teaching and learning; and reorientating the focus of attention from the teacher to the learning needs of learners (Furlong & McCulloch 2001; Phillips 2002).

A case study: the bed or PGCE (Senior Phase and FET) Subject Didactics History module[2]

In this section the practical work component of the Subject Didactics History module is outlined to illustrate how student History teachers at Unisa learn their practical competence by discussing, watching and doing to become effective and reflective

FET practitioners. Practical work is a compulsory component of both the BEd and PGCE (Senior Phase and FET) programmes. The structure of the programmes is as follows:

Duration	Admission requirements	Curriculum	Practical work
Bed (Senior Phase and FET)			
4 years (480 credits)	Grade 12 (matric) with exemption	40 modules selected from three groups of study units, namely school subjects, education subjects and professional studies	Two compulsory 5-week periods at approved schools
Postgraduate Certificate in Education (Senior Phase and FET)			
1 year full-time or at least 2 years part-time (120 credits)	A degree (or equivalent qualification) which includes three courses in one approved school subject and two courses in another school subject; or two courses in two approved school subjects and one course in a third school subject; or three courses in one approved school subject and at least one course in each of the two other approved subjects	10 study units including tests in language and practical teaching ability	10 weeks at a secondary school

Figure 1: Structures of the BEd (Senior Phase and FET) and Postgraduate Certificate in Education (Senior Phase and FET) programmes (School of Education 2005)

The practical work for the above two programmes is known as teaching practice, and comprises three components: a teaching practice portfolio, a language proficiency assessment report, and a subject didactics (Teaching Practice 1: PTEAC1-X) and a learning area didactics (Teaching Practice 2: PTEAC2-Y) teaching practice record. An elaboration of each of the components follows.

Teaching practice portfolio

For Teaching Practice 1 (PTEAC1-X) and 2 (PTEAC2-Y; see below), students will be required to develop a portfolio during the teaching practice period. A portfolio is a systematic collection of a student's work selected to provide information about the student's attitude, motivation, level of development and growth over the time of teaching practice. The portfolio will allow a more complex and comprehensive view of student performance during teaching practice than traditional assessment procedures. For the portfolio to be educationally effective, it should emphasise product, process and content, effort and achievement, student ownership, and self-evaluation. The portfolio should:

- be a natural part of daily classroom activities rather than contrived
- be thoroughly integrated into the instructional programme of the school
- encourage student responsibility, ownership and pride of accomplishment
- allow students to polish and refine their craft and skills - to build upon what they are learning to do well
- incorporate learning tasks and also the student's ideas, interests and attitudes
- invite challenge and complexity in learners' thinking and in the work they produce
- encourage student metacognition and increase awareness of capacity for self-reflection and making judgements (Unisa 2005)

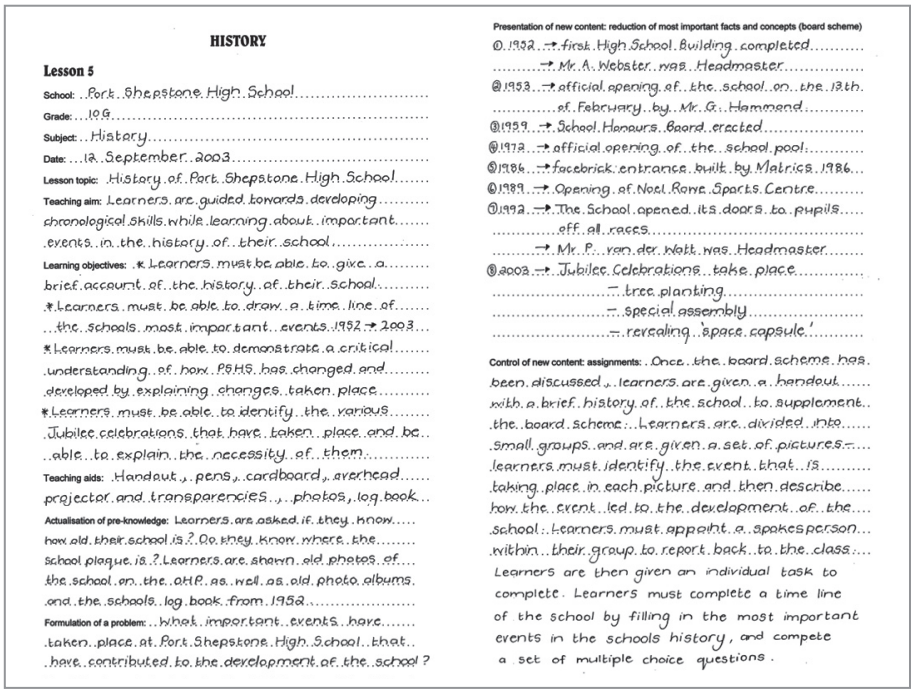
Language proficiency assessment report

During the teaching practice period, students will be evaluated on their language proficiency. The oral language test is conducted by the principal of the school and the vice-principal or a senior teacher. For this purpose the examiners will conduct a conversation of ten to fifteen minutes with the candidate in the language of his/her choice, chosen from the following list: Afrikaans, English, Sepedi, Sesotho, siSwati, Xitsonga, Setswana, Tshivenda, isiXhosa, isiZulu (Unisa, 2005).

Teaching practice records for subject didactics and learning area didactics: PTEAC1-X and PTEAC2-Y

Teaching Practice 1 (PTEAC1-X) and 2 (PTEAC2-Y) consist of two compulsory periods of teaching practice (each period for a specific subject didactics or a specific learning area didactics) of five weeks each. Students must register for Teaching Practice 1 (PTEAC1-X) in the same year that they register for the Subject Didactics, and for Teaching Practice 2 (PTEAC2-Y) in the same year that they register for the Learning Area Didactics. No additional fees are payable for Teaching Practice 1 (PTEAC1-X) and 2 (PTEAC2-Y), unless it is the only outstanding requirement for the completion of the degree or certificate (Unisa, 2005).

In the remaining paragraphs of this section an outline is provided of what Teaching Practice 1 (PTEAC1-X) for the Subject Didactics History module (DHS301-Y; SDHIST-V) entails. A teaching practice record booklet is issued to all registered Subject Didactics History students as a Tutorial Letter 102. The Tutorial Letter 102 booklet contains blank lesson plan and evaluation forms that have to be completed during the five weeks of teaching practice. Students are instructed to plan and prepare five FET History lessons for a grade 10, 11 or 12 class in order to gain experience in the planning and preparing of FET History lessons. They have to use the blank lesson plan forms for this purpose. The resources used in the five lessons must accompany their lesson plans. They are advised to discuss the lessons beforehand with an FET History teacher or a senior teacher, and then present them in the presence of the above teacher. If they are the FET History teacher or senior teacher they should ask any



HISTORY

Lesson 5

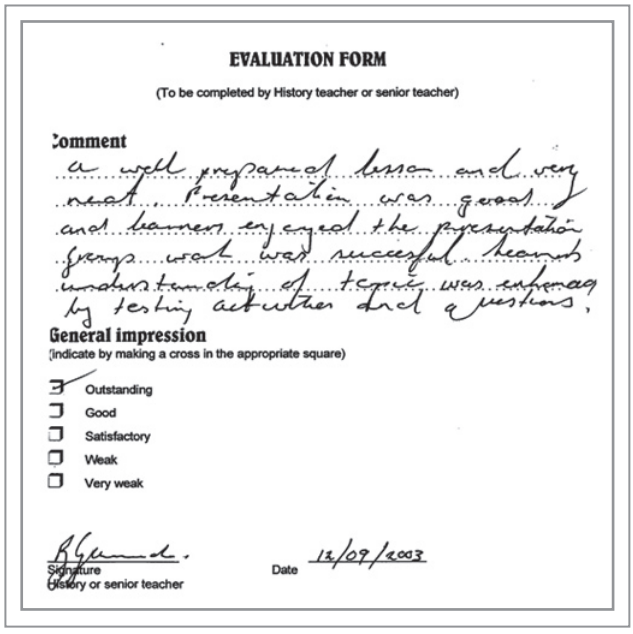
School: Port Shepstone High School
Grade: 10G
Subject: History
Date: 12 September 2003
Lesson topic: History of Port Shepstone High School
Teaching aim: Learners are guided towards developing chronological skills while learning about important events in the history of their school
Learning objectives: * Learners must be able to give a brief account of the history of their School
* Learners must be able to draw a time line of the schools most important events 1952 → 2003
* Learners must be able to demonstrate a critical understanding of how PSHS has changed and developed by explaining changes taken place
* Learners must be able to identify the various Jubilee celebrations that have taken place and be able to explain the necessity of them
Teaching aids: Handout, pens, cardboard, overhead projector and transparencies, photos, log book
Actualisation of pre-knowledge: Learners are asked if they know how old their school is? Do they know where the school plaque is? Learners are shown old photos of the school on the OHP as well as old photo albums and the schools log book from 1952
Formulation of a problem: What important events have taken place at Port Shepstone High School that have contributed to the development of the school?

Presentation of new content: reduction of most important facts and concepts (board scheme)

① 1952 → first High School Building completed
→ Mr A Webster was Headmaster
② 1953 → official opening of the school on the 13th of February by Mr G Hammond
③ 1959 → School Honours Board erected
④ 1972 → official opening of the school pool
⑤ 1986 → facebrick entrance built by Matrics 1986
⑥ 1989 → Opening of Neal Rowe Sports Centre
⑦ 1992 → The School opened its doors to pupils of all races
→ Mr P van der Walt was Headmaster
⑧ 2003 → Jubilee Celebrations take place
= tree planting
= special assembly
= revealing 'space capsule'

Control of new content: assignments: Once the board scheme has been discussed, learners are given a handout with a brief history of the school to supplement the board scheme. Learners are divided into small groups and are given a set of pictures. Learners must identify the event that is taking place in each picture and then describe how the event led to the development of the school. Learners must appoint a spokesperson within their group to report back to the class. Learners are then given an individual task to complete. Learners must complete a time line of the school by filling in the most important events in the schools history, and compete a set of multiple choice questions.

Figure 2: A lesson plan form (Rush 2004)



EVALUATION FORM

(To be completed by History teacher or senior teacher)

Comment

a well prepared lesson and very neat. Presentation was good and learners enjoyed the presentation. Group work was successful. Learners understanding of topic was enhanced by testing activities and questions.

General impression

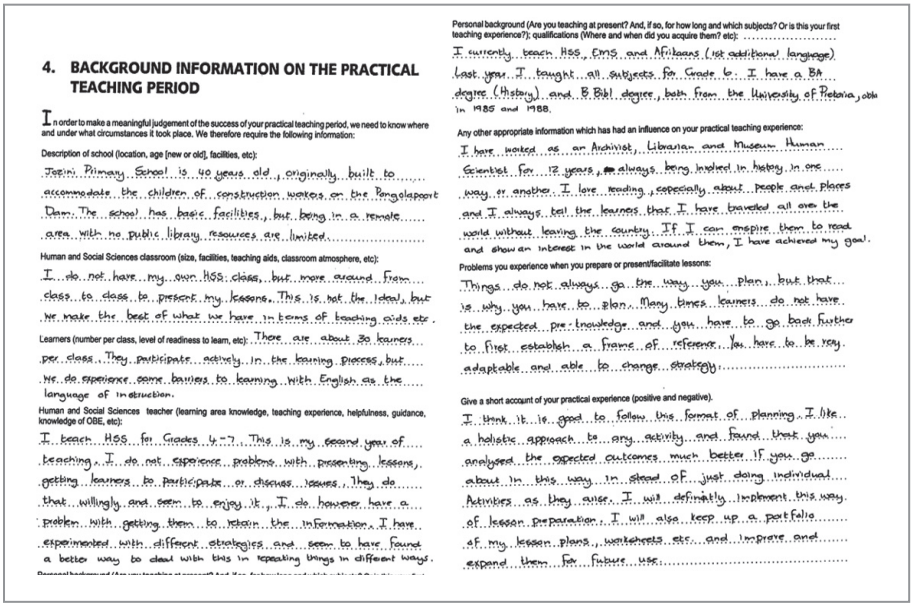
(indicate by making a cross in the appropriate square)

- [x] Outstanding
- [ ] Good
- [ ] Satisfactory
- [ ] Weak
- [ ] Very weak

Signature of History or senior teacher

Date 12/09/2003

Figure 3: A lesson evaluation form (Kriel 2003)



4. BACKGROUND INFORMATION ON THE PRACTICAL TEACHING PERIOD

In order to make a meaningful judgement of the success of your practical teaching period, we need to know where and under what circumstances it took place. We therefore require the following information:

Description of school (location, age [new or old], facilities, etc):
Jeppi Primary School is 40 years old, originally built to accommodate the children of construction workers on the Pongolapoort Dam. The school has basic facilities, but being in a remote area with no public library resources are limited.

Human and Social Sciences classroom (size, facilities, teaching aids, classroom atmosphere, etc):
I do not have my own HSS class, but move around from class to class to present my lessons. This is not the ideal, but we make the best of what we have in terms of teaching aids etc.

Learners (number per class, level of readiness to learn, etc): There are about 30 learners per class. They participate actively in the learning process, but we do experience some barriers to learning with English as the language of instruction.

Human and Social Sciences teacher (learning area knowledge, teaching experience, helpfulness, guidance, knowledge of OBE, etc):
I teach HSS for Grades 4-7. This is my second year of teaching. I do not experience problems with presenting lessons, getting learners to participate or discuss issues. They do that willingly and seem to enjoy it. I do however have a problem with getting them to retain the information. I have experimented with different strategies and seem to have found a better way to deal with this in repeating things in different ways.

Personal background (Are you teaching at present? And, if so, for how long and which subjects? Or is this your first teaching experience?); qualifications (Where and when did you acquire them? etc):
I currently teach HSS, EMS and Afrikaans (1st additional language). Last year I taught all subjects for Grade 6. I have a BA degree (History) and B Bibl degree, both from the University of Pretoria, obtained in 1985 and 1988.

Any other appropriate information which has had an influence on your practical teaching experience:
I have worked as an Archivist, Librarian and Museum Human Scientist for 12 years, ~~as~~ always being involved in history in one way or another. I love reading, especially about people and places and I always tell the learners that I have traveled all over the world without leaving the country. If I can inspire them to read and show an interest in the world around them, I have achieved my goal.

Problems you experience when you prepare or present/facilitate lessons:
Things do not always go the way you plan, but that is why you have to plan. Many times learners do not have the expected pre-knowledge and you have to go back further to first establish a frame of reference. You have to be very adaptable and able to change strategy.

Give a short account of your practical experience (positive and negative).
I think it is good to follow this format of planning. I like a holistic approach to any activity and found that you analysed the expected outcomes much better if you go about in this way in stead of just doing individual activities as they arise. I will definitely implement this way of lesson preparation. I will also keep up a portfolio of my lesson plans, worksheets etc and improve and expand them for future use.

Figure 4: Background information on the teaching practice period (Kriel 2003)

one of their colleagues to be of assistance in the evaluation of the lessons (Schoeman 2005a). The following is an example of a completed lesson plan form:

After the student History teachers have presented the lessons, the History teacher or senior teacher has to complete the evaluation form at the end of each lesson.

Two more forms have to be completed by the student History teachers before they send their teaching practice record booklets to Unisa for assessment. The first form contains background information on where and under what circumstances their teaching practice took place. The second form is a self-evaluation list to assess the progression of their craft knowledge in History teaching during their teaching practice period. An example follows:

Could you do better?
Do you want to do better?

Section A:
Assess your teaching practice period using the following criteria:

1 Knowledge of History as a school subject

Your subject knowledge has improved but it could be packaged more effectively. You have sound subject knowledge but you are aware of some of the gaps that need to be filled.

2 Lesson planning and design

You can plan lessons adequately but sometimes they don't go to plan! You plan learning outcomes but sometimes they need to be sharper and clearer. You have used mainly departmental resources but you'd also now like to start developing some of your own.

3 Teaching strategies

Your lesson introductions are OK but your lesson endings/conclusions are far from satisfactory. Your questioning technique is satisfactory but you know you can improve in many ways. You use the overhead projector (OHP) quite regularly but you'd now also like to start using information and communications technology (ICT) and audio-visual (AV) more. You've used mainly whole-class teaching but you want to try other teaching strategies too. You've used some group work but you weren't entirely satisfied with how it went; you want to develop more effective ways of organising group work. You've tried some empathy and role-play activities, but again, outcomes could have been better. You've used 'tried and tested' teaching strategies but you - and more importantly your learners - have become a bit bored with them. You want to develop a wider range of teaching and learning strategies.

4 Class management and control

You can manage and organise classes well but sometimes class control can be challenging. Your relationships with learners are, on the whole, OK but you find some learners difficult. You tend to 'teach to the middle'; you now want to find effective ways of meeting the needs of less able learners and challenging the more able.

5 Assessment criteria, procedure and recording tools

You've assessed learners' activities but, if you are honest, you could have done them more efficient. You've given 'marks/grades' and recorded them but you could have given more useful feedback.

6 Effectiveness

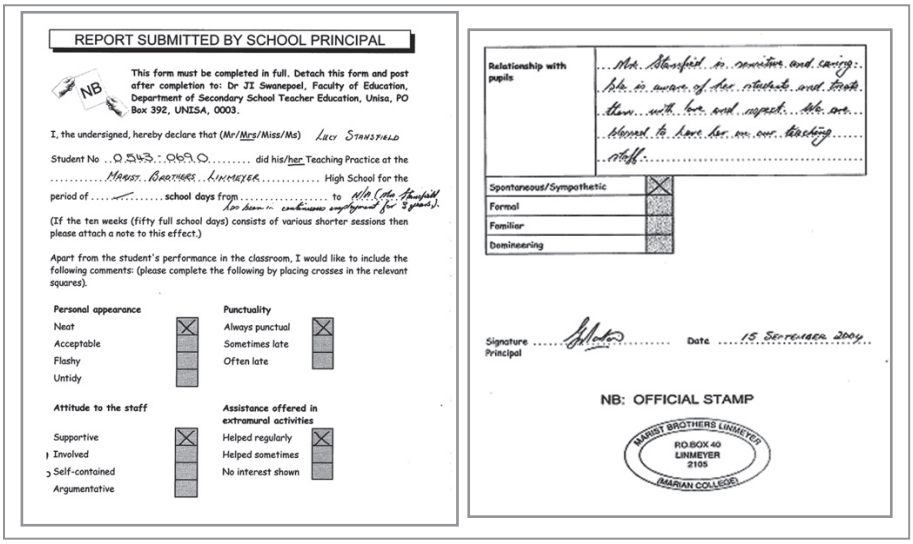
You've set appropriate tasks but you've also experienced 'dead-time' in some lessons. You've ensured that most learners learn something BUT COULD THEY LEARN MORE?

Section B:
Write a paragraph giving your personal comments on your performance during your teaching practice period

Figure 5: Self-evaluation list regarding their teaching practice period (Phillips 2002)

At the end of the teaching practice period, the school principals have to complete blank report forms on the general appearance and conduct of the student History teachers during their teaching practice period, and sent them to the lecturer responsible for this aspect of the teaching practice (Schoeman 2005a). An example follows.

The teaching practice record booklets have to be submitted to Unisa no later than the middle of October. They are submitted to the assignment section as Assignments 50, and marked by the lecturer responsible for the module using the following criteria: Concepts = 10; Relations = 10; Insight = 10; Originality = 10; Global exposition = 10. Total: 50 x 2 = 100%



REPORT SUBMITTED BY SCHOOL PRINCIPAL

NB

This form must be completed in full. Detach this form and post after completion to: Dr JI Swanepoel, Faculty of Education, Department of Secondary School Teacher Education, Unisa, PO Box 392, UNISA, 0003.

I, the undersigned, hereby declare that (Mr/Mrs/Miss/Ms) Lucy Stansfield

Student No 0543-069-0 did his/her Teaching Practice at the Marist Brothers Linmeyer High School for the period of ... school days from ... to ... (If the ten weeks (fifty full school days) consists of various shorter sessions then please attach a note to this effect.)

Apart from the student's performance in the classroom, I would like to include the following comments: (please complete the following by placing crosses in the relevant squares).

Personal appearance		Punctuality	
Neat	X	Always punctual	X
Acceptable		Sometimes late	
Flashy		Often late	
Untidy			
Attitude to the staff		**Assistance offered in extramural activities**	
Supportive	X	Helped regularly	X
Involved		Helped sometimes	
Self-contained		No interest shown	
Argumentative			

Relationship with pupils	Mrs. Stansfield is sensitive and caring. She is aware of her students and treats them with love and respect. We are pleased to have her on our teaching staff.
Spontaneous/Sympathetic	X
Formal	
Familiar	
Domineering	

Signature Principal ... Date 15 September 2004

NB: OFFICIAL STAMP

MARIST BROTHERS LINMEYER
P.O.BOX 40
LINMEYER
2105
(MARIAN COLLEGE)

Figure 6: Report submitted by school principals (Stansfield 2004)

C= Concept definition: 10 marks	R = Relations: 10 marks	I = Insight: 10 marks	O = Originality: 10 marks	G = Global exposition: 10 marks
In this category marks will be given for students' ability to grasp and understand the various concepts and aspects of a lesson plan. Students' ability to use the above in practice will also be taken into account.	In this category marks will be given for the manner in which the mutual relationship between the concepts and aspects of a lesson plan is demonstrated.	In this category marks will be given for students' ability to find the gist of the lesson. Students will not obtain credit for merely rewriting examples from the textbooks and/or departmental resources.	The aim of this category is to establish whether students are able to interpret the lesson content in a creative and original manner. At the same time credit will be given for logical exposition of ideas, aspects, and use of resources.	In this category credit will be given for planning and exposition. Aspects such as systematic exposition, headings and sub-headings, language proficiency, numbering, etc. will be taken into account.

Figure 7: Symbol definition (Schoeman 2005b)

The marks obtained by the student History teachers are sent to the assignment section and will eventually appear on the summary of their examination results under the module code: PTEAC1-X.

The results of their Teaching Practice 2 (PTEAC2-Y) booklets, teaching practice portfolios and language proficiency assessment reports will also appear on the

summary of their examination results. The degree or certificate will not be awarded unless Tutorial Letters 102 or Assignments 50 for Teaching Practice 1 (PTEAC1-X) and Teaching Practice 2 (PTEAC2-Y) containing the five lessons have been submitted, marked and passed, and unless the students' teaching practice portfolios, language proficiency assessment reports and school principals' reports have been received. (Schoeman 2005a).

Conclusion

History teaching is a challenging task, one which simply cannot be grasped in its entirety straight away. Learning to teach History requires patience, an open mind and determination. History teachers will have to be effective and reflective practitioners to experience the genuine excitement of being an FET History teacher. One of the dangerous and pernicious aspects of late twentieth century educational discourse was the view that teachers needed no theory at all. In some sense this was understandable, given the 'theory/practice' divide refered to previously. But some critics of teacher education took this too far by claiming that teachers needed virtually no theory at all, only the competencies and skills required for the craft of teaching. This is a too simplistic view of teaching and the teacher education process. John (1999:8) argues that History teaching is a 'multi-faceted, complex task ... teachers are highly skilled professionals with a complex knowledge base, which they draw upon to produce learning in their classes'.

The teaching practice component of the BEd or PGCE (Senior Phase and FET) Subject Didactics History module is in compliance with scholars' views on the mechanics of student teacher development during teaching practice and the requirements of the *Norms and Standards for Educators* (2000) with regard to work-integrated-learning (WiL). Hence, student History teachers at Unisa learn their applied competence not only by theorising but also by discussing, watching and doing. Student History teachers who engage in learning in the workplace and graduate at Unisa will (hopefully) become effective and reflective FET practitioners. All student History teachers at Unisa bring strengths and weaknesses to their teaching practice period, and progress in different ways. Not all student History teachers progress at the same rates, in the same ways and at the same times. Therefore, not all student History teachers are effective and reflective FET practitioners at the end of their teaching practice period. At the end of their ten weeks' teaching practice, most of the student History teachers' subject knowledge is well advanced but not always used in an 'applied' manner, in different ways and in different contexts, according to the needs of learners. Many of the student History teachers are not able to 'package' the subject effectively, and lack the skills to generally plan well in advance, taking into consideration short-, medium- and long-term factors, and to change these plans according to developing learning needs. 'Tried and tested' teaching strategies are still used but these are sometimes employed alongside more innovative, creative and 'risk-orientated' teaching-learning activities,

which are not always well planned, but which create more variety in lessons to enhance the teaching-learning process. The vast majority of student History teachers do not experience the History classrooms as centres of mad, chaotic ill discipline that they expected them to be, as in fact, most student History teachers find class control easier to manage than first anticipated. They also know more about their subject than the learners. Student History teachers thus become socialised into teaching although they realise that in order to ensure that learners learn and respect them as teachers, they have to start acting and behaving rather differently.

With the above in mind, this paper is concluded with the following two remarks:

Mechanics of student History teacher development at Unisa: Student History teachers at Unisa learn in a variety of ways - from theory, from discussion, from observation, from each other and from experienced teachers. As the literature review has demonstrated, if learning is not to remain abstract, its application to practical work must be planned, and the plan must then be implemented. To confirm the success of action, review is necessary, and to gain the maximum benefit, the review process must lead to new insights and learning which inform future plans. Learning is only properly integrated with doing when this full cycle is consciously carried out. Hence, student History teacher development requires a carefully planned work-integrated-learning programme and a reflective environment.

Teacher education partnership between schools and Unisa: The important thing to note about the craft knowledge of History teachers is that very often it is heavily tacit. In other words, the History teachers' skills knowledge is embedded deeply in their day-to-day practices. Thus experienced History teachers find it difficult to talk about or explain why they do certain things in certain ways - 'it just comes naturally'. This implicit knowledge can often prove problematic for student History teachers. If History teachers find it difficult to articulate their own effectiveness and reflectiveness, how can student History teachers be expected to learn from them. Often, this professional knowledge is held implicitly by the History teacher, and this largely explains why some of the most talented History teachers occasionally find it difficult to articulate the secret of effective and reflective teaching to student History teachers. An important priority here, then, is to encourage experienced History teachers to talk more explicitly about their own effectiveness and reflectiveness. Partnership itself helps in this process, by encouraging experienced History teachers to think about not only the 'how' of History teaching but also the 'why' of the History teaching process. For student History teachers, this is a starting point along the path towards effectiveness and reflectiveness.

A student teacher once wrote the following note on the first page of her teaching practice record booklet: 'You don't realise what's involved in teaching until you've tried it. I realised after a few days that actually teaching in the classroom is like climbing to the tip of an iceberg. It is a difficult and demanding task!' (Barenche 2004). Public

schools in South Africa need educated and trained teachers, adaptable and flexible for an ever-changing South African society. It is the task of Unisa to serve society's interest by educating student teachers to think, to be adaptable and to be skilful. That is why the school-university partnership is so essential and why work-integrated-learning is smart and right.

Notes

1 Although the term 'educator' is used in all national education policy documents, for the purposes of this paper the term 'teacher' is used, because FET educators are most commonly known by the latter term.

2 The Subject Didactics History module is used as case study, but it can be replaced by any other Subject Didactics or Learning Area Didactics modules on offer in the programmes, as the format and the requirements of the teaching practice component would be the same.

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Counselling with or counselling to: evaluating training of pastoral counsellors

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Introduction: Practical training in pastoral counselling

Religious communities have traditionally sought to provide spiritually-based solutions for those in trouble. Clergy have listened intently to personal problems for centuries and have cultivated a spiritual counselling response to those who suffer from mental and emotional illness.

Traditional spiritual counselling continues to help many of these people. It was, however, recognised long ago that in many cases specialised professional care was necessary for effective treatment. Pastoral counselling moves beyond the support or encouragement a religious community can offer by providing psychologically sound therapy that weaves in the religious and spiritual dimension. Combining these two areas in a person's life in helpful and healing ways is what pastoral counsellors do. To enable pastoral counsellors to participate as competent counsellors, an undergraduate counselling programme was developed.

The training of pastoral counsellors at Unisa in the format of year modules has been part of undergraduate degree courses towards a Baccalareus Theologiae degree for many years. Postgraduate training at honours, masters and doctoral levels provide opportunities for research in the vast field of pastoral care, counselling and therapy.

The need for professionalisation of the discipline other than in the church ministry led to the development of an undergraduate course of four modules of which two modules have the aim of practical in-house training.

Successful completion of these courses leads to graduation with a BTh with specialisation in pastoral counselling. Successful candidates are also eligible for registration with a professional association named the South African Association for Pastoral and Spiritual Workers (SAAP). The aim of this association is to advocate for professional registration of pastoral and spiritual workers in South Africa. In the interim applicants can apply for accreditation on one of five possible levels with the SAAP.

A BTh with specialisation in pastoral counselling leads to registration on level 4, category 3 of the SAAP accreditation system. The requirement for registration stipulates specific theoretical and practical standards in category 3.

The Intermediate Level standards are specified as follows:

Knowledge

(a) At least an advanced knowledge of one theory of pastoral counselling and a general knowledge of two other theories of pastoral counselling

(b) Knowledge of the theory of pastoral counselling practices methods of the choice in 'a'

Skills and experience

(a) Ability to apply the above knowledge in pastoral counselling

(b) Fifty (50) hours of practical pastoral counselling

(c) Twenty-five (25) hours' supervision

Nature of processes

(a) Wide-ranging scholastic or technical skills

(b) Considerable choice of procedures

(c) Contexts: variety of familiar and unfamiliar

Scope of learning

(a) Broad knowledge base incorporating some theoretical concepts

(b) Basic analytical interpretation of information processing

(c) Problem solving: a range of sometimes innovative responses to concrete but often unfamiliar problems, based on informed judgment

Responsibility

(a) Self-directed activities but under broad guidance and evaluation

(b) Complete responsibility for quantity and quality of output, and possible responsibility for the quantity and quality of the output of others

Learning pathway

(a) Entry to undergraduate or equivalent higher education

(b) Training towards certification in occupation characterised by advanced pastoral counselling skills

Pastoral counsellors interested in registration with the Health Professionals Council for Psychologists do have the opportunity to register for a Baccalaureus in Psychology with a focus area in Pastoral Counselling. The requirements for this programme are

honours level modules in Psychology and Pastoral Counselling as well as a supervised internship of six months' licensing.

Future programmes in Pastoral Counselling at honours and master's levels propose practical training not only in the format of specific modules but in the format of praxis training. Praxis training entails that a learner switch between the concrete situation and the theory and back to the concrete situation. New information is generated by the concrete intervention situation. This information is analysed in the theoretical context, which is followed by new experimenting in the concrete context. These elements, described by Freire (1972), are in line with the phases of experimental learning described by Kolb (1984). He mentions four phases: concrete experiences leading to specific awareness; reflective observation, which entails an intentional process of mutuality between new awareness and existing knowledge; abstract conceptualisation in which the information from the first two phases is organised in a structure or model; and active experimenting, which entails problem solving and decision making in new situations.

This paper, however, only focuses on the two practical modules of the BTh degree with specialisation in Pastoral Counselling. The supervision and training for proposed new programmes remain a challenge.

Problem statement

The challenge to the discipline is to develop modules in terms of a distance education model which entails experiential learning in the focus field of pastoral counselling.

The primary problem

The primary problem may be formulated as follows: In what way can a learner be engaged in a supervised experiential learning context? Which contexts will facilitate appropriate learning activities?

The secondary problem

Which factors pose problems for learners when they are exposed to the learning context?

Training design

The approach to and model of experiential training explains the content of the training method.

The evaluation of counselling training

The notion of training transfer

Training transfer has grown to be an important issue in the field of training evaluation. Training evaluation becomes an urgent endeavour due to unprecedented changes in

society impacting on human behaviour, spirituality and well-being. The well-known four step approach to evaluation of D.L. Kirkpatrick provides a solid basis for a host of evaluation models in use for the last 40 years (Bassi 1997: 110).

Kirkpatrick's four-level evaluation model focuses on four possible training outcomes: reactions, learning, evaluating behaviour, and results.

On level one, evaluating *reactions* means finding out if training participants enjoyed the training, if the training environment was suitable and comfortable, and if the trainers were capable and credible.

On level two, evaluating *learning* means determining the extent to which trainees have improved or increased their knowledge or skills as a result of the training.

On level three, evaluating *behaviour* means determining if the trainees are using or transferring their newly learned knowledge and behaviours back to the job.

On level four, evaluating *results* means determining if the training has affected results or achievement of goals.

Although Kirkpatrick did not mean his model to be hierarchical in nature, it has been popularly accepted as a hierarchy. Due to its wide acceptance and pervasiveness in the field of training, this model will be used as a guideline for the evaluation of the practical models in pastoral counselling.

Training and supervision

The utilisation of supervision in the training of pastoral counsellors has a longstanding history of 70 years. The use of clinical pastoral education (CPE) encourages clergy to gain increased empathy, deepened understanding, and professional and personal maturation. The effectiveness of this model of supervision for interdisciplinary professionals has been researched by Dayringer (1986). He reports on the introduction of clinical education in Psychosocial Care courses. The outcomes of this research demonstrate the value of supervised CPE training.

Learners develop insight in terms of both personal and professional identity, they articulate a personal philosophy or a theology, they deepen their understanding of people, they learn to function as a member of a healing team and they mature as professionals by conducting themselves ethically (Dayringer 1986).

Barletta's *Clinical supervision: A case study approach* (2002)is used as a guideline for supervisors in the BTh programme. This approach is based on therapeutic documentation as the vehicle for accountability. Trainees are disciplined by a process of therapeutic documentation. Supervisors can make important decisions such as the need for referral on the basis of a good intake interview. This model uses verbatim writing as a method and vehicle for supervision and training. Based on the medical model, this approach holds the supervisor accountable for training and evaluation. The supervisory approach to the training of counsellors of the relevant modules, however,

makes provision for training due to networks and peers as well. Evaluations in the BTh programme are less focused on the supervisor as the expert.

Pastoral care and counselling could hardly take place in isolation. The inclusion of the community's local knowledges is recognised.

The counsellor does takes note of these local knowledges for the sake of the care and counselling process, but also benefits personally from these knowledges. These knowledges that counsellors stand to benefit from can be referred to as 'hard-won insider-knowledges' that counsellor can employ in her or his professional practice. The standard term used to engage with these 'hard-won professional insider-knowledges' is 'supervision'. Supervision is often seen as a mere one-on-one encounter with an experienced professional pastoral counsellor or therapist as the supervisor – 'the supervisor is the expert and the trainee [learner pastoral counsellor] is somehow deficit' (Parry & Doan 1994:195). Additionally we would like to introduce the notion of appropriate community and professional networks to supervision.

The term 'supervision' is one that evokes a hierarchical relationship in which one party's knowledges are assigned a 'super' vision status, and in which the other party is subject to this supervision in matters of work and therapist identity.

When we use the terms 'supervisor' and 'supervision', we do so bearing in mind these arguments, working toward a participatory and collaborative form of supervision.

Parry and Doan (1994:187) remark that counsellors, just like their clients, experience fear, uncertainty, self-depreciation and anger. In order to deal with these feelings and other professional issues (e.g. referrals, medical support, etc.) appropriate community and professional networks can prove valuable to the counsellor.

Research confirms the notion of stages in supervision. Hill (2001) presents a collaborative pastoral care and counselling supervisory model based on constructivism and attachment theories. He refers to the notion of various dynamic stages supervisees encounter in their experience of supervision. He mentions six stages: the hesitation stage, the irritation stage, the consolidation stage, the collaboration stage, the integration stage and the termination stage. The value of stage awareness by supervisees is clearly stated by Hill – 'when supervisees have some awareness of what to expect in the process of learning marriage and family therapy, their anxiety is lowered allowing more emotional energy to be focused on the therapy process' (Hill 2001:76). The value of stages of supervision is confirmed by Snyders in the discussion of his systems theory approached. He quotes Andolfi and Menghi (1980): 'If we hope to initiate a process of differentiation, we have to clash with this sense of security that the apparent group unity supports in each member' Snyders says that a supervisory supra system may be viewed as a relational system in constant transformation through stages. (In this context a supra system is a meta-level of supervision that includes a number of different levels.)

The BTh with specialisation in pastoral counselling

The paradigm of the BTh programme

The focus is a social construction theory or discourse, an epistemology that contributes to a better understanding of conversational therapeutic processes. Different therapeutic practices in various parts of the world have contributed to the discourse in the social construction of therapy. Kotzé & Kotzé (1997) explain that the contributions of the Calgary group (reflected in articles in the *Calgary Participator*) should be noted. Tomm's (1987) ideas on reflexive questioning and therapeutic ethical postures have contributed to the diversity of voices regarding therapeutic practices of the social construction discourse. Conferences (Gilligan & Price 1993) and publications (Friedman 1993) are done in the same way by reflecting and including all participants' ideas and listening to different voices that contribute to the discourse.

In Houston and Galveston, Harry Goolishian and Harlene Anderson developed an approach that can be referred to as the 'client is the expert' and the 'not-knowing' view (Anderson & Goolishian 1992). In Norway, Andersen and the Tromso group developed important work that can be described as a reflecting process (Andersen (1991, 1993). Another approach that contributes to the social construction discourse is the narrative approach of White and Epston (Epston 1993; Epston & White 1992; White & Epston 1990; White 1989/90, 1991, 1992a, 1992b, 1995).

Kotzé (2001) explains the approach to pastoral counselling as listening to the voices of contextual theologies such as liberation and feminist theologies.

Contextual theology claims to be an epistemological break from traditional theologies. Its features are the following (Bosch 1991:424):

- A suspicion that western science, philosophy and theology were designed to serve the interest of the West
- A refusal to endorse the world as static, as something that only has to be explained, but rather as something that has to be changed
- A commitment as the first act of theology and then especially commitment to the poor and marginalised
- The notion that theology (spirituality) can only be done with those who suffer
- An emphasis on doing theology, since doing is more important than knowing or speaking (hermeneutic of the deed)
- The notion that hermeneutic circulation starts with praxis or experience, and shifts to reflection on theory with an intersubjective relationship between the two

Feminist theology (Isherwood & McEwan 1993:87) exposes the harmful effects of a hierarchical model in religions, while enhancing an egalitarian model by using strategies such as the following:

- Researching women's history and contributions
- Reflecting on theology in the context of women's lives
- Giving voices to the voiceless
- Introducing new values
- Dismantling sexist command structures of churches
- Questioning assumptions on the role of women held by societies and churches (religions) while discovering how the old distancing mechanism used by churches harmed women
- Uncovering patterns of prejudice
- Acting on new insights in the creation of liturgies, rituals in training and research to promote transformation of church culture

These feminist pastoral practices are liberating as they seek 'justice, peace, healing and wholeness for all in partnership' (Ackermann 1991:96). Feminist theology represents a radical critique of patriarchal religious and theological thinking whereby women and men benefit through this partnership stance.

Moving to a participatory way of doing spirituality calls for a sensitivity not only to the suffering of marginalised people in general, but also 'to the practical consequences that theological perspectives and belief practices might have'. This challenges us to move from 'being right to doing right' (Rossouw 1993:903). These ideas have shaped our training of pastoral therapists towards the constant questioning, challenging and deconstructing of the role of 'a variety of discourses that has been training persons towards certain dominant ideas and away from others' (Madigan 1998b:89; see also 1998a:33). In this way we have been challenged to do pastoral care in an ethically participatory and reflexive manner.

Pastoral care as ethical care

A commitment to do pastoral care as participatory ethical care immediately challenges us not to care for but to care with people who are in need of care.

Traditionally pastoral care and counselling have been constituted by Western individualistic thinking. However, according to Graham (1996:53), the focus has shifted from a 'self-actualised individual for whom care functions primarily at times of crisis towards one of a person in need of nurture and support as she/he negotiates a complexity of moral and theological challenges in a rapidly-changing economic and social context'. This is a participatory process in which therapists collaborate with people in challenging oppressive discourses and negotiating ways of living in an ethical and ecological accountable way. Meeting this complexity has been our experience over and over again when supervising students and colleagues faced with dilemmas that a person brings to counselling.

(c) Pastoral care as ecological care

Pastoral therapy should involve not only participatory ethical care but also ecological care. We are connected to one another through our ecological positioning. Through all the human suffering, injustices and pain we are challenged by the words of Denise Ackermann (1991:111):

> A feminist spirituality is ecologically oriented, in the belief that violations of the eco-system mean the destruction of our life-support system and that these violations are a product of the western theological tradition, of an hierarchical chain of being and chain of command, and of the socialisation of people into dominant and subordinate social roles. Having 'domination over' creation needs to be replaced by the view that human beings are the custodians of nature. The socio-economic implications of such a view present a great challenge to consumerist societies and the capitalistic ethic.

(d) Language, discourse, narrative and therapy

If language, discourse and narrative constitute meaning, experience and lives, then therapy can be described as a language event. Change is then enabled within language. What is talked about and how it is talked about make a difference, and it is these differences that can be used to make a difference by shaping or constituting people's lives (Anderson & Goolishian 1988, 1992; Bateson 1979; Berg & De Shazer 1993). In therapy the focus is on how people's lives are constituted by language, meaning and narratives.

Through the narratives and stories that people have about their own and other people's lives, they make sense and give meaning to their experiences. This then gives rise to dominant stories, and these stories determine which experiences are included and shape people's lives (White 1991). The alternative narratives and knowledge come marginalised and subjugated and do not get told.

The emphasis on language in social construction discourse also accentuates deconstruction, a branch of literary criticism as an important conversation in therapy.

(e) Deconstruction and reflective conversation

White (1991, 1993, 1995; White & Epston 1990) has succeeded in developing a family therapy approach in which Foucault's concepts (Flaskas & Humphreys 1993:42) are translated into a therapeutic language. The 'externalising the problem' approach focuses on the relationship and functioning of the power of the dominant story and how it constitutes people's lives. People are subject to the power of these normalising truths that shape their lives and relationships (White 1991). The dominant stories maintain their constitutive power through techniques and practices of everyday power, while alternative stories become subjugated or marginalised knowledge. White (1991, 1992a) attempts to attend to these alternative stories with the purpose of empowering the alternative story to become more constitutive of people's lives.

Another way of deconstructing theories and practices is through transparency and multiple reflexive conversations.

The aims and outcomes of the modules

Teaching approach

The teaching approach in this programme is formulated as follows:

- It is designed to initiate interactivity.
- Learners need to make use of 'local knowledges' – the stuff people in everyday life know and make use of to create their own understanding of life.
- Learners need to construct their own local knowledges of pastoral counselling.

Modules of the programme

PCM301-S	Engaging in Pastoral Care and Counselling Discourse
PCM302-T	Exploring Pastoral Care and Counselling Praxis
PCM303-U	Doing Supervised Pastoral Care and Counselling with Individuals, Couples and Families
PCM304-V	Doing Supervised Pastoral Care and Counselling with Groups and Communities

Outcomes of experiential modules

The four modules are interrelated, the one building on the other to form a logical integrated whole. The outcomes of the two experiential modules are as follows:

PCM303-U

(a) Purpose

This module will enable and assist learners at an advanced level to collaborate under broad supervision in facilitating change towards negotiated, ethical, just and ecological ways of being, respectful of cultural diversity (including gender, class, race, sexual orientation, religion, etc.), with special reference to individuals, couples and families.

(b) Learning outcomes

1. Under broad supervision learners should be able to collaborate with individuals, couples and families in facilitating change towards negotiated, ethical, just and ecological ways of being.
2. Under broad supervision regarding pastoral care and counselling of individuals, couples and families learners will be able to show a reflecting awareness of the interaction between self and counsellees aimed at well-being.

3. Under broad supervision learners will be able to demonstrate the ability to maintain appropriate professional work ethics and legal requirements in the context of authentic individual, couples and family counselling.

PCM304-V

(a) Purpose

This module will enable and assist learners at an advanced level to collaborate under broad supervision with people in facilitating change towards negotiated, ethical and ecological ways of being, respectful of cultural diversity (including gender, class, race, sexual orientation, religion, etc.), with special reference to groups and communities.

(b) Outcomes

1. Under broad supervision learners should be able to collaborate with groups and communities in facilitating change towards negotiated, ethical, just and ecological ways of being.
2. Under broad supervision learners will be able to show a reflecting awareness of the interaction between self and groups as well as communities, aimed at well-being.
3. Under broad supervision learners will be able to demonstrate the ability to maintain applicable professional work ethics and legal requirements in the context of group and community care and counselling.

Guidelines for the negotiation for supervision and community and professional networks

The following table outlines the proposed supervision structure. Readers interested in a detailed description may contact the author at the Department of Practical Theology at Unisa for a copy of the Tutorial Letter 501 for the module PCM303-U.

Outline of the supervision and appropriate community and professional networks

(2) Unisa supervisor		
(3) Organisation (church, school, etc.)	(1) Learner pastoral counsellor	(4) Counselling supervisor (academic)
(5) Organisational supervisor	(6) Professional referral network • medical • pastoral counsellors • social services • legal • nursing • policing • the 'wise ones' • traditional healers	(7) Community support network (community-based initiatives) e.g. • divorce recovery programme • Alcoholics Anonymous • NICRO • AIDS counselling • FAMSA

Guidelines for the experiential training

Two examples of experiential training are presented.

Counselling an individual child

Learner counsellors participate in eight sessions of one hour each with children of primary school age. They engage in the explanation of troublesome behaviour. Referring to narrative therapy skills and illustrated case studies presented in the introductory modules, they engage in interventions based on the application of micro and macro skills.

These skills are primarily conversational skills like the utilisation of questioning, micro mapping, externalising a problem, exploring the history of a problem, mapping the influence and effects of a problem, deconstructing a problem, planning for unique outcomes, handling an alternative story, and using celebrations, outsider witness groups and letters.

Readers interested in a description of the guidelines for counselling may contact the author at the Department of Practical Theology at Unisa for a copy of the Tutorial Letter 502 for the module PCM303-U.

Care and counselling of a community

Learner counsellors participate in culturally respectful practices in a specific community. Four meetings of community outreach or supportive actions provide the opportunity for learners to engage in narrative interventions. The facilitation of the intervention provides the learning context for counsellors in training.

Readers interested in a description of the guidelines for community participation may contact the author at the Department of Practical Theology at Unisa for a copy of the Tutorial Letter 501 for the module PCM304-V.

Evaluation of the experiential/practical modules of the BTh programme.

Feedback from supervisors

Supervisors use guidelines for evaluation of counsellees for supervision. One supervisor from a group of students gives feedback on the value of the supervised practice framework used in the PCM courses. Readers interested in full details of the guidelines for supervisors may contact the author at the Department of Practical Theology at Unisa for a copy.

Few students have the professional experience and/or confidence to create and negotiate such a supervisory context by themselves. One has to keep in mind that students in more advanced learning contexts have their training institutions arranging supervisory care with external institutions (e.g. masters' students of psychology and social work,

final-year medical students). Within the participatory frame of the coursework, it may be advisable to enquire whether students find the guidelines proposed in PCM 303-U/501 realistic and practical.

The supervision model proposed in PCM303-U/501 is an *advanced and specialised* narrative method. Counselling supervisors *specialising* in the narrative method will be able to meet student expectations as created in the tutorial letter. Counselling supervisors working in other models (e.g. object relations therapy, strategic intervention therapy, biblical counselling) may cause conflict and doubt in the minds of beginning counsellors.

The specialisation in theory and narrow academic view on a pre-graduate level have certain advances. Should the Department consider the advances valuable, it is advised that only counsellors specialising in the narrative method should be considered as counselling supervisors for BTh students. This, however, holds practical implications as there are few professionals specialising in the narrative method, and the number decreases if one considers that the need is national and geographically widespread.

It is important to note that the supervisory guidelines provided in PDM303-U/501 are accountable and ethical where students, organisations, supervisors (external and Unisa), and community and professional networks **are able to implement and sustain** such systems. These proposed guidelines and supervisory structures are all within the frame of participatory ethics and narrative ethicising.

Evaluation by course co-ordinator

Problem statements

In what way can a learner be engaged in a supervised experiential learner context? Which contexts will facilitate learning activities. In terms of the problem statements for this presentation the following comments are relevant.

Comments

It is clear after three years of involvement with this course that those students who are involved in structured counselling centres do find the training beneficial. Examples of structured centres are Hospivision, working in the Pretoria Academic Hospital, and church-related counselling centres e.g. Coram Deo Counselling Service and Oasis of Hope Celebration Centre. Unstructured contexts seem to be discouraging and learners struggle to find their way.

Supervisors who are qualified and willing to participate in guidance seem to be difficult to engage because of high costs of supervision. Students who make contact and negotiate with supervisors from training institutions are more fortunate. Examples of excellent supervisors are clinical pastors from hospitals as well as psychologists and social workers with training in Theology and Spirituality. Because of the explicit

narrative approach of the programme, supervisors trained in narrative therapy are more successful in the supervision.

A number of factors pose problems for learners when they are exposed to the learning context. Students struggle to negotiate a learning context with qualified supervisors. Supervision is a costly activity and some students cannot afford costly supervision. Students with less life experience and skills training find counselling with couples, groups, families and communities problematic. The programme has been changed to enable learners to participate in counselling contexts, which complement their level of training and competencies.

Evaluation in terms of the notion of training transfer

In terms of Kirkpatrick's four-level evaluations, the following comments are applicable:

a. Evaluating reactions

No evaluation of supervisors is facilitated, and this needs to be developed. Guidelines are provided but many supervisors are not properly trained in narrative therapy.

b. Evaluating learning

Supervisors are issued with two evaluation documents, which are discussed and completed with the trainees. This evaluation exercise seems to be of value in terms of training.

c. Evaluating behaviour

Trainees negotiate supervision sessions after the completion of counselling sessions. New insights and guidelines can be implemented in follow-up counselling sessions.

d. Evaluating results

Results from counselling sessions can only be determined over a long period of time. The course needs to make provision for evaluation of the outcomes of counselling.

Conclusion and summary

The aim of this presentation has been to evaluate the training of pastoral counsellors with specific reference to the two modules in which the programme for in-house practical training is outlined. The evaluation has been done on the basis of two guidelines, namely comments by trained supervisors, and the notion of training transfer developed by Kirkpatrick. The presentation included the following aspects:

One – an argument emphasising the importance of practical training for pastoral counsellors. The aim of the argument was to enhance and support endeavours advocating the professionalisation of pastoral counsellors.

Two – a presentation of different evaluation perspectives for pastoral counselling courses, including supervision, training transfer and local knowledge.

Three – a presentation of the foundational paradigm of the modules referring to contextual theologies, ethical care, ecological care, language and narrative deconstruction, as well as reflective conversation.

Four – a presentation of the outcomes of the modules, guidelines for a supervision and community network, as well as guidelines for experiential training.

Five – an evaluation of the training in terms of reports by supervisors, problem statements and the notion of training transfer.

In conclusion it can be stated that the modules present timely opportunities for learners to participate in experiential training in pastoral counselling. It must be added that learners struggle with advanced counselling work and that future development of the modules needs to address the competency levels of learners. Learners need to be facilitated by well-trained supervisors who are skilled in different paradigms and skills, and training needs to be accommodated in structured counselling centres. Supervision needs to make provision for the evaluation of the outcomes of counselling, through the evaluation of counsellees.

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Using a co-operative education consortium model to promote lifewide and lifelong learning for management learners in the explosives sector

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The knowledge economy is changing the demands of business regarding the competencies and skills of the workforce. Businesses demand a flexible workforce that is 'specific as well as generalist' – that is, employees with business-specific and occupational abilities related to their practical workplace experience together with general transferable academic knowledge and skills and personal values. This mix of explicit and implicit knowledge (the latter generated through experiential learning) is increasingly becoming the means of production in the knowledge-driven society. Co-operative education (co-op. ed.) plays a pivotal role in circulating both newly generated academic knowledge from institutions of higher learning to the workplace and newly generated applied knowledge from the workplace to the institutions of higher learning. This paper describes an approach to designing, establishing and delivering a context-relevant management learning programme for the explosives sector of South Africa by using a co-op. ed. consortium model. This model creates opportunities for lifewide and lifelong learning so as to ensure learner progression and labour mobility through the development of both explicit intellectual knowledge and implicit practical knowledge.

Introduction

The explosives sector in South Africa provides employment to many thousands of people and generates many millions of rand of income each year. It is therefore an important role player in the overall economic picture. In 2005 Unisa introduced a new programme in explosives and ammunition sciences for middle-level managers to maintain and expand South African's vast mining and well-established armaments industry. Gillard (1998:9) defines a programme as a planned and coherent (not necessarily uniform) set of teaching and learning and assessment activities, pursued

to depth in one or more specialisation fields, at one or more (qualification) levels. A programme-based approach, Gillard argues, demands a shift of perspective away from discipline to student. This new Unisa programme combines explosives sciences and operational management. The focus is on exit-level outcomes of graduates who will be able to manage teams and enterprise resources to ensure that the work gets done effectively, efficiently and safely. The purpose of this programme is to provide the explosives sector in Africa with qualifying students who have sufficient technological and management knowledge to take safe technical and sound managerial decisions in an explosives-related work environment.

South Africa has a shortage of trained middle-level and high-level operational managers, in particular black and women managers as a result of past legacies. Black practitioners within this occupational area were denied career advancement and possible registration with a professional council. Unisa is a public statutory body that can be considered to be a black empowerment entity for offering explosives management training in order to revitalise the sector and to train a new, representative generation of explosives technologists and managers.

A series of existing just-in-time, credit-bearing short learning programmes for continuing professional development in the explosives sector became the starting point for designing a fully-fledged learning programme leading to a BTech degree in Management (Operations of Explosives). The practitioners and trainers teamed up with public education providers to create a co-operative education (co-op. ed.) consortium that attracted employers, employees, professional bodies, trade unions, learners, alumni, government, and private education providers. Members of the co-op. ed. consortium were involved in designing and delivering the learning programme. The responsibility for quality assurance lies with Unisa.

Typical learners are those working adults living in the SADC regions who act as supervisors and operational managers in the explosives sector. The qualification is also meant for engineers, scientists and other people who want to be skilled in middle management and/or further their studies.

Explosives operations managers contribute to society by safeguarding lives and property. The occupations, jobs or areas of activity in which the qualifying learners will operate will be predominantly in the commercial sector (dealing with the manufacture, quality assurance and application of commercial explosives for the mining and engineering industry) as well as in the public sector (for example in the police, army and security sector).

Job holders in the mining and engineering industry are typically responsible for the planning and execution of blasting operations for mining gravel or granite, excavations, ditches, roads or the demolition of buildings. Their work is not the manufacture or use of explosives but managing people who make or use explosives. Therefore, the core

of the qualification is managerial competence. Graduates can use this qualification as a stepping stone to further learning – for example, towards becoming a strategic manager, business owner, researcher or expert in the explosives sector. Students who have work experience can accelerate their studies by obtaining credit for their learning achievement through recognition of prior learning (RPL).

Following the nested programme-based approach, each qualification consists of parallel generic academic and specialist professional modules and unit standards. Elective modules for the qualifications include specialisation courses in Human Resources and Labour Relations, Engineering, Entrepreneurship and International Trade. These electives represent career pathways within the explosives management sector. The specification of these learning and career pathways is critical to organisations that wish to retain employee talent.

The experiential learning or work-based learning blocks in the learning programme give students the opportunity to integrate specialist and general learning in the workplace so as to become competent in one of the following job areas or workplaces:

- The mining and gravel pit industry
- The manufacturing of commercial explosives
- The South African National Defence Force
- The Navy, Armscor and Denel groups
- Engineering and building companies

Members of the above workplaces formed a co-operative education consortium to design the outcomes of the qualifications, to develop and deliver the learning programme and to provide learner support. A consortium is a group of people who are working together on a particular project (Wehmeier 2002:244).

This co-op. ed. consortium model heralded a shift from a supplier-led approach (in which qualifications and programmes are designed by education service providers) to a more demand-led approach to programme design, development and delivery, carried out as agreed upon by the consortium. The consortium is needed to establish and service lifelong and lifewide learning and career paths for its learners and workforce. This paper describes the impact of the co-op. ed. consortium on the demand-led design and delivery of a credit-bearing lifewide and lifelong management learning programme for the explosives sector.

The co-op. ed. consortium: a research management team to design, develop and deliver an explosives management learning programme

Co-operative education, usually known as co-op. ed., is an integrated approach to higher education in terms of which students and workers can alternate structured

institution-based education with structured context-based education. To design and deliver a flexible management learning programme for the explosives management sector, the co-op. ed. consortium research management team was formed. Its members were encouraged to build their own partnerships and alliances amongst stakeholders, based on common interest, mutual respect and credibility. These loosely coupled networks refer to voluntary networks within larger networks linked to a range of co-op. ed. projects. Such alliances are powerful tools for the much-needed transformation in higher education and learning in South Africa.

Lolwana (2005:13) states that the overtly content-driven syllabi used in South Africa have over the years lost their links with the industries which they purport to serve. Existing qualifications are mainly 'whole qualifications', which makes it difficult for learners to choose electives according to their interests and work circumstances. Such whole qualifications often lack industry recognition and are not portable to workplace learning.

Co-op. ed. learning consortia consist of constellations of communities of practices, which represent stakeholders with a variety of worldviews, thinking, practice and experience. In the current case, a steering committee was chosen from the co-op. ed. consortium, called the advisory committee, to negotiate and define a synthesis of these views in a protocol for designing, implementing and evaluating a framework of management and explosives qualifications for the explosives sector. The purpose of this advisory committee of the co-op. ed. consortium was to establish an effectively organised, co-ordinated and accredited education and training system for management and explosives which promoted quality, accountability and cost-effectiveness.

One of the main functions of a co-op. ed. consortium is to arrange relevant experiential learning that is delivered and assessed by the employer, professional bodies and Unisa academics. These learning opportunities provide powerful learning as well as work environments with a decentralised support system. The traditional institution-based pre-service model with limited or no work-based learning was not considered to be relevant to real learner needs in the explosives sector of South Africa. Luckett (2001:50) argues that higher education and learning institutions no longer hold a monopoly on knowledge production. She observes that the workplace is taking over more and more of the research and development function. Consequently institutions of higher education and training are forced to set up partnerships with other relevant stakeholders in the knowledge production terrain. These partnerships ensure that the diversity of education and training products, services and results of programmes are sustainable and address local developmental needs.

The challenge of the co-op. ed. consortium was to compile a series of academic and professional qualifications that would be aligned with the National Qualifications Framework (NQF) and would not only reflect multiple job roles, organisational requirements and technologies but also accommodate the diverse needs of various

work contexts in the explosives industry. The curriculum had to be a living document allowing for flexibility in the selection and implementation of content, methods and contexts. Prior learning and experiences of learners, especially those learners employed in the workplace, were seen to be significant factors in the programme design and acceleration of delivery.

In the South African context, the NQF is a social construct. It represents a climbing framework that interlocks education and training at formal institutions and workplaces. The NQF fits all learning and all qualifications into a single elaborated structure. Raffe (2005:50-51) observes that the NQF celebrates a wide range of contexts (e.g. formal and informal sites), various modes of learning (e.g. disciplines and work-integrated learning) and social relations (teacher-student and employer-employee). The NQF provides interconnected learning and career pathways that provide portability and progression routes for learners and workers. Raffe describes the NQF as an instrument for social transformation that provides all people with flexible pathways by which they may access learning and progress. To promote student and worker mobility, the NQF gives each learner opportunities to learn at a formal institution as well as in a work-related context, for example on a job. This strategy is called co-operative education.

Co-operative education is defined in a Unisa policy (Groenewald 2003) as a teaching and learning strategy that integrates the learner's academic studies with experiential learning. This is done in partnership with the relevant occupational field based on a mixture of explicit knowledge (conceptual and factual) and tacit or implicit knowledge gained through experience, simulation, and going through the actual process that has to be learned. In a co-op. ed. consortium, everyone with potential or learning and teaching power can take part and become an active and responsible citizen capable of contributing to the lifelong and lifewide learning of others.

Lifelong and lifewide learning

In this co-op. ed. consortium model, learning is seen as a lifelong and a lifewide process. Lifelong learning is not restricted to a certain period of one's life but can happen anytime and anywhere. It is a continuous process initiated by teachers or workplace supervisors but directed by the learners. It is the co-op. ed. consortium that creates powerful learning and work environments in on- and off-campus and on- and off-job contexts. The acquisition of knowledge and skills in these powerful learning environments should happen through social interaction between its members. This results in a lifewide process which involves a combination or blend of events such as coaching by a line manager, engagement in work teams and panel discussions, participating in online chat groups, accessing knowledge management databases, having breakfast with colleagues, work shadowing, using job aids or performance tools, observing role models or studying independently at home.

Lifelong and lifewide learning refers to just-in-time and just-for-you learning which people can seek when they need it. Lifewide learning blends context-dependent (experiential learning) and context-independent (academic) knowledge, formal and informal learning, self-directed and convivial learning, technology-based and people-based learning as well as teacher-led directive learning and self-discovery learning. Gamble (2004) refers to context-independent or institutional conceptual learning and to context-dependent experiential learning. The latter learning is learnt in life and on the job. Both types of learning must be included in a qualification, although the weighting differs in various types of qualifications. Lifewide learning puts the learner or people in the middle of the blend.

The co-op. ed. consortium provides varied social and cultural learning and work contexts, within which learning naturally occurs. The emphasis is on learning as a social practice rather than as a pedagogic strategy. From a socio-cultural perspective, learning and development should take place in socially and culturally shaped contexts that are constantly changing. Knowledge and skills created in an integrated and participative co-op. ed. consortium will change not only the learners but also the organisations and the social networks of which they are part. In the co-op. ed. consortium model, teaching and learning concentrate on real issues or problems and involve groups of people carrying real responsibility in real conditions, which may lead to a substantive contribution to the well-being and safety of society in general. Students have to complete assignments which allow them to synthesise context-dependent as well as independent work. Students are required to plan and manage their own work over an extended period of time, meeting deadlines and working in teams. Here technical work is put in a social and commercial context. This will lead to qualified learners who understand the material they are working with and who will contribute to making the explosives sector safer and more environment-friendly.

Guiding principles for lifelong and lifewide learning within the co-op. ed. consortium

The following guiding principles were negotiated by the co-op. ed. consortium and are applied to all the activities dealing with lifelong and lifewide learning within the consortium.

Co-operation instead of competition

The co-op. ed. consortium is a voluntary co-operation based on partnership rather than competition. It is not a formal franchising partnership but rather an informal alliance. However, the members are expected to conform to certain rules to realise lifelong and lifewide learning. Katane (2000) views collaboration as the backbone of the mission to enable lifelong and lifewide learning to solve social problems. Through co-operation, the co-op. ed. consortium members strive continuously to become close networking

communities of learning and practice. They may involve local and national multi-professional partners to exchange local and global knowledge and ideas and to be relevant and transformative. Such partnerships will lead to the creation of appropriate new knowledge, innovation and development. Knowledge creation through research is no longer the preserve of narrowly defined groups of 'experts' in competition with each other. The South African Qualifications Authority (2000:3) states that knowledge 'is rather created through partnership amongst various groupings in society, from academics and researchers to business, from workers to professional experts, from government to community organisations, from learners to professors'.

Education for transformation: 'From sweeper to engineer'

Education and training are seen as transformation tools designed with the intention of preventing disadvantaged learners and workers from getting stuck in unskilled or semi-skilled jobs. The co-op. ed. consortium offers spaces of hope for people to climb the career and learning ladder so as to improve their own and others' quality of life. It values lifewide and lifelong credit earning and gives recognition to it.

Education, training and work opportunities for all

The unemployment in SA is high. Diederichs (2002:50) refers to unemployment as our public enemy number one, as one out of every four people is without a job. Only a working nation is a happy nation. People are likely to believe that having a good start in the workplace, with the option of having lifelong and lifewide education, is rapidly becoming the learning and career pathway of choice. The co-op. ed. consortium model helps to democratise education and training. It creates more opportunities for people to study throughout life, as learning places are created not only at learning institutions but also in the regional communities and workplaces so as to provide education, training and work opportunities for all.

Distance education

Ben-Jacob, Levin and Ben-Jacob (2000:202) argue that typical college students in our new millennium will be employed full-time and will pursue further and higher education to become more employable and to advance their careers. The students will take advantage of asynchronous, technologically-mediated distance education materials that are both content- and activity-rich. Thus, the fusion between learning and work is made closer than ever before through distance learning at Unisa, which is a one-stop, public, multi-purpose education service provider for tailor-made solutions for the explosives management sector.

Culture of consumption

The post-Fordist era in which we are living marks a shift from a culture of production to a culture of consumption. Market demand shapes our products and services according

to the patterns of consumption. Universities are moving from being scholarly ivory towers to being information co-operatives. Accordingly, as suppliers, they co-operate with the co-op. ed. consortium to design and deliver tailor-made learning programmes as an important driver in the value chain of growth.

Psychological ownership

The co-op. ed. consortium – consisting of knowledge workers for higher learning institutions (specifically Unisa), local employers and community leaders and trade unions – owns the project psychologically. The participants are committed to shared views, concerns and interests.

Capacity development

When necessary, the higher education institutions assist the local social partners to acquire the capacity and individual skills required for participating effectively in the co-op. ed. consortium. The members of the community also sensitise the knowledge workers of the higher education institutions to make them aware of the problems of their community of practitioners and to trust their input.

Diversity

This programme caters for more diversified categories of learners and can lead to unique learning tracks. The co-op. ed. consortium brings individuals together with multiple perspectives on any learning or work situation as a result of their gender, status, education, age, class or race. It calls for cognisance to be taken of diverse sector needs, catering for market niche areas, and tries to promote independent thinking and teamwork in multicultural organisations and contexts. The qualification takes into account learner profiles and entails programme content and learner support appropriate to the target group (in the light of their previous knowledge, experience and progression needs), so as to achieve lifelong and lifewide learning.

Collaborative experiential learning

Academic learning can be primarily an individual matter through the transfer of knowledge from experts to novices, but experiential learning is usually a collaborative or team effort. Therefore, beside structured academic learning, the new explosives management programme includes collaborative experiential learning.

This mix of explicit and implicit knowledge (the latter generated through experiential learning) is increasingly becoming the means of production in the knowledge-driven society. As outlined by Rothwell and Kazanas (1994), experiential learning can be divided into structured, planned, on-the-job training (referring to planned and controlled interventions by a supervisor or co-worker) and unstructured or uncontrolled on-the-job learning (referring to self-directed lifelong and lifewide learning, usually

occurring as a by-product of the daily scheduled tasks of teams). The latter learning refers to organisation learning, lifelong and lifewide. Here learners are encouraged to question team members, communicate and share ideas and produce collectively. Also, the job performance is judged in part by the performance level of the team, according to Ben-Jacob and others (2000:204). To share, discuss and implement this implicit or tacit knowledge, knowledge management captures these unintentional learning activities. Polanyi (1966) coined the concept of tacit knowledge. It refers to non-codified knowledge gained through experience or simulation, which resides in the individual's mind and actions. Tacit knowledge is used for problem solving and posing, and refers to more informal learning in community groups, workshops and online groups initiated by the co-op. ed. consortium.

Learning will be shaped by finding out and taking action

According to Rogers (1969), all learning should include experience – even theoretical learning should be complemented by experiential learning to influence future thinking and doing. Rogers feels that all human beings have a natural propensity for lifelong and lifewide learning. The role of the educator is to facilitate experiential learning by setting a positive climate for learning, in particular discovery learning, by clarifying the purpose of learning, by organising access to learning resources, by increasing the joy of learning and by sharing feelings and thoughts. Rogers emphasises the importance of learning to learn and being open to change. To make learning a transformative process, learning in the co-op. ed. consortium model incorporates different inputs to support the learners' active exploration and manipulation of learning material through reflective journal writing, story telling, metaphor analysis, small group discussion, reading a learning guide, watching someone's action, or actually doing something. However, the real learning is about change, not only in knowledge but also in skill, and how we perceive, think and do. In the co-op. ed. consortium model, lifelong and lifewide learning is shaped by participants with inquiring minds eager to find things out and take action, leading to new language and new practices.

The impact of the co-op. ed. consortium advisory committee on the design of the management and explosives programme for the explosives sector

The co-op. ed. consortium advisory committee held various meetings after its establishment. From these meetings the following guiding principles emerged for designing lifelong and lifewide learning for the management and explosives programme for the explosives sector.

Designing a socially negotiated programme ensuring relevance

The co-op. ed. consortium advisory committee took measures to ensure that the management and explosives programme was relevant for the sector and would contribute to social and economic development. Relevance refers to the 'fit for

purpose' principle of curriculum reform. This requires a better articulation with the problems of society and the world of work through lifelong and lifewide learning. To make higher education programmes more responsive to the labour market and to make its graduates more employable, the content of the programme reflects not only a disciplinary approach but also a problem-based and trans-disciplinary approach, especially in respect of its experiential learning component. These modes of knowledge configuration are described by Gibbons (1994) as Mode 1 and Mode 2 Knowledge. Mode 1 Knowledge is discipline-based, while Mode 2 Knowledge is trans-disciplinary. The latter generates new knowledge through interaction with a variety of knowledge producers outside the traditional disciplinary boundaries. This is a more democratising real-world mode of knowledge generation emerging from the context in which the problem arises. For Gibbons (1998a:58), Mode 2 Knowledge is that learning material and those methods which reflect the particular co-op. ed. consortium's role in the economic development of the region or nation concerned and in the development of a civic culture.

To address the need for relevance, the advisory committee felt that the programme should educate learners to become multi-skilled 'flexible specific-generalists'. Furthermore, they should become motivated and responsible citizens. Such graduates can think critically, analyse the problems of society, look for solutions to the problems of society, apply them and accept social responsibility in accordance with the values enshrined in our Constitution.

Incorporating in the programme design the values enshrined in our constitution

The Department of Education of South Africa, in its Manifesto on Values, Education and Democracy (2001), states that the basis for curriculum transformation and development in contemporary South Africa is laid out in the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996). The Constitution expresses our nation's social values and its expectations of the roles, rights and responsibilities of citizens in a democratic South Africa. The Constitution places pre-eminent value on equality, human dignity, life, and freedom and security of persons. The preamble to the South African Constitution states that we need to improve the quality of life of all citizens and free the potential of each person. South Africans need to heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights. The national critical and developmental outcomes are a list of outcomes that are derived from the Constitution and are specified in the South African Qualifications Act (1995). They describe the kind of citizen the education and training system in South Africa aims to create. It is expected that each qualification should promote the critical and developmental outcomes. The exit-level outcomes of the qualifications in the management and explosives learning programme incorporated the critical cross-field outcomes to ensure all-round graduates.

Acknowledging situated learning in the programme

Knowledge is transferred in a contextual way. In learning, Lave and Wenger (1991:108) believe that knowledge, both implicit and explicit, is exchanged via stories, which are packets of situated knowledge. In a co-op. ed. consortium, learning occurs both formally in the workplace and also informally or naturally via activities in the workplace. Engaging in activities in a context enables implicit tacit knowledge to be transferred, giving effect to communication and enculturation. Knowledge is also expanded through discussions in communities of practice in which expert-novice interactions take place. Here, learning is not taken out of context. Also history, power and culture play a role in questioning taken-for-granted assumptions. Learning is situated in a context of collaborative action and reflection, where students can learn constructively from different viewpoints, theories and practices.

Blending formal, non-formal and informal delivery in the programme design

The learning strategy used by the co-op. ed. consortium includes a mix of face-to-face lectures, self-contained learning guides, practicals and experiential learning opportunities. The learning programme makes provision for structured learning and structured workplace learning, not only to transmit management knowledge to explosives practitioners in South Africa but also to create new workable knowledge, unique to specific contexts, through lifelong and lifewide learning. In structured learning, the co-op. ed. consortium members use case studies and patterns in addition to rules, principles and procedures. In structured workplace learning or in professional as well as community service learning, members work together to apply and adapt theory and occupational standards as well as to produce a project to transform practice and derive new theory. Action learning, thus, becomes an empowering approach in that its participants become better able and more willing to take responsibility for their own lives and those of others and are prepared to take risks to transform the situations of which they are part. In an action learning situation, the hierarchy between facilitators and adult learners is eliminated, and a learning community is created in which knowledge is collaboratively constructed rather than transferred.

Furthermore, a community of practitioners is created, as each of the stakeholders or role players from the co-op. ed. consortium come from different backgrounds, holding different professional positions and working in different contexts and cultures. Each social partner in the co-operative education situation works with the students in formal situations (e.g. knowledge transmission in a classroom), in non-formal delivery in the workplace, or in an informal delivery situation where learners learn naturally. These partners help learners to see and handle knowledge differently and to apply it according to a specific role player's theory or perspective. From a socio-cultural perspective, learning and development take place in socially and culturally shaped contexts, which are themselves constantly changing through feedback loops from theory to practice and vice versa.

Designing a constructivist programme

The constructivist type of curriculum does not follow a linear behaviourist path. It is not a prescriptive specification of practice. Lave (1997:32) calls it 'an arrangement of opportunities for practice.' In the traditional concept of education, knowledge is transferred from a knowledgeable person to someone who lacks knowledge. In a constructivist approach, a student must take responsibility for his/her own learning. Here a variety of powerful learning environments are provided in which students are engaged in redefining goals, in choosing activities and in assessing themselves and peers. Learning outcomes are competencies involving complex dimensions such as explicit and implicit knowledge and skills, personal professional values and environmental factors. Based on the philosophy of Ubuntu (placing high value on human dignity), nobody will be left behind in a constructivist curriculum that involves people of all ages, races and languages dealing with activities.

Constructing feedback loops from theory to practice and vice versa

Knowledge created in terms of an integrated and participative learning approach will change not only the learners but also the organisations and the social networks they are part of. If lifelong and lifewide learning concentrates on real issues or problems and involves groups of people carrying real responsibility in real conditions, it may lead to a substantive contribution to the well-being of society in general. Kraak (1997:54) argues that continuous innovation is highly dependent on the presence and feedback loops of two knowledge forms in society and work, namely on an abundance of theoretical scientific and technological knowledge provided by higher education institutions and on skilled workers provided by the community. These practitioners possess contextual and cultural 'know-how' or tacit knowledge achieved by learning-by-doing. New knowledge is often formed by feedback loops between formal and tacit knowledge. Tacit knowledge is embedded and implicit in practitioners themselves. It is built up over time and gives the organisation the competitive edge. The fundamental challenge is to design a programme which creates a dynamic synergy between the coded, formalised knowledge used by experts in higher education and the tacit knowledge practised by professionals and skilled personnel in the workplace. The dialogue is considered by the co-op. ed. consortium as the most powerful teaching and learning tool for lifelong and lifewide learning.

Using dialogue as teaching, learning and assessment tool

Freire (1972) uses dialogue as a tool to open possibilities for liberatory action. Dialogue should not involve one person acting 'on' another but rather people working and living 'with' one another. Freire (1972) prefers informal education that takes place in a dialogical or conversational way rather than the transmission of knowledge and skills that takes place in a formal curriculum. Too much education, Freire (1972) argues, involves 'banking' – the educator making 'deposits' in the would-be learner. Learning according to Freire (1972) also involves 'problem-posing'. Dialogue is not just about

deepening understanding but is part of taking action and making a difference in the world. The lived experience is important to enhance community and to build social capital in which justice and humanity flourish. The co-op. ed. consortium adopted the principle of dialogue as a main tool for teaching, learning and assessment. Lifelong and lifewide learning is seen as a process initiated by the educator and directed by the learner. Learner autonomy and lifelong and lifewide learning are considered to be the ultimate outcomes of the programme. It is assumed that teaching does not cause learning but supports those learning intentions to which the learner commits himself or herself. The role of the educator in the management and explosives programme is that of a learning companion (rather than an instructor) who uses dialogue as main tool for learning, teaching and assessment, assisting learners and workers to become independent and to develop the capacity to manage their own personal, educational and professional development effectively.

Encouraging co-op. ed. consortium members to act as learning companions in learning clusters

The members of the co-op. ed. consortium advisory committee decided that the lecturer or coach is, in the first place, a learning mediator or a cultural guide who is sensitive to the diverse needs of learners, including those with barriers to learning. He or she should construct learning environments that are appropriately contextualised and inspirational, and should communicate effectively, showing recognition of and respect for the differences of others.

The main tool of a learning companion is dialogue. A learning companion speaks with the learner to assist in the formation, conduct and interpretation of otherwise self-directed learning and work actions. The personal learning companion together with appreciative pedagogy is at the centre of the strategy for learner support. The learning companion creates a safety net or a zone of trust around the learner. A member can take on the role of a lecturer, tutor, demonstrator, workplace mentor or assessor, and in problem-based learning he or she also acts as a co-learner. Learning companions can also be supported by guidance online. The learning companion should be available at agreed times to support the learner on request or make contact with the learner in the case of non-progression to the next level of development. The need for a learning companion is explained by Vygotsky (1978:85). Assessment should be integrated into day-to-day operations.

The impact of the co-op. ed. consortium model on the delivery of the management and explosives programme for the explosives sector

The delivery of the management and explosives learning programme for the explosives sector aims to empower adult learners in South Africa. It offers learners with different interests and ambitions opportunities to perform better and to foster their careers

through lifelong and lifewide learning. It opens up opportunities for further and higher learning and to pursue a learning path at an institution of higher learning. The management and explosives programme consists of a series of qualifications, starting with access certificates to higher education and training. The education concept of the programme, co-operative education, integrates lifelong and lifewide learning and work. Especially at the beginning of the programme, the emphasis is on skills development through experiential collaborative learning in real-life and work situations. Gradually conceptual learning strategies are introduced. In fact, the programme widens the participation of new target groups of learners in higher education – 'from work to formal learning' instead of 'from institutional learning to work'. Learners in this programme are lifelong and lifewide learners who are already in a job. They are more interested in qualifications in which theory is closely related to practice. Based on a constructivist view of learning, students are provided with authentic or problem-based tasks that stimulate active and group-directed learning and relate to everyday life and work tasks and problems in the explosives sector.

A flexible learning programme was designed to respond to the various demands of the co-op. ed. consortium representatives. Flexibility was built in to meet, in the first place, the demands of the sector and its workers rather than those of the education and training providers or the employers. The programme provided the learners with a choice of learning outcomes and strategies to allow them to choose the delivery mode and learning site, their mentors, the resources, learning styles, learning pace and time. The duration of the programme is based on 42 000 notional learning hours (420 credits). The outcomes of the programme are market-related, which means that the programme was specifically designed to meet the needs of the explosives sector, employees and co-op. ed. consortium. The timing of the programme delivery was adjusted to the production cycle of the explosives community. The delivery of the programme took place in those times when the employees had time on hand to learn. During the peak production time, the classes were stopped and only resumed later.

The co-op. ed. consortium created lifewide learning environments in the learning programme for learners to profit from workplace-based learning as well as from institution-based learning; from experiential learning as well as from conceptual learning; from teacher-directed learning as well as from self-directed lifelong learning; from discrete assessment of a module as well as from integrated assessment of a qualification; and from independent learning as well as from collaborative convivial learning.

The teaching and learning strategy includes a mix of face-to-face lectures, practicals and experiential learning opportunities, making provision for structured learning and structured workplace learning. Co-op. ed. proponents have long argued that by operationalising classroom learning in the workplace, students begin to see the relation between theory and application and the practical relevance of what they are studying. The learning that happens in the workplace possesses a durable, lasting quality.

The co-op. ed. consortium is a group of people who are working together on a particular project, in this case to introduce a programme in explosives and ammunition sciences for middle-level managers in the explosives sector. One of the purposes of this qualification was to maintain and expand South Africa's vast mining and well-established armament industry. Members of the co-op. education consortium included employers, employees, professional bodies, trade unions, learners, government, and private education providers, who were required to design the outcomes of the qualifications, to develop and deliver the learning programme and to provide learner support. The final responsibility and quality assurance for lifelong and lifewide learning lies with Unisa. The impact of the co-op. ed. consortium can be supported by the way in which each member plays a crucial role as a mentor with a special 'one-to-one' relationship to a person or a group (Bailey in SAIDE, 2003:3).

On a voluntary basis, group members of the co-op. ed. consortium assist each other to expand lifelong and lifewide learning opportunities by means of the following:

- Identifying problems by all actors from the economy and society
- Creating new knowledge by permanent negotiation parties
- Advising each other – listening to each other's problems and offering suggestions based on their expertise
- Counselling – offering each other a relationship based on trust and acceptance
- Coaching – creating or structuring learning experiences so that the other can practise and gain new insights
- Assessment – gathering and giving information about an individual or project
- Advocacy – taking action on behalf of and with the agreement of other group members or another person
- Feedback to systems – providing feedback to the co-op. consortium on the experiences or problems of individuals or groups that require changes in the system

Conclusion

In a learning age when knowledge and information continue to define the competitive advantage of enterprises and individuals, no organisation or person can afford not to learn and apply newly generated knowledge. Education and training lie at the heart of a knowledge society. Human capital is the most valuable asset of an organisation in a knowledge age. Knowledge management has become the driver of business organisation, jobs and wealth creation. In this knowledge society, there is a shift from hard production factors to soft factors – the human capital. To generate power, higher education should build bridges to communities, together with the diverse sectors of society.

The co-op. ed. consortium, which was established to deliver the management and explosives learning programme, required new solutions to traditional teaching and learning. Unisa, as a leading provider, has developed a footprint for sustainable lifelong and lifewide learning of quality for learners in the explosives management sector. Learners in the programme were familiar with learning in the workplace through collaborative experiential learning opportunities and co-assessment. The learning programme consists of blended lifelong and lifewide learning opportunities. This learning programme is an inclusive programme with a focus on education for employability in the explosives sector rather than education for employment – developing the ability to do a specific job. Education for employability develops the ability to adapt new skills to new working and living environments through lifelong and lifewide learning opportunities.

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Co-operative education in the Department of Business Management: A case study

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This paper provides the reader with an elaborate contextual description of the former technikon education underlying principles. The paper further seeks to highlight the importance of co-operative education within the field of Business Management at Unisa. Furthermore, case studies from the Real Estate and Management programmes at Unisa are presented to illustrate the application of co-op. ed. and, specifically, experiential learning within the Department of Business Management. The paper is concluded by highlighting the advantages of co-operative education to various role players.

Co-operative education

Co-operative education defined

The idea of combining work experience with formal study, which is what co-operative education is in essence, dates back to the apprenticeships of the medieval guilds (Groenewald 2004). Co-operative education can be defined as a structured qualification curriculum[1] which seeks meaningful integration of formal study from textbooks and learning materials with learning through productive work experiences in the relevant occupational field. The curriculum is derived through extensive consultation with representatives from the occupational field, and sustained relevance is ensured through advisory structures. At the heart of co-operative education is the Latin motto *experimentia docet*, meaning *experience teaches* (Groenewald 2003). For the highest possible educational value to be achieved, the experiential component of the curriculum must receive as much attention as the theoretical component.

Co-operative education should not be confused with co-operative learning, which is defined as a 'small group of students working together to achieve a common goal' (Jarvis & Wilson 1999). However, group/co-operative learning can be used most effectively in the design of experiential learning to facilitate reflection on what has been learnt by individual students during the experiential component and the sharing of experiences to enrich the learning.

Principles of co-operative education (technikon philosophy)

The website of the former Committee of Technikon Principals (CTP) states that co-operative education is a powerful element in the technikon/university of technology education paradigm, allowing students to benefit from both formal education and training at technikons/universities of technology along with first-hand work experience in the marketplace.

A Department of Education technical team report of 29 March 2004 dealing with an investigation into the state funding of experiential learning (EL) at higher education institutions recommended that these institutions should offer students engaged in EL the following (South Africa. Department of Education 2004):

Orientation: Work preparedness and life skills programme

During such a programme students receive instruction to prepare them for the world of work. Policy and ground rules clarify roles and the obligations of the students, the higher education institution and industry in the co-operative education partnership. Students acquire job-seeking skills such as CV writing, completing job applications, and interview and presentation skills. Other life skills such as time management, team building and communication are also introduced.

Learning programme

In the learning programme learning criteria and specific outcomes are documented to offer the students and mentors guidance relating to work-based training and learning areas for the specific disciplines. Students receive guidance on how the work learning experiences should be integrated and recorded. Assessment criteria and evaluation time frames are documented.

Placement process

The higher education institution markets and promotes co-operative education to commerce, industry and government and secures accredited workstation placement opportunities. Students are introduced to a range of companies and must apply and secure their own placements. Institutions of higher education may facilitate the application and interview process as required, and students are selected by the companies after shortlisting and interview processes.

Visits and monitoring

Staff from the higher education institution visit students to ensure that their learning experience meets the expectations of all parties. The students, mentors and staff from the higher education institution meet to discuss progress. Logbook entries, presentations or any other agreed evidence, portfolios or artefacts may be used to assess student progress. Visits to students at the workplace must be planned in good time

and carried out by appointment. The frequency of visits will depend on geographical location, costs and other related factors.

Assessment and evaluation

Interim and continuous assessment may take place throughout the experiential learning period, with assessment and evaluation being performed by mentors, staff of the higher education institution or external examiners. Logbooks, assignment reports, projects, presentations or any other agreed evidence, portfolios or artefacts may be used to assess and evaluate student learning. Marks, credits or records of outcomes-based education (OBE) competence may be used to reflect student success and learning outcomes. Structured and recorded feedback by students and industry can serve as a quality assurance tool for review and improvement.

Administrative support infrastructure

Best practice presupposes dedicated administrative infrastructure and resources. This would include a database of participating companies, student placement and work-record progress, as well as correspondence, communication and marketing material.

The technical team based the best practice indicators listed above on two publications, namely *Essentials of co-operative education practice* (CTM 2000) and *Best practice in co-operative education* (CTM, 2000), the products of collaboration between the Committee of Tutorial Matters (CTM) Standing Committee: Co-operative Education[2] and the Southern African Society for Co-operative Education.

The Southern African Society for Co-operative Education further produced a quality assurance policy with audit and measurement criteria for the operational and strategic management of the experiential learning parts of co-operative education programmes (SASCE 2003).

Beaudin and Quick (1995) identify the theoretical underpinnings of three major experiential or experiential learning categories:

(a) Field-based experiences - working with practitioners of the field of study, actually doing the job for which the student is being trained and learning from this experience

(b) Prior learning assessment - credit or certificates given for knowledge attained from life experiences

(c) Academic-based experiential learning - teaching methods that involve the students in conducting activities and reflecting on what they did

Note that (a) and (c) are about active learning, whereas (b) involves the recognition of prior learning (RPL). The apparent misconception regarding experiential learning (EL) in some of sections of the new comprehensive University of South Africa will need to be addressed.

The Department of Education technical team report of 29 March 2004 dealing with the investigation into the state funding of EL at higher education institutions further distinguishes the following five forms of EL:

On-campus and off-campus EL

Some contact tuition institutions provide on-campus EL, such as in food technology (hotel school), jewellery design and manufacturing, secretarial services, public relations and electronics. In such instances the institution would be responsible for the effective supervision of the EL student.

Directed and independent EL

In directed EL the student acquires or applies previously acquired knowledge and skills in a supervised situation that approximates or replicates the conditions under which the knowledge/skills will be used. The instruction is typically individualised, with a high degree of interaction between the student and the supervisor. Typical examples are the hospital internship at academic hospitals.

In independent EL the student acquires knowledge or skills through independent experiences. There is no formal interaction between the student and the teacher/agent, but interaction does take place between the student and individuals encountered during the course of the education experience, as well as between the student and the actual surroundings. A typical example is an architectural student working in an architect's office.

EL involved in contact and distance modes of instruction

Apart from different service approaches to EL students in these two modes of instruction, the majority of EL full-time equivalent (FTE) students involved in distance tuition were historically already situated in the workplace. However, Unisa is attracting increasing numbers of school leavers who are not employed.

Integrated EL and separated EL

During 2000 and 2002, technikons underwent a major recurriculation exercise involving the redesign of all programmes in order to comply with the South African Qualifications Authority (SAQA) requirements for OBE and to register technikon programmes on the National Qualifications Framework (NQF). This exercise was co-ordinated by convenor technikons. Convenor technikons were requested to recurriculate the EL components as well, by redesigning them in terms of outcomes with associated assessment criteria. These EL components, which have been integrated into the curriculum in the same way as other subjects, were classified as 'integrated EL'.

The technical team report stipulates that according to the existing Higher Education Management Information System (HEMIS) policy, any EL component of a programme should be reflected separately within the following three HEMIS study times:

Minimum total time

The minimum total number of years (to the nearest tenth of a year) of full-time post-secondary study needed for completion of the instructional programme leading to the particular degree, diploma or certificate.

Minimum experiential time

The minimum number of years (to the nearest tenth of a year) of full-time study needed for completion of the experiential part of the instructional programme leading to the particular degree, diploma or certificate.

Minimum formal time

The difference between the minimum total time and the minimum experiential time

For integrated EL, the minimum experiential time component, which was usually reflected separately in Report 151, a publication of recognised technikon instructional programmes (Republic of South Africa, Department of Education 2004), is no longer a separate component, and has been included or integrated into the curricula of the formal courses with an associated credit value in Report 151. The old types of EL component that have not yet been redesigned and recurriculated have been classified as 'separated EL' and their minimum experiential time has remained separately reflected in Report 151. Even though separated EL is evaluated, it is not outcomes-based and students do not receive a mark in the form of a percentage, but simply a 'complete' or an 'incomplete'. CTP studies show that only some 10% of EL FTE students are still classified as 'separated EL'; separated EL should therefore soon be phased out.

Fieldwork and EL

There are a number of programmes in which the minimum experiential time is specified as zero during the programme approval process, indicating that EL is not a requirement of those programmes. Therefore, in those programmes EL is not compulsory for all the relevant institutions that will offer the programme. However, within such a programme a particular higher education institution may believe that experience in an appropriate work environment would enhance learning and contribute to the overall competence of its students. Such an institution could arrange for its students to work off-campus for a specified period (e.g. three months) as part of, for instance, site visits or field trips that are included for enrichment purposes; this constitutes fieldwork. Fieldwork for a particular programme is not necessarily conducted at all the relevant institutions, and may range from being compulsory at some institutions to being non-existent at

others. In the latter case, students can successfully complete the programme purely on the basis of coursework or formal contact time.

Application within the Department of Business Management at Unisa

Co-operative education (co-op. ed.) as a teaching philosophy is the cornerstone for all the technikon-type programmes within the Department of Business Management at Unisa. The manner in which it is applied in respect of EL may differ between programmes. Two illustrations in this regard follow.

Importance within the field of business management

Co-op. ed. as teaching philosophy within the field of business management does the following (Technikon South Africa 2004):

- Exposes students to challenging learning experiences related to the business world
- Assists students to start with a career plan during their studies
- Acknowledges the balance between conceptual, theoretical and practical content
- Trains the students according to the needs of the business industry
- Provides the business industry with employees who are workplace-ready
- Develops core skills such as business skills and critical cross-field outcomes

Co-op. ed. within the Real Estate programme at Unisa

The Real Estate programme has always maintained close ties with the industry it serves. The integration of EL into the academic programme therefore relies heavily on the requirements of and input from the property industry and the property valuation industry in particular. A two-pronged approach with regard to the inclusion of work-integrated learning is followed. This coincides with two of Beaudin and Quick's (1995) three major experiential learning categories:

- Academic-based experiential learning
- Field-based experiences

Academic-based experiential learning

Different methodologies are used to introduce students to EL. The two main methods used are practical assignments and workbooks.

Students are required to complete a number of practical assignments for the various subjects. These assignments are based on the typical daily tasks of practising valuers. The assignments also differ in complexity depending on the level of the subject. The practical assignments for the property valuation subjects are compulsory, and if students obtain less than 50% for the assignment they are not allowed to sit for the

examination. Although not compulsory, the practical assignments for the other subjects also make a significant contribution to the student's yearmark.

In Property Practice and Property Economics and Finance workbooks are used to expose students to different scenarios that property practitioners encounter in their work.

Aim of the practical assignments

The aim of the practical assignments is to expose students to the real-life work situation of professional valuers; for example, by doing a valuation students are confronted with the same problems professional valuers experience from day to day. Exposing students to real-life situations right from the beginning helps them to make an informed decision as to whether to pursue property valuation as a career or not.

What does a practical assignment entail?

There are different practical assignments for the different subjects.

Property Valuation I, II and III

For the Property Valuation subjects, students are required to value a property and write a fully motivated report. These reports are submitted for evaluation and feedback.

In their first year students are required to value a single residential property, in their second year an income-producing property and in their third year a property which is being developed.

An example of a typical Property Valuation II practical assignment is given in annexure A.

Property Practice I

Students are required to inspect a residential property, complete an inspection form and write a report on their findings. This subject is very technical and students battle to understand the use of the subject. A practical workbook was developed to simplify the technical aspects of the subject and to show students how to apply the information contained in the study material. See the discussion of workbooks later on.

See annexure B for an example of a typical Property Practice I practical assignment.

Evaluation of practical assignments

Property Valuation

Students receive a mark sheet, designed by the South African Institute of Valuers, with all the elements that should be covered in a substantiated valuation report and the marks allocated for each item to assist them in completing the assignment.

As indicated above, students are required to value a specific property and submit a full substantiated report. Assignments are marked according to the mark sheet, and comments are made in the report indicating shortcomings and how these can be rectified. It would be ideal if students could be given the opportunity to rectify these reports and resubmit them for evaluation. However, the limited time available and the existing administrative systems do not permit this.

The mark sheet in annexure C constitutes a guideline to examiners. No two properties are the same and adjustments can be made where examiners feel necessary.

Property Practice

Student must submit the assignment to the University before a due date to be marked and returned with comments made by the marker.

The aim of a workbook

The aim of a workbook is to show students the bigger picture and to indicate where the specific subject fits in. Students find it difficult to understand why they have to study Property Practice I and Property Economics and Finance I. The workbooks for these subjects not only clarify difficult concepts but also indicate to students the relationship between the different subjects in the qualification.

What does a workbook entail?

A workbook is written with a special need in mind. For instance, students find it difficult to relate to the technical nature of Property Practice I and the mathematics in Property Economics and Finance I.

Property Practice I

The workbook for Property Practice I takes students a step back and starts with basic map reading and how to measure a building before touching on the more technical concepts in the study material. The workbook contains a series of case studies, beginning with a very simple building and advancing through increasing degrees of difficulty to end with a complicated building. If students work through the workbook as instructed, they will systematically work through their study material at least four times, being exposed to more complicated technical information on each occasion. The workbook concludes with the practical assignment already mentioned above.

Property Economics and Finance I

The content of Property Economics and Finance I is very mathematical, and experience indicates that students therefore tend to lack enthusiasm for the subject. In the workbook the theory is related to everyday occurrences to highlight the application and use of the subject. The workbook also provides additional exercises based on everyday occurrences to give students practice.

Evaluation of workbooks

The workbooks are designed with self-evaluation in mind. They are therefore not submitted for formal evaluation.

Field-based experiences

Field-based experiential learning was included as an additional subject called Practical Valuation. During the period 2000 to 2002 the former Technikon SA came under pressure to include experiential learning, and the South African Council for the Property Valuers Profession (SACPVP) experienced problems with the administration of their requirements with regard to practical experience. After discussions Technikon SA offered to administer the practical experience as required by the SACPVP as part of the experiential learning component in the National Diploma: Real Estate (Property Valuation).

Practical Valuation consists of two components:

- The procedure for the appointment of a mentor
- A logbook to record all valuations done

All students who intend specialising in property valuation must register for Practical Valuation. The purpose of voluntary experiential learning is to ensure that students gain experience and are exposed to the content of the course material in practice. In fact, we would like to see students combine theory and practice in a way that gains them recognition and respect as professionals from both colleagues and supervisors. Only valuation experience gained after registration with the SACPVP as a candidate valuer will be taken into account by the Council for registration as an associated valuer.

The onus rests on students to provide the University and the SACPVP with sufficient acceptable and certified proof of their experiential learning.

Students are responsible for finding a suitable mentor and registering that person with the University. On receipt of the name of a mentor, the University checks the mentor's credentials, and if these are found to be suitable, the student and mentor are officially notified by the University that the mentor's appointment has been accepted.

At the end of the experiential learning period, students are evaluated on basis of the following aspects:

- Personal reports completed by each mentor for the period during which a student worked under his/her supervision.
- Evaluation reports for the required three practical assignments. The mark awarded by the mentor for the practical execution of the project counts 10% and the theoretical evaluation of the lecturer 90% of the final mark obtained for each project. The pass requirement for each project is 50%. If students do

not meet these requirements they are required to submit a modified report for evaluation following negotiation with their mentor and lecturer.

- Contents of the logbook and project file.
- An interview by a Unisa lecturer and SACPVP representative to evaluate the student's personal practical experience. During the interview questions will be asked relating to the projects, the logbook and project file to assess whether the student:
  - completed the projects by himself/herself and has acquired the necessary practical skills to do a valuation independently
  - will be able to carry out work independently in the categories that appear in his/her logbook
  - is able to apply the knowledge gained throughout the practical work and has developed a broad perspective regarding property valuation (Technikon SA, 2001)

If the work a student has completed during the training period is found to contain insufficient variety, or the student does not exhibit the abovementioned competencies, he/she may be asked to extend his/her practical period and repeat some aspects of the experiential learning.

Co-op. ed. within the Management programme at Unisa

The Management programme at Unisa consists of the National Diploma: Management and the BTech: Management. The purpose of this programme is to further educate and train students who are already working and are in line for promotion to a managerial position, or who are already in a managerial position but require management training.

In order to reflect the current market or industry structure, the curriculum and, more specifically, the syllabi or outcomes of the major, namely Management I, II III and IV, are developed according to the different management levels.

Management I focuses on the operational level, which includes first-line and supervisory managers. Management II and III focus on the tactical level, comprising senior and middle managers, and Management IV on the strategic level, which comprises top management.

Management IV is divided into two modules. The first module, Strategic Management, covers strategic management from a generic point of view, focusing mainly on the roles and responsibilities of top management within the field of strategic management. South African case studies are presented, and students are expected to develop strategic plans with some implementation.

The second module, Integrated Management, focuses on the implementation of strategic goals and corporate strategies. Although students are expected to submit two

assignments which are more theoretically based, they are also required to submit a case study project at the end of the academic year instead of writing a formal examination. This case study project is considered to be integrated EL, as it is part of the approved national curriculum.

Case study project

Instead of writing an examination, the student will be required to complete a case study project focusing on the practical application of strategic implementation. He/she will be required to complete the project before the examination date and then submit it at the examination venue on the day of the examination.

The aim of the case study project

The aim of the case study project is to ensure that the student can apply strategic management in practice – especially with regard to implementing a corporate strategy at the different management levels.

Research has found that strategies fail mainly due to poor implementation. The case study project will develop students' creative and management skills – especially with regard to implementing strategies.

What the case study project involves

The case study project consists of the following five steps:

Step 1

Students are required to write a case study on an enterprise of their choice, preferably the organisation which they work for or, if this is not possible, another real or enterprise.

Step 2

The student must identify ONE strategic goal and a corporate strategy for the enterprise that will ensure its success and continuation. (This simply needs to be written down – the student does not need to explain how he/she developed it.) This enterprise strategy will inevitably arise from a problem or opportunity that was described in the case study.

Step 3

The student needs to explain in detail how he/she will implement the strategic goals and corporate strategy that have been identified at tactical (senior/middle) and operational (first-line/supervisory) management level in the enterprise. The steps in the strategic management model must be followed.

Step 4

The student must comment on the changes that top management must instil in the enterprise to ensure the successful implementation of the strategy.

Step 5

The student must explain in detail the interaction that has taken place in the enterprise to ensure the successful implementation of the corporate strategy.

The case study project as a whole must consist of 20 to 25 typed pages (1½ line spacing). Although a typed project is preferable, this is not obligatory.

Examination of the case study project

See annexure D for an example of the form used to evaluate the case study project.

The student can use this form to determine whether he/she has covered all the important aspects.

Declaration

The case study project should be preceded by a declaration stating that it is the student's own work. Since the case study project is regarded as an examination paper, the same disciplinary measures apply as during the examination.

Submission of the case study project

As this project replaces the examination, the following requirements apply:

1. The student must be present at the examination venue on the examination date set for this case study project as if he/she were going to write an examination.
2. The student must be marked present and receive an examination script.
3. The student must remain in the examination venue for at least an hour to complete the details on the examination script and, if he/she wishes, to finalise the project.
4. The case study project must be placed inside the examination script and submitted to the invigilator.

The case study project will not be returned to the student, as it is handled strictly as an examination paper. It is therefore a good idea for the student to keep a copy of the case study project.

Progress report

In order to assist students in completing the case study project for the examination, a progress report has been designed. The progress report is nothing more than a summary of the case study project.

The student will not receive a mark for the progress report. It therefore does not contribute towards the yearmark. The student must use this report to explain his/her approach to the case study project, after which he/she will receive feedback from the tutor. The progress report, and not the actual project, must be submitted together with Assignment 2 for evaluation purposes. After receiving feedback on the progress report, the student must resubmit it together with the final case study project on the day of the examination.

According to the Unisa examination rules there is no supplementary examination opportunity for projects. This means that if the student fails the case study project, he/she fails the subject. Students are therefore strongly advised to complete the progress report to help them prepare.

No progress report will be accepted after the due date. There is no guarantee that students will receive feedback in time to incorporate it into their final case study project in the case of late progress report submissions.

The progress report is shown in annexure E.

Conclusion

For co-op. ed. to be successful, co-operation between education and industry at the different levels of learning needs to be established. Once this co-operation has been successfully established, the following advantages for the employers, the students and institutions will be created (SASCE 2003):

Advantages for employers

- Employers will have access to a regular supply of trained and highly motivated student employees who want to work and learn.
- The availability of students who have participated in co-op. ed. opportunities will allow employers to initiate projects not funded in the normal budget and to undertake short-term endeavours.
- The organisation's more skilled, permanently employed professionals will be able to perform other tasks and to act in supervisory roles.
- Employers will have a cost-effective means of evaluating the potential of future employees without making a long-term hiring commitment.
- If a co-op. ed. graduate is appointed to a permanent position, significantly less training is needed.
- Due to their active involvement with the students' education and training, employers are co-educators. Employers also have the opportunity to engage in an exchange of ideas and a sharing of new developments, curriculum review and joint research with the educational institutions.

- Co-op. ed. creates opportunities for the implementation of skills development programmes.

Advantages for students

- Co-op. ed. students will receive a well-rounded, relevant education that is enriched by the practical application of academic knowledge while accumulating valuable and varied work experience.
- Students will be able to make a realistic assessment of their interests and aptitudes and to make adjustments in their career directions.
- Students will develop confidence and skills in working with people and directly improve their employment opportunities upon graduation.
- Students may receive remuneration that could help to pay for their education.
- Students learn in the world of work.
- Students will be exposed to and learn about the professional and work ethics associated with a specific career or group of careers.

Advantages for comprehensive universities and universities of technology

- Universities will receive feedback from industry, business, government and communities regarding the quality and relevance of their educational programmes and service delivery.
- Universities will be able to form partnerships with industry, business, government and communities which contribute to the development of communities and the economy, regionally and nationally.
- Co-op. ed. creates research opportunities and innovative partnerships.
- Co-op. ed. creates opportunities for industry-based sabbatical opportunities for academic staff.
- If students perform well at a particular workstation, employers will be encouraged to accept more students for EL.

Summary

Co-operative education, which combines the world of work with formal study, forms an integral part of the teaching strategy of the Department of Business Management at Unisa. The application of experiential learning in distance education has been highlighted through a description of the methodologies used by two programmes within the Department. In Real Estate a combination of methodologies is used to ensure that students are exposed to the workplace, namely practical assignments, workbooks and field-based experiences, while Management uses case study projects at each level instead of writing a formal examination at the end of an academic year.

Experience has shown that these practices achieve the benefits envisaged by the Southern African Society for Co-operative Education for employers, students and comprehensive universities and universities of technology.

Notes

1 The term 'curriculum' means different things to different people. Here it is understood to be more than the syllabus, and is taken as a broad concept including aspects such as teaching and learning strategies, forms of assessment, standards and quality assurance of the delivery process, and the resources made available (Technikon Southern Africa & the South African Institute for Distance Education, 2002).

2 The CTM is a substructure of the CTP.

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Annexure A

Compulsory assignment 2
Due date: 1 July 2005 (1st registration)
Due date: 31 January 2006 (2nd registration)

In assignment A you identified an income producing property. A client wants to buy it at market value. You must value the property in terms of the income approach and give the client a substantiated valuation report.

Compile the report just as you would for a paying client, i.e. include photographs and a full substantiation. Your report must be typed and neatly bound. Remember to obtain the municipal valuation as well as the assessment rate payable. The most important part of this assignment is the substantiation of your valuation. As this valuation is done for academic purposes, you should include copies of all the documents you used in the annexure. Submit this report in duplicate - an original with all the necessary annexures and a copy without the annexures. The lecturer will write notes and comments on the copy and return it to you. You can then phone the lecturer and discuss the report in full.

The following declaration must accompany this assignment:

I, ... (full names), hereby declare that this assignment is my own work and has not previously been used for academic or other purposes.

.....
Signature

.....
Date

If you experience any problems with this assignment, please contact me in good time.

Annexure B

Give a systematic explanation of the physical characteristics of a property you own or one you are familiar with.

Discuss the following aspects:

- Erf
- Type of soil (foundation used according to type of soil)
- Topography
- Services
- Improvements
- Area (m^2)
- Aesthetic appeal (inside and outside)
- Layout
- Type of finishes (floors, walls, ceilings, roof, windows, etc.)

Annexure C

Assessment plan for practical valuation

Table 1: mark sheet

No.		Income-producing	Single residential	Developable land
A	General report	(10)	(10)	(10)
1	Instruction	5	5	5
2	Purpose of valuation			
3	Date of inspection			
4	Date of valuation			
5	Effective date of valuation			
6	General information			
6.1	Historical background			
6.2	Macro environment			
7	References			
8	Assumptions and limiting conditions			
9	Certificate of valuation			
10	Annexures, presentation and language	5	5	5

No.		Income-producing	Single residential	Developable land
B	Subject report	(25)	(20)	(20)
1	Title deed information	3	3	3
1.1	Description			
1.2	Extent			
1.3	Title deed number			
1.4	Owner			
1.5	Purchase price			
1.6	Date of sale			
1.7	Mortgage bonds			
1.8	Endorsements			
1.9	Servitudes			
1.10	Mineral rights			
1.11	Township conditions			
2	Local provincial and central government information	3	3	3
2.1	Local authority			
2.2	Town planning			
2.2.1	Zoning			
2.2.1.1	Bulk			
2.2.1.2	Coverage			
2.2.1.3	Height			
2.2.1.4	Parking			
2.2.1.5	Other			
2.2.2	Road widening			
2.3	Municipal valuation			
2.3.1	Land			
2.3.2	Buildings			
2.3.3	Date			
2.3.4	Rates and taxes			
2.3.5	Other charges			
2.4	Guide plans			
2.5	Structure plans			
2.6	Acts and statutes			

No.		Income-producing	Single residential	Developable land
3	Physical features	3	3	6
3.1	Situation (location)			
3.2	Environment (micro, which includes amenities)			
3.3	Services			
3.3.1	Roads			
3.3.2	Electricity			
3.3.3	Water			
3.3.4	Sewerage			
3.3.5	Stormwater			
3.4	Site			
3.4.1	Topography			
3.4.2	Soil composition			
3.4.3	Form/dimension			
3.4.4	Potential for subdivision			
3.5	Improvements	3	6	0
4	Income and expenditure	8	8	8
4.1	Tenants and rent information			
4.2	Accommodation and size			
4.3	Terms of rent contracts			
5	Highest and best use	3	3	6
6	Method of valuation and explanation	2	2	2
C	Market report	(30)	(35)	(35)
1.	Motivation and conclusion	5	5	5
2	Market tendencies	5	5	5
2.1	Macro			
2.2	Micro			
3	Market research	20	25	25

No.		Income-producing	Single residential	Developable land
3.1	**Transactions** The transaction will include all the information such as buyer, seller, full description, extent, purchase price date of sale, zoning etc., full analysis of the transaction, with background regarding purchaser's and seller's viewpoints plus, if required, calculation of cap rates.			
3.2	Properties for sales			
3.3	Other market evidence			
D	Value report	(35)	(35)	(35)
1	**Substantiation and conclusion** This can include a summary of the schedule of sales, analyses of income and expenditure, all the arguments regarding the retention and rejection of sales as well as the findings and conclusions of value.	25	30	25
2	Assessment of value	10	5	10
2.1	Calculations			
2.2	**General** Under this heading one could further highlight the valuation calculation or make comments regarding it.			
3	**Certificate** This certificate can be left here or, as indicated, can be incorporated under the general report.			
	TOTAL	100	100	100

Note: percentage and comment

75+% - Excellent
65-74% - Good
50-64% - Average
35-49% - Substandard
0-34% - Poor

Annexure D

Evaluation report
Case study project

Business Management IV (BSM4M2P)
Management IV (MNG4M2M)
Advanced Strategic Management IV (AST461F)

Module B: Integrated Management

Student name:……

Student number:……

Theme of case study project:……

1.	**Orientation** The relevance of the topic with regard to the aim of the case study project The credibility of the topic in business terms The degree of originality	**10**
2.	**Presentation of case study information** Selection and utilisation of relevant and recent information Completeness and accuracy of the information Use of quotations, effective characterisation, photographs, etc.	**20**
3.	**Recommendations with regard to the implementation of strategy at tactical/functional and operational management levels** Insight revealed Creativity Practical viability of recommendations Adequate substantiation of recommendations	**35**
4.	**Recommendations with regard to the changes that top management must make with the implementation of strategy** Insight revealed Creativity Practical viability of recommendations Adequate substantiation of recommendations	**15**
5.	**Interaction within the enterprise to implement strategy**	**10**
6.	**Technical presentation** General layout, style, logical development, final polishing	**10**
TOTAL		100

Annexure E

Integrated Management progress report:
Case study project (examination paper)

Instructions:

- Follow the instructions for the case study project given in Tutorial Letter 1.
- Complete this report and submit it, together with assignment two, on the due date.
- Resubmit this report – after feedback from your tutor – together with your final case study project on the day of the examination.

Student number: ……

Case study project details	Tutor comments
1. Supply the name of the enterprise: 2. Describe the nature of the enterprise: 3. List the headings that you have used in the project: 4. State the strategic goal and corporate strategy that you want to address: 5. Briefly explain the circumstances that led to the formulation of the strategic goal and corporate strategy: 6. Which tactical/functional managers are involved in the implementation of the corporate strategy? 7. Briefly explain what these tactical/functional managers should do to implement the corporate strategy: 8. Briefly explain what the actions on operational management level should be to implement the corporate strategy: 9. Briefly explain the changes that top management should make to ensure the successful implementation of the corporate strategy: 10. Briefly explain the kinds of interaction between top, senior/ middle and first-line/supervisory management levels in implementing the corporate strategy: 11. Briefly explain the kinds of interaction between the tactical/functional managers during the implementation of the corporate strategy:	

Case study project details	Tutor comments
12. Complete the following checklist • Did you include aspects that will add value to the final product (e.g. organigram, map, pictures, characters)? • Did you take care to write legibly or perhaps even type out the project? • Did you look for spelling mistakes? • Did you check that your sentences were correctly formulated? • Will your project be at least 20 to 25 pages long?	
Student remarks/questions:	**Tutor remarks:**

.....
Signature

.....
Date

Please remember to resubmit this report (with tutor feedback), together with your final case study project, on the day of the examination.

Integrated Management

Progress report: Case study project (examination paper)

Attaining specified qualification outcomes in economic and management sciences through work-integrated learning

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Florence Leshoedi, Nicola Wakelin-Theron and Carina van Zijl
College of Economic and Management Sciences, Unisa

This paper strongly emphasises a dual but integrated curriculum that is based on the needs of the relevant occupational field. Long-term supportive partnerships with the occupational field involving work-integrated learning are advocated. The perspectives of the Higher Education Quality Committee (HEQC) regarding work-based learning are presented. The how, what and why of four qualifications offered by the College of Economic and Management Sciences at the University of South Africa are presented, as well as the *modus operandi* regarding work-integrated learning. Current practice is assessed against the HEQC criteria. Some concerns in this regard are raised and a recommended way forward suggested.

The pedagogy of career-focused and/or professional qualifications or programmes differs from academic qualifications in that the former submit to the paradigm of co-operative education. The word 'paradigm' originates from the Greek *paradeigma* and Latin *paradigma* meaning 'pattern, model or example' (Stanage 1987). The paradigm of co-operative education is a basic set of beliefs that guide value-adding educational action, a patterning of thinking. Co-operative education is thus a holistic value-adding approach to learning (Groenewald, 2003). Experiential or work-integrated learning (WIL), as an integrated component of the programme curriculum, is a key characteristic of co-operative education. Sovilla and Varty (2004) emphasise that the primary mission of co-operative education is to enhance student learning, and it achieves this through the quality of teaching.

An intimate relationship exists 'between the curriculum development based on the needs of the occupational field; the placements of students for work-integrated learning (as part of the program curriculum); and maintaining a continuous reciprocal advisory process' (Groenewald 2004:22). Adequate representation of the relevant occupational field (achieved through the inclusion of professional and/or vocational body representatives) in the curriculum design is essential. Those outcomes that

are of an applied nature and best achieved through real-life (or simulated) learning experiences represent the WIL component of a qualification. This component is just as important as the theoretical components of the curriculum of the qualification, and the learning must be directed, supervised, monitored, assessed and evaluated.

Internationally there is a strong emphasis on placement, co-ordination and the administration of WIL. Kerka (1999), however, cautions that overemphasis on job placements increases the risk of neglecting learning. She calls for a reconceptualisation of the co-operative education paradigm, that is, the integration of the experiential and academic components of the curriculum. In this she echoes Wilson, Stull and Vinsonhaler (1996), who had previously suggested a fresh perspective and redefinition of co-operative education as a curriculum model.

Kerka (1999:3) further recommends that partnerships be developed into a supportive culture where 'employer support does not have to be repeatedly obtained and there are clearly understood long-term expectations'. There is a close relationship between curriculum development that is based on the needs of the occupational field, and the placement of students for WIL. Long-term supportive partnerships are more likely to be established if adequate representation of the occupational field in the curriculum design is ensured (Groenewald 2004). Supportive partnerships promise sufficient appropriate placement opportunities. Such relationships are further nurtured by ongoing consultation, in order to ensure continued relevance of the programme.

The draft Higher Education Qualification Framework reminds us that in addition to qualification-specific learning 'the South African Qualifications Authority (SAQA) stipulates that the learning outcomes of all South African Qualifications should include critical cross-field or generic skills to promote lifelong learning as well as discipline-, domain-specific or specialised knowledge, skills and reflexivity' (South Africa, Department of Education 2004:7).

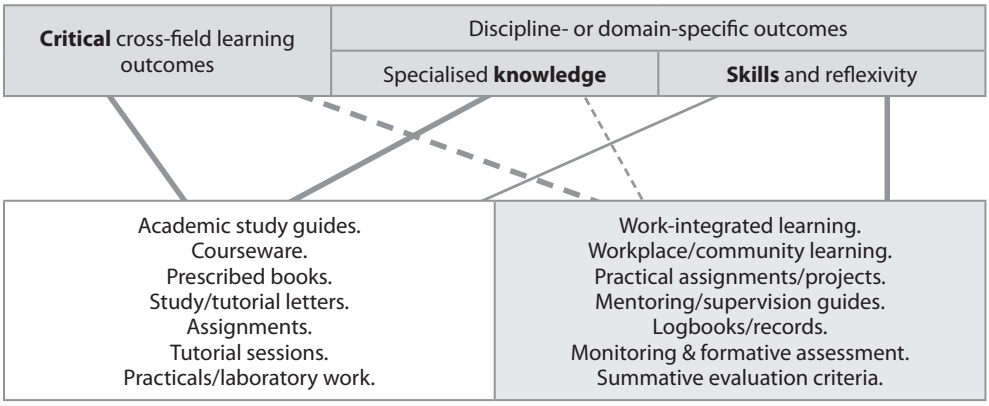

Figure 1: The dual curriculum of a co-operative education programme

The quality of distance learning is determined by the quality of learning materials and the quality of mechanisms to facilitate the learning. The WIL component of the programme curriculum (bottom right-hand block of figure 1) is derived primarily from (a) the skills expected by the specific occupational field of graduates with a specific qualification and (b) those cross-field outcomes best acquired through real-life experiences, as well as to a lesser extent through the application of theoretical knowledge (which the occupational field expects graduates to have). WIL materials therefore play a very important role in determining the quality of graduates.

In terms of the Higher Education Act of 1997, quality assurance of higher education in South Africa has been made the responsibility of the Council on Higher Education (CHE). The CHE in turn discharges this responsibility through the Higher Education Quality Committee (HEQC). In June 2004, after extensive consultation, the HEQC published *Criteria for institutional audits*. These criteria serve a dual purpose in that they function as evaluative tools and as quality management benchmarks. By applying these criteria, institutions are able to analyse and reflect on their quality management and produce self-assessment reports. As evaluative tools, the criteria focus on 'institutional signals and indicators of quality and quality management' (CHE 2004a:1).

Criteria 7, 8 and 11, under the heading 'Quality-related arrangements for programme development, management and review as well as for student assessment and success' (CHE 2004a:10), relate to WIL (see table 1). Evidence of programme development and review is a crucial indicator of needs-focused and credible programmes as well as continuous improvement in the design and delivery of the programmes, and student assessment and success are considered central indicators of teaching and learning effectiveness.

Table 1: Institutional audit criteria focusing on work-integrated learning

Areas	Sub-areas	Criterion
Programme development, management and review	Programme management	7
	Programme design and approval	8
Student assessment and success	Management of assessment	11

At this juncture it is important to point out that work-integrated or work-based learning is an element of co-operative education, which is defined by the HEQC as '[a] philosophy of learning that promotes the concept of *enhanced learning* based on co-operation between education institutions and industry, commerce and the public sector' (CHE 2004a:24, emphasis added). A co-operative programme is based on the needs of the occupational field and relevant professional/occupational body or bodies; the curriculum is developed collectively; and the occupational field accepts

responsibility for the work-based learning components of the curriculum. This collaborative presentation of the programmes concerned enhances the learning and the achievement of the desired learning outcomes.

The *Criteria for institutional audits* document states that 'experiential learning' is 'a term traditionally used within the former technikon sector for work-based learning' (CHE 2004a:25). The Committee of Technikon Principals (CTP) formally adopted the term 'work-integrated learning' instead. The *Criteria for institutional audits* document defines work-based learning as follows (CHE 2004a:26):

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

The *Criteria for institutional audits* document also provides a definition of professional programmes, describing these as 'programmes that have to meet the licensure and other professional and work-based requirements of statutory councils' (CHE 2004a:25).

Now that the terms 'work-based/work-integrated learning', 'professional programmes', 'experiential learning' and 'co-operative education' have been clarified, we may proceed to the presentation of the specific institutional audit criteria relevant to WIL.

Item (iii) of criterion 7 deals with effective programme management, as well as information and administration systems relevant to work-based/work-integrated learning (CHE 2004a:11):

- Learning contracts or agreements by which the student, higher education institution and employer can negotiate, approve and assess the objectives and outcomes of the learning process. The roles and responsibilities of the various parties, i.e. the institution, students, mentors and employers, are clearly spelt out in the contract or agreement;
- Regular and efficient communication between the institution, students, mentors and employers;
- A system (at both the institution and the place of employment) to record and monitor regularly and systematically the content and progress of the student's learning experience in the workplace; and
- A mentoring system which enables the student to recognise strengths and weaknesses in his/her work, to develop existing and new abilities, and to gain knowledge of work practices.

Item (vii) of criterion 8 accounts for 'the characteristics and requirements of professional and vocational education in the development of programmes' (CHE

2004a:12) and, with regard to clear and efficient systems and procedures for the design and approval of programmes, states that:

- the programme promotes an understanding on the part of the student of the specific occupation for which he/she is being trained;
- the programme has a balance of theoretical and practical or applied knowledge. The student has opportunities to master the techniques and skills which are required by a specific profession or occupation; and
- work-based learning forms an integral part of the curriculum, and placement in a work environment is regarded as an essential component of the programme.

Item (iv) of criterion 11 highlights what would be expected in terms of the institution's assessment policy and procedures to ensure academic and professional standards for qualifications that entail work-integrated components – 'procedures whereby academics as well as workplace-based assessors (e.g. mentors and/or supervisors) provide input into assessment' (CHE 2004a:14).

Both the HEQC publication *Criteria for programme accreditation* (CHE 2004b) and the draft publication *Criteria for accreditation of programmes offered through distance education* (CHE 2005) state (criterion 1 (ix), third bullet, p. 8 and p. 10 respectively) that 'work-based learning and placement in a work-based environment forms an integral part of the curriculum'. However, this statement is qualified with a footnote stating that in 'some professional fields of study, work-based learning traditionally occurs after the qualification'.

The HEQC criteria for programme accreditation (CHE 2005:25; CHE 2004b:17) highlight four aspects pertaining to the co-ordination of work-based learning, namely communication and three systems – recording, monitoring and mentoring. The details are contained in criterion 15 (pp. 31–32 and p. 21 respectively), which reads as follows:

> CRITERION 15: The coordination of work-based learning is done effectively in all components of applicable programmes. This includes an adequate infrastructure, effective communication, recording of progress made, monitoring and mentoring.

In order for this criterion to be achieved, the HEQC stipulates four items, which correspond with item (iii) of criterion 7 of the *Criteria for institutional audits* document, already cited (CHE 2004a).

The aforementioned explains what the paradigm of co-operative education or the pedagogy of career-focused and/or professional qualifications entails. WIL, as an integrated element of the curriculum, has been emphasised. The discussion of the interdependence of distance education materials and mechanisms to facilitate learning on the one hand, and quality on the other, preceded the HEQC's institutional audit criteria for work-based learning. Against this background description of the ideal situation, this paper will discuss some aspects of the actual situation pertaining to the

College of Economic and Management Sciences (CEMS) at the University of South Africa (Unisa).

The how, what and why of four qualifications

This section describes the work-integrated/experiential learning components of four qualifications offered by the CEMS. A synopsis of each of the four qualifications is given, followed by table 2, which contains descriptions of the specific *modus operandi*.

National Diploma: Credit Management

The objective of this qualification is to equip students with the knowledge and competence needed for a career in credit management. The specific learning outcomes are based on three role clusters derived from the major subjects, namely Credit Management, Law for Credit Managers and General Management. Students may choose one of three projects for the purposes of their experiential learning. The three project options are based on the credit insurance field, the credit information bureau or the credit management department of any type of business.

National Diploma: Human Resource Management

At Unisa the former national curriculum, derived through the former technikon sector convenor[1] system, has since 2002 been supplemented with an experiential learning component. This component is based on the four role clusters that were derived from the standards generating process for human resource management and practices (Groenewald, Pieters, Odendaal & Bushney, 2004). The first role cluster deals with strategic human resource planning and organisation for work and people management, which gives rise to policies and preferred practices for the organisation. The second role cluster focuses on operationalisation by means of delivery processes to acquire, develop and utilise people. The third role cluster concerns the establishment, maintenance and improvement of labour and employee relations in accordance with legal requirements. The final role cluster deals with administrative processes and systems to support all the aforementioned.

National Diploma: Safety Management

The aim of this qualification is to equip safety officials with the knowledge and competence for a career in safety management. The experiential learning entails the application of basic safety management principles and adherence to occupational health, safety and environmental legislation in the workplace. It involves the execution of safety inspections or audits, conducting incident investigations and reporting, as well as task observations to identify unsafe actions and conditions, and also to assess, control and monitor risks. Implementation of a basic safety programme to improve the health and safety conditions and/or performance of the student's employer is also addressed. The experiential learning further includes compilation of safety training

material and facilitation of training, as well as co-ordination and the application of safety at a strategic level.

National Diploma: Tourism Management

The Unisa tourism management co-operative education programme was introduced in 2000 at the former Technikon SA. There are four exit levels, namely a national certificate (upon successful completion of the first-year level), a national higher certificate (second-year level), a national diploma (third-year level) and a BTech degree (fourth-year level). Wakelin-Theron believes that work experience gained through experiential learning placements in the tourism industry can help in the induction process (Wakelin-Theron & Groenewald, 2004). This should enable tourism organisations to increase employee retention and improve employee performance. The experiential training involves five months' exposure or a research assignment project (involving about five months of extensive research) in one or more of the five main travel and tourism sectors, namely accommodation, attractions, transport, tour operators and destination organisations.

Table 2: Experiential learning modus operandi of four management qualification

	Credit	Human resource	Safety	Tourism
Involvement of vocational community	Ongoing liaison with credit bureaux, institutes, banks, attorneys, commercial organisations and town councils.	The South African Board of Personnel Practice serves as Education and Training Quality Assurance body for human resources.	Representatives form companies and members of the Institute of Safety Management form an advisory committee.	Technikon SA served as the convenor technikon. Industry participated in the curriculum design.
Learning materials	A student guide. A mentor's guide. A logbook.	An experiential learning guide. An individualised letter of introduction confirming that the student is registered and needs to gain experience in order to complete a portfolio.	A tutorial letter guides the student on how to approach the learning and assignment/ project. A mentor's guide suggests how students should be helped. A logbook.	Guidelines on how to complete the portfolio, plus documentation for completion by both the mentor and student and the practical research project. Documentation to prove that fieldwork has been done.

	Credit	Human resource	Safety	Tourism
Evidence or submission requirements	A diary of personal practical experience and a logbook of six months (full-time) or 120 days (part-time). One completed project (selected from three). A portfolio of activities in which the student has participated and training courses attended. Final report of 10–12 pages.	The complete portfolio of evidence, including the personal development plan and reports on the elements of the role clusters. The employer's contact details. A performance assessment by the supervisor.	The completed assignment/ project and both the mentor's and student's feedback in the form of an evaluation sheet.	Regardless of the option, the portfolio must be submitted. The final documentation needs to be signed once the mentor/ supervisor has seen the final research project.
Securing learning settings	Students required to secure their own. However, Nedcor and ABSA place 100 students each and Kredit Inform, Credit Guarantee Insurance Corporation, Experian and Afrox have agreed to take students.	It is the student's responsibility to find a company. Letters confirming that students need certain exposure are provided on request.	It is the student's responsibility to find a company. The lecturer assists.	It is the student's responsibility to find a company. Those students who are unable to find a suitable placement may complete the research project instead.
Formalisation of the learning	The mentor, identified by the student, is co-responsible and co-evaluates the student's performance – see annexure A for the evaluation form. This contributes 30% to the final mark.	The experiential learning guide serves as an instrument for the student to negotiate exposure.	There is a formal contract between Unisa and the external mentors for the assessment of the assignment/ project. The internal mentor receives a confirmation letter.	The workplace supervisor plays an active role.

	Credit	Human resource	Safety	Tourism
Monitoring and assessment	The lecturer and a credit management expert (a) co-mark the portfolios and (b) conduct an interview with the student to evaluate the student's experience. The portfolio contributes 70% to the final mark – see annexure B for the evaluation form.	The portfolios are assessed by contract lecturers or assessors.	The internal mentor works closely with the student and completes a feedback report. The external mentor completes an assessment form. The lecturer moderates the project for quality assurance.	The supervisor or mentor confirms the authenticity of the portfolio. The portfolios are assessed by the lecturer – see annexure C for the specific criteria.

The table above and the preceding synopses appear to meet the HEQC criteria outlined in the previous section. However, a careful comparison of table 2 and criterion 7 reveals distinct shortcomings. Although the distance education documentation contains guidelines (some better than others – specific mentor guides in the case of Credit Management and Safety Management) for employers, the learning contracting is left up to the student. Furthermore, although there is feedback (confirmation of authenticity of the experience, performance assessments and evaluation of the student's portfolio), this cannot be regarded as 'regular and efficient communication' between the parties. In addition, the distance education experiential learning process cannot be regarded as a regular and systematic system where by both Unisa and the place of employment record and monitor the content and progress of the student's learning. Finally, although mentoring is an element of the experiential learning of some, it is not known to what extent it 'enables the student to recognise strengths and weaknesses' and develops 'existing and new abilities'. The next section explores the reasons for the status quo, presents possible solutions and asks where we go from here (*quo vadis*).

Status quo and *quo vadis*

In 2002 the then Faculty of Economic and Management Sciences at Technikon SA undertook a self-analysis and produced a status quo report (Oosthuizen, Cronje, Coetzee, Ferreira, Odendaal & Wakelin-Theron). A questionnaire comprising four sections (curriculation, advisory committee, industry liaison and experiential learning) was completed by the academic staff of the six academic departments with regard to all the qualifications offered.

One of the significant themes to emerge from the data collected was the inadequate functioning of advisory committees. However, other forms of consultation and liaison were shown to be actively pursued, although this contact is insignificant when viewed in the context of the geographical dispersion of students, and is more than likely a reason for the limited number and established scope of partnerships. The reader is reminded of Kerka's (1999) views in this regard, presented in the first section, concerning the development of partnerships into a supportive culture. Oosthuizen et al. (2002:3) remark in this regard that 'industry liaison should be part of each staff member's CPAs, but due to workload and administrative responsibilities it is not always possible to stick to contracted CPAs'. Subsequently, in the context of the merger between Unisa, Technikon SA and the distance education arm of Vista University, pre-merger paralysis was experienced, followed by merger manoeuvring, with the result that the situation worsened with regard to the provision of resources and budgetary constraints on industry liaison.

A distinct theme that emerges regarding experiential learning is resource constraints, with respondents remarking that the academic department 'does not have the capacity to implement experiential learning' or that 'the staff is not satisfied with the resources available to manage the experiential learning process' (Oosthuizen *et al*, 2002:9). The report concludes with the following comment:

One has reason to question whether co-operative education is regarded as an element of Technikon SA's strategy. Policies, budgetary provision and staffing suggest it is not regarded as core business.

The subsequent restructuring process to merge the former three institutional structures has not made it any easier. The delayin finalising the human resources structures has further impacted negatively on resource provision.

It is recommended that a critical review of the former Unisa staff formula be undertaken to make provision for the resource requirements of WIL. The former Unisa staff formula document states that 'the purpose of the academic personnel formula is to distribute the cost units allocated to the academic section of the University in a fair and just way between departments'. The academic staff formula 'is based on the typical activities performed by academics' to develop and maintain an instructional programme/qualification. Two of the five categories of activities identified in the Unisa academic staff formula are summarised (in normal font) and discussed (in italics) with regard to WIL in table 3.

Table 3: The academic staff formula versus work-integrated learning practices

Activity category	Description
Development of study material	Based on international norms for the ratio of development hours to the learning or notional hours of a course, distributed over the 'in use' duration of the study material. A full 'year level' of study constitutes 1 000 learning hours and carries a weight of 1.0; a module thus represents 100 learning hours and carries a weight of 0.1, and a year course represents 200 hours and carries a weight of 0.2. – The scope of the outcomes that would be addressed through WIL would determine the weight of WIL within the curriculum of the qualification. Representation by the appropriate vocational community is essential to curriculum design (first bullet of the fundamental principles, item 3 of the WIL policy). The budget of the former Bureau for Learning Development made provision for this. Provision is made for course design preparation (x 0.8), curriculum design (x 2.5), compilation of study material (x 13), editing (x 0.5) and translation (x 2.5). A module therefore represents 1 300 hours (divided by the agreed 'in use' duration). – The course design for WIL includes the following (see item 5.2.1 of the new comprehensive WIL policy): • Pre-WIL orientation of students to optimise their learning • WIL materials, frameworks and guidelines for students, to facilitate the required learning and the production of evidence of such learning, e.g. portfolio guidelines or project specifications • Documents to record learning acquired, e.g. logbooks • Guidelines for workplace mentoring facilitation • Monitoring guidelines and assessment criteria for WIL tutor The total number of departmental staff hours is converted to a monetary value in terms of the weighted total remuneration per full-time equivalent C1 staff member, as determined annually by the state.
Delivery of study material/ Presentation or WIL facilitation	This category makes provision for the teaching of course units that have already been developed. Lecturer load parameters were determined through research and it is claimed that these are not dependent on the way in which the course is presented. However, the HEQC imperatives suggest that WIL is a much more labour-intensive teaching mode compared with distance learning courses in general. The current basic undergraduate parameter is 750 registered students per module, which is inadequate with regard to the imperatives pertaining to WIL.

First registration statistics for 2005 relating to former Technikon SA qualifications reveal that there are in excess of 350 unemployed students who require suitable WIL positions. These positions need to be solicited within a job-scarce labour market. In addition, the WIL of an estimated 2 500 and more students enrolled for 34 subjects/ courses needs to be monitored. Because of the impact of non-completion of WIL on throughput and in the light of the aforementioned, it is argued that this scenario

represents *an area of work requiring urgent attention*. The approval of the following WIL positions in addition to two central staff members, and the filling of the new positions as soon as possible are therefore considered priorities:

- Dedicated WIL managers/co-ordinators at the KZN Hub and the Johannesburg and Pretoria regional offices respectively – three staff members @ R280 000 per person = R840 000
- Shared WIL and tutoring/discussion class co-ordinators at the Polokwane, Bloemfontein and Parow offices respectively – three staff members @ R220 000 per person = R660 000

It is further proposed that service level agreements (SLAs) be entered into with the regional directors in charge of the Nelspruit, Mafeking, Port Elizabeth, East London and Umtata offices.

The degree of speciality of the WIL of various qualifications necessitates subject-field expertise. Instead of permanent staff, the appointment of tutors is proposed to undertake the monitoring (formative assessment). Remuneration would be limited to the standard hourly rate (R170) payable to tutors, plus travelling expenses to the place of work of allocated students. *In situ* monitoring, in which the workplace mentor is involved, is generally considered important. The number of monitor visits is dependent on the standard duration of the WIL for a particular qualification. An average of one to three visits of 30 minutes per student is anticipated. A ratio of ten students per tutor is proposed. It is proposed that monitoring by WIL tutors be piloted for a limited number of qualifications during 2005. Credit Management and Safety Management, with student numbers of 40 and 228 respectively, were proposed for the pilot study; this represents an envisaged cost of R22 780 for one round of monitoring visits.

Notes

1 'Until December 2003, the former technikon sector made use of a convenor technikon system. A technikon had been appointed as "convenor" for a particular national qualification. All the technikons that offered the particular program formed a committee. Any requests for changes to the subject composition of a diploma had to be agreed to by all the technikons. The convenor technikon would then apply to the Department of Education to change and publish the new subject composition of the particular diploma. Although a few technikons included an experiential learning component in the National Diploma in Human Resource Management, the majority did not, and for this reason experiential learning does not [currently] represent a credit-bearing component of this diploma' (Groenewald, Pieters, Odendaal & Bushney, 2004:36).

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Annexure A

Mentor/learner evaluation

Learner's name	
Student number	
Project option	

A: Project evaluation

Rating: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100% where:
10% = unacceptable; 50% = average; 100% = excellent Give an overall mark for the project done under your supervision.

Credit management and life skills displayed by learner	Performance
Planning of project	
Theoretical knowledge of how to do the project	
Independent execution of the project	
Initiative shown	
Own research and self-improvement	
Practical performance of task	
Total average mark	

B: Evaluation of performance

Give an overall mark for the performance of the learner who worked under your supervision. (This rating is to be discussed with the learner.) Rating: 1 2 3 4 5 6 7 8 9 10, where: 1 = acceptable; 5 = average; 10 = excellent

Communication skills	
Attitude towards staff and public	
Personal appearance	
Acceptance of authority	
Punctuality	

Name or organisation: ……

Name of learner: ……

Learner's signature: ……

Name of assessor/mentor:……

Mentor's signature: ……

Mentor's comment: ……

……

Date: ……

Annexure B

Portfolio assessment form

(Example of assessment form to be completed by the lecturer)

CMG standards role cluster 1: Credit Management

Inadequate		Adequate	
No/little evidence submitted	Insufficient evidence submitted	Sufficient evidence submitted	Substantial evidence submitted
0……7	8……..…15	16……...22	23…….30
No or very few elements of these credit-related issues discussed and submitted	Some of the elements of these credit-related issues discussed and submitted	Most elements of these credit-related issues discussed and submitted	All the elements of these credit-related issues discussed and submitted

(30)

CMG standards role cluster 2: General Management

Inadequate		Adequate	
No/little evidence submitted	Insufficient evidence submitted	Sufficient evidence submitted	Substantial evidence submitted
0……5,5	6……..…12	12,5……18,5	19……25
No or very few elements of these management issues discussed and submitted	Some of the elements of these management issues discussed and submitted	Most elements of these management issues discussed and submitted	All the elements of these management issues discussed and submitted

(25)

CMG standards role cluster 3: Law for Credit Managers

Inadequate		Adequate	
No/little evidence submitted	Insufficient evidence submitted	Sufficient evidence submitted	Substantial evidence submitted
0……5,5	6……..…12	12,5……18,5	19……25
No or very few of the legal aspects were discussed and submitted.	Some elements of the legal aspects were discussed and submitted.	Most elements of the legal aspects were discussed and submitted.	All the important elements of the legal aspects were comprehensively discussed in a practical manner.

(25)

Training

Inadequate		Adequate	
No/little evidence of competence	Insufficient evidence of competence	Sufficient evidence of competence	Substantial evidence of competence
1……..2	2,5……...5	6……7,5	8……..10
No or very little discussion on the reflection of learning. It is unclear what was learnt from the experience. Appears as if the learner gained very little.	Inadequate discussion of the reflection of learning. Although something was learnt, it is not clear exactly what was gained from the experience.	An adequate discussion of the reflection of learning. Clear that something was learnt. Some link between theory and practice.	A detailed integrated discussion on what was learnt from the experience at the organisation. A clear realisation of the integration of theory and practice.

(10)

General

Inadequate		Adequate	
No/little evidence of competence	Insufficient evidence of competence	Sufficient evidence of competence	Substantial evidence of competence
0……2,5	3……..…5	5,5……7,5	8……10
No or very little recommendation, or not feasible; no/ limited link between critical evaluation and recommendations.	Some elements of this. Recommendations do not flow from the critical evaluation, are not specific and lack detail.	Recommendations flow from the critical evaluation and reflection of learning.	Specific, comprehensive and feasible recommendations flow directly from the critical evaluation and reflection of learning.

(10)

Overall assessment of portfolio (judgement based on all of the above)

Inadequate		Adequate	
No/little evidence of competence	Insufficient evidence of competence	Sufficient evidence of competence	Substantial evidence of competence

Annexure C

Specific assessment criteria

The final assessment is based on a tutor's cumulative evaluation of the various different but interrelated skills that combine to establish the overall standard of any submitted work. To arrive at a final assessment for any assignment, tutors should examine each assignment in terms of a range of criteria, the sum of which covers all the intellectual skills that are required at this level.

The criteria follow.

Presentation

As noted in the tutorial letter, assignments/projects must be presented in a professional manner that accords with research principles and Unisa standards, and must communicate with the reader in a fluent, readable and compelling fashion. Note, however, that this criterion does not reward fancy stylistic designs.

Organisation of material

This concerns the logical structure and sequence of the material presented.

Analysis

The essence of any assessment is always the analytic power of the arguments and propositions set out, debated, considered and critiqued.

Relevance

Assignments/projects/examinations must always relate to the questions as posed and show that the learner is familiar with the pertinent implications of their presented analysis and perspective – i.e. the relevance and logical implications of their analysis and its relationship to real professional work experiences, activities and circumstances.

References

All assignments/projects must be shown to be based on the corpus of relevant data, prescribed secondary material, referred secondary extra readings and any other additional information that the learner has acquired for understanding the assignment topic.

Notes from the field: Integrated learning in distance-based information technology teaching

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There are many interpretations of the term *integrated learning*. In the National Diploma: Information Technology, a version of Integrated Learning is used in the evaluation of final-year student projects. The project assesses students on their ability to integrate and demonstrate their knowledge through the development of a computer software system. This is a workable solution to IT teaching via distance education but has some shortcomings. This article describes some of the lessons learnt in applying this form of assessment. These lessons are based on the observation of a process that has evolved over a number of years. It is hoped that these observations and lessons will prompt some serious thinking on the process of teaching IT via distance.

The qualification

The National Diploma: Information Technology (NDip IT), as offered by Unisa, is a three-year qualification instructed in distance mode (Unisa 2005). The NDip IT specialises in four areas, namely: Business Applications, Software Development, Web and Applications Development, and Technical Applications. Countrywide there are 12 specialisation areas offered by the various universities, technikons and universities of technology.

The project

Each of the four Unisa NDip IT specialisation areas has a programming component in each of the three academic years. These culminate in a project-based subject in the final year, which we will call 'Project 3' for the purposes of this article. Project 3 consists of two modules with the first focusing on advanced programming topics of the specific specialisation area. In the second module, students apply their acquired programming skills to develop a working software system. The software systems in the different incarnations of Project 3 differ only in the application area and the specific programming languages and packages used, but they aim at the same broad outcomes. Table 1 shows some examples of projects which will clarify some of the differences and similarities:

Table 1: Example projects for the four specialisation areas

	Business Applications	Web and Applications Development	Technical Applications	Software Development
Topic	Inventory system	E-commerce website	Interactive computer game	Production control system
Programming Language	Visual Basic .NET	Java, XML, HTML, ASP	C	C++
Database	Oracle	SQL server	none	Oracle

Projects in the first three specialisation areas focus on the area defined by the specialisation. The examples in table 1 indicate the nature of these projects. Projects in Software Development, on the other hand, could be more generic and cover topics from one or more of the other areas. It often happens in practice that projects developed for the Software Development specialisation area have a business application, as these are relatively easy to source. A typical example would be a combination inventory and point-of-sale system, as would be used by a small- to medium-sized business. We will discuss this in more detail with an example.

Terminology

Several terms could describe the learning process in Project 3.

Work-integrated learning would seem to be an obvious term, as that would be the ideal way for a student to implement such a project. Many Project 3 students work in some or other Information Technology capacity and most of them choose to make use of a work-related project. This has all of the pros and cons of the work-integrated learning concept.

Unfortunately, there are also some full-time students. This may sound anomalous, but it simply means that these students do not work in the formal sector, or do not work at all. The numbers of these students have been increasing over the last few years. *Work-integrated learning* may not be an accurate term to use for the learning these students undergo during Project 3. The projects these students develop often involve fictitious businesses. This in itself is not a bad thing, but the problem comes from some students' limited understanding of the requirements of such a business in real life and the effects of this often become evident in the final system presented by the student.

Students may also be employed in a different sector than formal IT. These students are often studying IT with the intention of making a career change and need an IT qualification in order to do so. In modern businesses, there are very few places where IT cannot find an application. This is clear from the fact that virtually everything that

happens in today's business world involves computers. This could range from very people-oriented areas, such as healthcare, to very business-oriented environments, such as the communication infrastructure of a large telecommunications company.

Experiential training could be a more sensible term to use in this case, as the purpose of Project 3 is for students to apply their knowledge and skills in industry. As discussed above, this may not be in the formal IT sector. Even if students develop Project 3 for their local communities, such as a church database or a management system for a high school, they get exposure to applying their skills in an experiential way.

From the perspective of teaching the subject, the term *integrated learning* would be a better description of the process of learning that happens. Distance education poses some unique challenges to both students and lecturers, which we will not delve into in detail. Subjects with a high theoretical content are relatively simple to offer via distance, but it is where students need to acquire practical skills that distance education becomes difficult.

The problem with distance education

Computer programming, using one of many programming languages in one of several programming environments, is one of many skills that is best by learnt repeated practice. This is difficult to enforce using our current distance education paradigm, whereby student assessment takes the form of a formal written examination. One way around this would be to do a practical assessment for all subjects for which such a skill is required. It would make an interesting study to determine whether the practical problems of distance and logistics are likely make this more expensive than the current practice at residential institutions. It may also make an interesting study to determine if distance education is the real cause of the problem. Again, a comparison with work-integrated learning practices at residential institutions would help clarify this question.

Another problem with distance education in Project 3 is that not all students are employed. Residential institutions often have a practice of placing the student, often temporarily, with an employer with the specific aim of implementing such a project. In the distance education environment this is problematic for a number of reasons:

1) Residential institutions have relatively close ties with the industry in their geographical regions. It is not possible to have these same ties countrywide, and even worldwide, in all the places where we have students.
2) It is possible to handle the administration requirements for such placements when there is a relatively limited number of students and only a few tens of industry partners. The sheer numbers are a severe limitation for a distance education institution that depends on having fewer lecturers per student.

The question of the placement of students in a work environment could also form part of such a comparative study, as mentioned earlier.

A compromise is what is called for, and it is from this perspective that the current practice used in Project 3 evolved.

Integrated nature of Project 3

In the first year of the NDip IT, students get exposure to various aspects of Information Technology, ranging from the use of word processors and spreadsheets, computer hardware, basic networking concepts, as well as the theory of programming and the implementation of this theory using a specific programming language.

The second year builds on this by adding the concepts of databases, the analysis and design of software systems, user interface principles, as well as immersion in more advanced programming concepts.

Advanced databases, management of IT projects, as well as advanced programming concepts appear in the third year. By now, students have had exposure to all the theory they will need in order to implement a successful software system. The nature of the subjects in the NDip IT is such that it would be difficult for students to master the theory at second year level, for example, if they did not develop the practical skills required in the first year. Many of the lessons of advanced programming only becoming apparent once a student has learned to program. Students can only learn programming the hard way: through practice. We can therefore assume that when a student reaches the third year he will have mastered an intermediate level of programming. Project 3 is the first real opportunity to test the integration of the various skills and knowledge sets students will have acquired during their studies.

To develop a project that has a real-world business application (even a relatively small one), will not only require a thorough grounding in programming skills. It is here that the knowledge acquired from other subjects start playing a role. Project 3 requires that a student source a project, preferably from a real business. The business application has to be analysed and a solution to the business problem be proposed. The solution will be in the format of a computerised system. The student will have to follow a number of steps within the framework of a project plan, design, and implementation and testing. To explain the intricacies of this process, it is best to look at a specific example.

An example

CarBits (CC) is a fictitious motor parts business that sells a wide range of car parts and accessories – anything from oil filters and spanners to car magazines and cold drinks. At any point in time, there are thousands of individual items on the shop floor or in the storerooms. Some items, such as oil, sell very fast, while other items may be on

the shelves for months. A typical day in the shop may see hundreds of clients, many of whom have very little knowledge about cars and will ask many 'stupid' questions to which the sales personnel will have to find the answer. Shoplifting is sometimes a problem, and regular stocktakes keep track of stock levels. Every single item goes out of the shop via a till point. (This is not quite true, as items may be stolen, and this needs to be catered for as well.) Management of the stock levels is clearly the most critical part of the business of *CarBits*. This is an excellent example of where a computerised system can solve the difficulties of managing a particular business problem.

CarBits is also an excellent topic for Project 3. It entails a classical inventory system, with well-defined scope and with various opportunities for extending the complexity and scope of the project. To develop the *CarBits* inventory system successfully, most of the aspects present in a fully-fledged IT project would have to be undertaken. Without going into the details of the various methodologies, these would typically be as follows (SDLC 2002, Computerworld 2002):

- Initial planning and feasibility study
  - Take a high-level view of the project
  - Determine goals
- Systems analysis and requirements specification
  - Determine system functions
  - Determine end-user needs
- Systems design
  - Do a detailed design
- Implementation
  - Write the code
- Integration and Testing
  - Test the system for errors
  - Integrate the system into its working environment
- Deployment
  - Put the system into production in the actual business environment
- Maintenance
  - Make changes and corrections during the lifetime of the system

An inventory system can have a limited scope that only covers the processes of getting stock items into and out of the system. This would require a small database with front-end capabilities suitable to the different users of the system. Such inventory systems can be extended, often in phases, to make it progressively more useful in the real business. In practice, the moment system users see a demonstration of the system in operation they realise the potential and start demanding a whole host of other features that would make their jobs easier and the business more productive.

This is one of the useful lessons in the process of developing a real-world system. The world out there is not nearly as clear-cut as the theory tells students. The methodology described above seldom follows the steps as clearly as shown.

There are many examples of possible extensions to the system. Staff members may be part of an incentive scheme according to which their salaries are partly determined by their sales volumes. The system needs to keep track of who sells what. The management of stock may include figures that determine when new stock should be bought – you do not only buy new stock when you run out of stock. Anybody who has been involved in logistics and stock control will tell you that you need as much information as possible in order to predict what will happen to stock levels (MIT 2005).

CarBits can buy from different suppliers, who may compete with each other for price, faster delivery time, or in various other ways. This might involve getting quotations and making decisions based on these in combination with the actual stock levels. A computerised system can significantly ease the difficulties of this process. *CarBits* may have regular clients, some of whom may be trustworthy enough to buy items on credit. Other regular clients may be businesses that are invoiced on a monthly basis. If one makes a thorough analysis of the *CarBits* business, there are many opportunities for developing a system that fully integrates the various aspects of the business and in the process simplify the management of the business and provide comprehensive information for decision-making purposes.

Students learn that the various users of the system have different needs. The sales clerk has the simplest need of all. He/she simply scans the barcode on the item and handles the actual payment. The parts assistant at the parts desk has intimate knowledge of the inner workings of a three-litre Ford but may only have basic computer skills. However, he/she will need to find any part, the number on the shelf, its price, and if it is not available, when it will be. The store manager will have to draw daily reports on stock levels, set various parameters, such as re-order levels, and make various strategic and tactical management decisions based on the information provided by the system.

Formative assessment

A software implementation such as Project 3 is not only the final product. Any software development goes through an entire life cycle, from the initial idea to demonstrating the final system. The life cycle is also a major component of the learning that takes place in Project 3. It is important to assess this part of the process in order to provide students with an opportunity to learn.

One of the difficulties with distance education is the relatively short period during which feedback can be given on the learning process. Due to this short period, students in Project 3 are required to submit three assignments:

1) project proposal
2) Analysis and design
3) Updated analysis and design

The purpose of the first assignment is to assess the nature and scope of the student's intended project. Here we determine, in broad terms, whether the proposed system would be at a suitable standard for Project 3. We often find that students tend to be very ambitious at this point. They do not realise the significant investment in time and effort such a project would require.

The second assignment is the detailed business and technical analyses, as well as the detailed system design that follows from the results of the analyses. By the time students do Project 3 they have been exposed to at least one major analysis and design methodology as well as all the tools required to be able to do detailed design. Here they are required to put most of these skills into practice. The feedback we provide here is critical and intends to get the student to produce a realistic and accurate design so that they will be able to implement a successful system.

The third assignment is a refinement of the second. Students are required to submit this in order to determine whether they have acted on the critical feedback on the second assignment. It is at this point that we can also determine whether a student should be allowed to demonstrate the final system. We tend to err in favour of the student in the sense that if there is any possibility of the student passing the final demonstration, we will allow him/her to present it. This assessment is based on experience and is somewhat difficult to quantify. It would make an interesting study to determine how accurate this assessment is and how it can be quantified, so that it can be applied consistently.

The current weighting assigns 40% of the final mark to the assignments in the formative assessment process and the last 60% to the final project demonstration.

Planning and performing the final assessment

Table 2 indicates the current assessment criteria, used during the final project evaluation, which incorporate most of the above competencies. The description alongside each criterion, should be read as a guideline by the evaluator. Each criterion carries a specific weight. The weights are determined before the evaluation, based on the initial phase 1 documentation submitted by the student (see table 2). These weights will differ from project to project. For example, one system might have more complex interaction with the user than another system. The former would then have larger weighting for *User aspects* than the latter. Other criteria, such as the *system Aspects*, must be present in all systems and will therefore carry the same weighting.

Table 2: Project 3 assessment criteria

Criterion/outcome	Description
Documentation	Phase 1 - Proposal - Analysis and design - Feasibility study - Cost/benefit analysis Phase 2 - User manuals - Software installation - Technical documentation
User aspects	Menu options - Options for normal users - Hotkeys for advanced users Online help/hints - Sufficient - Appropriate to the system Error messages - Customised
System aspects	Scope and specifications - How much of the original scope did the system address? - Where does the system fit into the 'bigger picture'? System - Effective interaction between modules of the system - All modules active via the menu system - Consistent handling of options/functions
Technicality	Screen design - Balance - Overload - Colours Interfacing - Printers, networks, etc. - Client/server
Complexity	Depth - Algorithms and formulae - Data structures Width - Suitable functions and options Interaction - Between user and system
Robustness	Does the system 'crash'? Relational database - Normalisation - Referential integrity - Data integration - Data validation - Hints on specified field

Criterion/outcome	Description
System Security	Identification and authorisation - Password requested - Protection of passwords - Changing of passwords Threats - Identify and address
Database security	Different roles and users Appropriate privileges applied
Usefulness	Does the system supply useful information? - For normal daily operations - MIS information
Portability	Will the system work on a different environment, with minor changes? Will the system still work when the operating system or software is upgraded?
Backup and Recovery	Recovery plan Backups - Part of normal operations - Different media
Presentation	Professionalism of presenter Sufficient test data Did the presenter plan the presentation?
Additional aspects	Aspects not covered in the scope and complexity expected at the level of Project 3.

We can best illustrate the concept by example. The *CarBits* system would be a relatively normal system for Project 3, in the sense that there are plenty of application opportunities in the real world for similar systems. Students would have been able to source such examples by themselves, and the system would be within the expected abilities of all students to implement. Table 3 summarises the assessment weighting for the *CarBits* system. The table does not show the detailed assessment criteria. The final mark of 100 does not include the 5 marks assigned to extras. The extras are components and functionality that would not be required from a system such as *CarBits* and which would not be assessed by any of the other criteria. This allows for bonus marks to be earned for work done outside the scope of Project 3.

Table 3: Example of assessment criteria for CarBits system

Criterion/outcome	Description	Weight
Documentation	All manuals required	5
User aspects	All aspects required	10
System aspects	All aspects required	15

Criterion/outcome	Description	Weight
Technicality	Normal screen design, no interaction required	5
Complexity	Average complexity	10
Robustness	All aspects required at full scale	10
System security	Normal business security	10
Database security	Normal roles and user access levels	5
Usefulness	Normal daily operations plus basic MIS	5
Portability	Must cater for normal system upgrades	10
Backup and recovery	Full backup and recovery required	10
Presentation	All aspects required	10
Extras	Additional aspects for bonus purposes	5 (max)
	Total	100

The practical issues

Aside from the academic arguments on outcomes, learning and assessment, there are some real practical matters when it comes to the assessment of Project 3.

Unisa is a distance education institution. The effect of this is that its Project 3 students could literally be anywhere in the world. Figure 1 shows a typical distribution of Project 3 students per the nine official provinces, as well as the overseas students. The graph does not immediately show the complexities of the travelling arrangements. The Northern Cape, for example, has very few students, but they may be more than 400km from their nearest regional office, which is Kimberley.

The current practice is to ask the students to present their projects at their nearest regional office in South Africa. The bulk of students are in the Gauteng area, while a still significant portion of the students are outside Gauteng. This requires that a panel of assessors need to travel to the different regional offices to do the project evaluation. The number of assessors is limited to a portion of the current staff complement, each of whom has other responsibilities as well. Unlike a normal written examination for which a hundred students can be managed by a single invigilator, each evaluation session has to be attended by at least two assessors, who only assess a single student's project. Students also have their own work and personal schedules. The net effect of these factors is that the assessment process becomes a complicated scheduling exercise. During the first half of 2005 the assessments started in mid-March and were only completed at the end of June. A total of 10 assessors and 140 students were involved, with a distribution very similar to the one shown in figure 1. Keep in mind that there are two cycles of students each year, with this cycle being the smaller of the two by

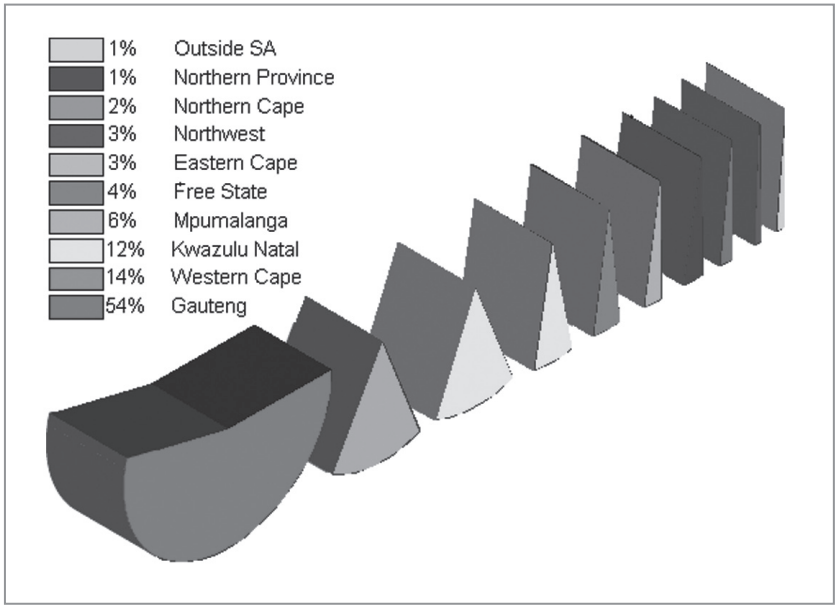

Figure 1: Distribution of Project 3 students

roughly a half; a full year might involve as many as 500 students. The total time out of office for the assessors amounted to roughly five man-weeks, with a total of 10 weeks per year.

A further practical issue is the actual machine on which the demonstration has to take place. We have learnt that the best machine for the demonstration is the one on which the system was developed. There are just so many variables influencing the successful operation of a system that, even though we can expect Project 3 to be portable between platforms and different versions of an operating system, we cannot fail a student on this criterion alone. It is also the computer environment in which the student is comfortable. We therefore expect students to bring the machine to the demonstration venue, which has transport implications for some students. In a certain sense obstacles such as these are in themselves tests to the student, and their response to them is often assessed under the presentation component.

Concerning the idea of using the machine the system was developed on, some systems are developed within a corporate computing environment that would be impossible to replicate elsewhere. This necessitates that the assessment take place at the student's workplace. This has some complications in terms of the assessment. Often a corporate project is the work of more than one person or is a one-person project within a larger project. The practical implications related to 1) the time spenton, and the logistics of, travelling; the time spent on, and the logistics of, travelling and 2) the extra time and care that need to be taken to assess the limits of the student's own work, where other parties or projects were involved.

Another reality of distance education is that lecturers cannot spend as much time with individual students, and even with all the students for that matter, as would a lecturer at a residential institution. Distance education institutions get fewer subsidies per student, and lecturers are involved in more subjects. The effect of this on Project 3 is that students cannot expect the individual support and regular assistance that is possible at a residential institution. Students are expected to source their own mentors, preferably from industry, to assist them with their projects.

The current university regulations on projects do not allow re-examinations. On the practical side this fits well with the scheduling of the actual demonstrations – but going to a distant venue a second time becomes problematic. On the learning side of the equation, one could ask whether re-examinations should be allowed. This remains a point of some debate.

At residential institutions students often work in teams when developing projects. Our practice has thus far been not to allow this. Not all students will be able to work in teams due to simply not being able to meet with other students, and they often do not have physical access to shared facilities.

Problems and questions

Now that most of the details of the current process have been spelled out, it is obvious that there is scope for improvement. It is our experience that some improvements tend to create another set of problems. However, this should not stop us from trying. Let us look at some of the problems and questions, comments, pros and cons raised by these problems. The list is not exhaustive and is not intended to be a final answer, but rather thoughts that could stimulate further investigation towards a better solution.

No re-examinations are allowed.

- This was mandated by the old SERTEC regulations.
- Should re-examinations be allowed?
- What would be the prerequisites for re-examinations? Other subjects currently require a 40% sub-minimum in the examination.
- There will be additional logistical requirements, with additional cost and time involved.
- Would re-examination be fair to students who managed to barely pass at their first attempt? Re-examination candidates would have additional time, which other student did not.

There is no set project for all students to work on.

- The current diversity of projects is a reflection of the variety of industries and environments students find themselves working in.
- A set project could simplify the assessment process.

- The project would have to accommodate the various academic background students come from. Project 3 students may not have started with Unisa and may have been taught in different programming languages and systems.
- The project examiners may become bored when they have to see hundreds of the same thing, which may have an effect on the fairness of assessment.

Students are currently not allowed to work in teams.

- Should teamwork be allowed?
- There is extensive literature on the pros and cons of teamwork in the IT environment.
- The team approach is the way in which many IT projects in the real world are done.
- Not all students will be able to work in teams.
- How does one set up the assessment so that individuals can be assessed fairly with regard to teams?
- The Internet makes communication fairly easy and cheap. This may be a tool to explore for the implementation of teamwork.

The final project assessments are done by lecturers in a face-to-face setting.

- The large numbers of individual assessments place a significant workload on the lecturing staff.
- Extensive travel and logistical arrangements are required to successfully assess all projects.
- Should peer assessment or self-assessment form part of the assessment process? In a teamwork situation peer assessment could provide useful additional feedback to the assessors.
- Should the employer be part of the assessment process? This could build well on the work-integrated learning concept. Not all students are employed. Not all students who are employed do projects in their work context. An employer may be biased.
- Could a form of assessment by distance be implemented? The Internet may again be a useful tool. How does one ensure that the work presented is that of the student? This is not easy to do in a face-to-face situation and may be even more problematic when the student's body language and other cues are not visible.
- Should students be required to develop projects that are accessible via the Internet? Not all students have these skills (see the earlier point on different backgrounds). How does one ensure that the work is the student's own?
- Should a formal 'Project Day' (or days) be arranged, when all students are assessed at the same venue and time? There are large numbers of students.

Not all students may be able to attend such a session due to finances and distance.

- Should the co-operation of residential institutions in the different regions be used? The advantages are that: 1) the expertise is already there, and 2) co-operation could foster closer relations. On the downside it could: 1) increase the cost (but it may save travel costs) and 2) place an additional burden on the external institution staff.

The current formative learning process is based on documents.

- The final product of the project is a software implementation. Distance education students often find it difficult to bridge the gap between theory and the practical application of skills. The current learning process still does not address this adequately and remains a problem of distance education. Work-integrated learning could be a solution and should be investigated.
- Are there other types of formative assessment that could address this problem?

The final assessment is based on a mark-out-of-X principle.

- There is quite a bit of flexibility in the current process.
- Is this approach correct?
- It is seldom that software developed in the real world works perfectly the first time. There are many software revisions and redesigns.
- Are there other assessment techniques for Project 3?

Conclusion

The current process has the advantage that it is relatively transparent and relatively flexible, and in general it is fair. However, on the downside it is very time-consuming and requires a significant staff involvement, which is problematic in a distance education environment. There is certainly room for improvement and it is hoped that this article will stimulate some debate on the topic, thereby finding even better ways of integrating assessment into the current learning process in the final projects.

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Work-integrated learning in the School of Engineering (Electrical) at Unisa

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All diplomas and BTech degrees offered by the School of Engineering at Unisa contain a compulsory period of work-integrated learning. The work-integrated learning component is offered as a subject or as multiple subjects and requires a minimum period of one year approved training. The student participates in work-integrated learning while in employment at an approved company, and monitoring takes place by means of a logbook, a mentor system and visits to industry by a Unisa academic. The Engineering Council of South Africa (ECSA) is the accrediting body for all engineering courses.

Introduction

Unisa offers the National Diploma and BTech degree in Engineering through open and distance learning according to the same guidelines set for any other university of technology or comprehensive university. Work-integrated learning forms an essential component, contributing 33% of the qualifications, and takes place in addition to the required practicals and projects forming part of theoretical training. In what follows, work-integrated learning in Engineering at Unisa is discussed in view of the requirements as set out by the statutory bodies.

National Diploma and BTech degree in Engineering

To obtain a National Diploma in Electrical Engineering a student must obtain three credits. Two of these credits are obtained by passing 20 subjects, each consisting of a theoretical and practical component, while the third credit is obtained for one year's suitable work experience, i.e. work-integrated learning. The BTech degree requires an additional credit which comprises seven subjects, each consisting of a theoretical and practical component, and an industrial project which counts 30% of the degree. Students unable to complete work-integrated learning will not be awarded the qualification, even though they might have passed all the required academic subjects.

The purpose of the National Diploma and BTech in Engineering qualifications is to develop the necessary knowledge, understanding and skills required for learners' further learning towards becoming competent practising engineering technicians and technologists. The qualifications are intended to subsequently empower candidate engineering technicians and technologists to demonstrate that they are capable of

applying their acquired knowledge, understanding, skills, attitudes and values in their working environment in South Africa.

The Engineering Council of South Africa (ECSA 2002) states as follows:

> A person achieving this qualification will be able to:
>
> - Competently apply an integration of theory, principles, proven techniques, practical experience and appropriate skills to the solution of well defined problems in the field of engineering while operating within the relevant standards and codes.
> - Demonstrate well-rounded general engineering knowledge, as well as systematic knowledge, of the main terms, procedures, principles and operations of one of the disciplines of engineering.
> - Gather evidence from primary sources and journals using advanced retrieval skills, and organize, synthesize and present the information professionally in a mode appropriate to the audience.
> - Apply the knowledge gained to new situations, both concrete and abstract, in the workplace/community.
> - Identify, analyse, conduct and manage a project.
> - Make independent decisions/judgments taking into account the relevant technical, economic, social and environmental factors.
> - Work independently, as a member of a team, and as a team leader.
> - Relate engineering activity to health, safety and environment, cultural, and economic sustainability.
> - Meet the requirements for registration with the Engineering Council of South Africa as a Candidate Engineering Technician.
> - Demonstrate the capacity to explore and exploit educational, entrepreneurial, and career opportunities, and to develop him/herself professionally.

The Engineering Council of South Africa

The Engineering Council of South Africa (ECSA) is a statutory body established in terms of the Engineering Profession Act 46 of 2000.

Apart from administrative provisions, the principal focus of the Act is aimed at promoting the safety, health and interests of the public in relation to the engineering work and professional conduct of persons registered with ECSA.

In order to achieve the Act's main focus, ECSA is empowered to perform a variety of functions. A function greatly impacting on Unisa's School of Engineering is their setting and auditing of academic standards for purposes of registration through a process of accreditation of engineering programmes at universities and universities of technology.

With reference to the Act, ECSA (2002:3) states as follows:

> In terms of **Section 13 of the Engineering Profession of South Africa Act (No. 46 of 2000)**, ECSA must conduct accreditation visits to any educational institution at least once during its term of Council (four years). ECSA must either conditionally or unconditionally grant, refuse or withdraw accreditation with regard to all educational institutions and their educational programmes with regard to engineering. This duty is performed in consultation with the Council on Higher Education (CHE).

In addition, ECSA (2002:3) carries out accreditation of programmes offered by universities of technology and comprehensive universities to:

- establish whether the qualifications awarded from the programmes meet the educational requirements leading towards registration as professional engineering technologists, professional certificated engineers and professional engineering technicians
- establish whether the diplomates or graduates from the respective programmes are ready for employment and are equipped to continue learning throughout their careers
- establish the international comparability of the programmes.
- assure the public of the quality of the programmes.
- encourage improvement and innovation in engineering education in response to national and global needs

The design, monitoring and evaluation of, as well as visits to industry for, work-integrated learning in the Engineering disciplines are structured to meet the requirements as set out in the purpose of the qualifications, the required outcomes and the criteria used by the accrediting body, ECSA. Strict guidelines exist that need to be adhered to if full accreditation is to be achieved and maintained.

Currently ECSA accredits only the National Diploma: Engineering and BTech: Engineering qualifications that are offered by universities of technology and comprehensive universities. All disciplines in Unisa's School of Engineering have been fully accredited to offer the National Diploma and BTech degree. The next accreditation visit will take place in 2006.

Work-integrated learning in electrical engineering at Unisa

General

To fulfil the requirements for the National Diploma: Electrical Engineering, a student must have completed a minimum period of 12 months' work-integrated learning in addition to the theoretical subjects (and their practical components) required. Work-integrated learning comprises 33% of the qualification.

The work-integrated learning must take place under the guidance of a qualified supervisor (or mentor) according to syllabus guidelines which student and mentor receive on registering.

On completion of the student's work-integrated learning period, the employer must certify that the student has completed such learning successfully. Should the student not meet the minimum requirements for the National Diploma and the student's performance is still not up to standard according to the employer, the period of work-integrated learning may be extended.

The implication for students is that they must be employed at some time in the course of their studies by an employer able to offer the relevant and necessary work-integrated learning. If students are not able to complete the work-integrated learning, they will not be awarded the National Diploma, even though they might have passed all the required academic subjects.

Options available to students unable to obtain permanent employment, preventing them from participating in work-integrated learning, are the following:

- Accredited institutions (not educational) offer work-integrated learning training at a subsidised cost. Most of these institutions have hostel and meal facilities available.
- Several companies offer bursaries for work-integrated learning at their training centres and, on completion, the best candidates are offered permanent employment.

Registration requirements

Electrical Engineering Practice I: Ten subjects successfully completed towards the National Diploma

Electrical Engineering Practice II: Fifteen subjects successfully completed towards the National Diploma

Fields of specialisation

The fields of specialisation for which curricula are suggested are the following:

- Computer Systems
- Clinical Engineering
- Electronics and Electronic Communication
- Power Engineering
- Process Instrumentation

Monitoring experiental learning

Experiential learning is monitored by means of a logbook, mentor system and visits to industry by a Unisa academic.

- **Experiental learning recording: logbooks**
  Logbooks are used by the student to record all learning that has taken place during the respective learning periods. The employer must certify in the logbook that all learning aspects have been completed. On completion of each learning aspect, the student's progress must be evaluated by his/her mentor. The evaluation must be discussed with the student and signed off by both student and mentor. It is the student's responsibility to ensure that the logbook is kept up to date and signed by the employer. The logbook serves as documented proof of learning received or progress made and should always be available to Unisa staff during their monitoring visits. On the successful completion of the student's learning periods, the student must submit his/her logbook, together with a covering letter from the employer, attesting that the student has completed all the practical requirements satisfactorily and is competent in the field covered by the specific diploma. These must be submitted to the Electrical Engineering Work-integrated Learning Co-ordinator.
- **Mentors**
  The student must identify a suitable mentor at his/her workplace. A curriculum vitae of the proposed mentor is submitted to Unisa for approval. It is preferable to use ECSA registered mentors (not always possible). Once the mentor is approved, the student can commence with compiling the required documentation. The guidelines for employers and mentors are documented in: ' Work-integrated Learning, Policies, Procedures and Guidelines'. This document is supplied to mentors, employers and any other interested parties.
- **Visits to students**
  A Unisa representative will visit the student and his/her mentor at least once per work-integrated learning subject.

Suggested curricula

Electrical Engineering Practice I

Topics from which the student and his/her mentor or training manager, in consultation with the Unisa representative, can draw up a training programme to make up the required 24 weeks of work-integrated learning in the applicable field of study are listed in the following table:

Item no.	Item description	Time period
*1	Orientation	1 Week
*2	Safety / first aid skills	Nil
*3	Basic hand skills and computer literacy	3 weeks
*4	General administration	1 week
*5	Report writing	1 week
*6	Electrical components / electronic components / wiring of circuits	4 weeks
*7	Circuit diagrams and applicable drawings	3 weeks
*8	Measuring instruments	3 weeks
9	Power sources	3 weeks
10	Programmable devices	3 weeks
11	Measuring instruments and analysers	3 weeks
12	Assembly and preparation of computer components	3 weeks
13	Network administration	3 weeks
14	Application programming	3 weeks
15	Basic communication (modems, x.25 pads)	3 weeks
16	Power supplies	2 weeks
17	Flow measurement	1 week
18	Pressure measurement	1 week
19	Level measurement	1 week
20	Temperature measurement	1 week
21	Control systems	2 weeks
22	Wiring and soldering of elementary circuits	2 weeks
23	Manufacturing of PC boards	2 weeks
24	Wiring arrangements and cable binding	3 weeks

* Items 1-8 are common to all fields of specialisation and must be completed by all trainee students. The training programme is not limited to these topics.

Electrical Engineering Practice II

All topics for the second part of work-integrated learning, from which at least five mentioned in each field of specialisation need to be covered to make up a total of 24 weeks, are listed below:

Computer systems

Item no.	Item description
1	Advanced communication systems
2	Requirements, analysis and design of network systems
3	Project management, installation, commissioning and testing of computer system
4	Troubleshooting and maintenance of computer network systems
5	Computer-aided engineering and computer applications
6	Quality control (ISO 9000)
7	Any project in agreement with Unisa

Clinical engineering

Item no.	Item description
1	OHS Act
2	Hospital equipment
3	Harmonic scalpels, PH monitoring, laparascopic surgery, etc.
4	Troubleshooting and maintenance of clinical hospital equipment
5	Various sections in a hospital: theater, intensive care, mechanical workshop, etc.
6	Receive lectures by specialists
7	Any project in agreement with Unisa

Electronics and electronic communication

Item no.	Item description
1	Communication systems
2	Industrial electronics and instrumentation
3	Design of analogue and/or digital systems
4	Installation, commissioning and testing of new analogue/digital systems
5	Fault-finding and maintenance of digital and analogue systems
6	Computer-aided engineering and computer applications
7	Quality control
8	Any project in agreement with Unisa

Power engineering

Item no.	Item description
1	Power cables
2	Overhead lines
3	Power transformers
4	AC machines
5	DC machines
6	Rectification and conversion
7	Protection systems
8	Switchgear
9	Installation and commissioning of equipment
10	Drawing and design of circuits and systems
11	Any project in agreement with Unisa

Process instrumentation

Item no.	Item description
1	Communication systems
2	Industrial electronics and instrumentation
3	Design of analogue and/or digital systems
4	Installation, commissioning and testing of new analogue/digital systems
5	Fault-finding and maintenance of digital and analogue systems
6	Computer-aided engineering and computer applications
7	Quality control
8	Any project in agreement with Unisa

Number of students enrolled for work-integrated learning in Electrical Engineering at Unisa

A list of student numbers in the compulsory design and work-integrated learning subjects in the Engineering National Diploma and the BTech:

Subject	2003	2004	2005
Design project 3	82	114	100
Industrial project 4	13	23	21
Work-integrated Learning 1	14	25	27
Work-integrated Learning 2	9	9	18

The 2005 student numbers may not be accurate as the second registration period had not ended at the time of writing this paper.

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Multiple sites of learning – co-operative education in the ND: Animal Health at Unisa

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The National Diploma (ND): Animal Health was implemented by the former Technikon SA in 1992. It was initially aimed at the training of animal health technicians for the provincial veterinary services in South Africa. The programme was developed in close collaboration with the then only industry stakeholder, the national and provincial veterinary services. However, it has been revised repeatedly since then to meet the changing requirements for the profession and to open it for students not employed by the veterinary services. This paper gives an overview of the structure of the course and the weighting of the different integrated components representing the institution-based and workplace-based learning. The different modes of delivery and assessment of skills and knowledge are discussed and a critical analysis of the programme is used to identify the strengths and weaknesses.

This case study describes the three-year diploma programme for animal health technicians (AHTs) offered by the Department of Animal and Veterinary Public Health with special reference to the practical and workplace-based components.

The National Diploma: Animal Health is a career-focused professional qualification. Graduates are registered as para-veterinary professionals with the South African Veterinary Council, which is also the monitoring body for the quality standards of the programme. The approval of registration of Namibian graduates by the Veterinary Council Namibia (VCN) and the accreditation of the qualification with the Namibian Qualifications Authority (NQA) are pending.

The aim of the programme is to qualify learners as animal health technicians who are competent in applying their general and specialised knowledge and skills in the field of animal health care and disease control as well as on managerial level in order to support animal and human well-being. Graduates are able to pursue career paths in different fields of the animal health industry, such as animal health technicians as part of a veterinary team, meat inspectors, feedlot managers, zoo-keepers,

pharmaceutical representatives or stock farm managers. To meet the complex nature of work requirements, graduates must acquire intellectual knowledge and practical skills in a variety of fields to contribute to the improvement of agriculture and food production in Southern Africa.

The vast majority of students are South African but currently 30 students from Namibia are registered for the first year. The Namibian Directorate of Veterinary Services, however, has indicated that approximately 250 staff members in the field of animal health need further education to upgrade to the animal health technician level.

Co-operative education

The teaching approach of the programme follows the principles of co-operative education, which can be described as a teaching and learning strategy that integrates the learner's academic studies with experiential (or work-integrated) learning and practical training (Groenewald 2003). The components of the programme are the appropriate theoretical background (knowledge base), practical contact courses and sessions, structured work-integrated learning and formal assessment of theoretical knowledge, experiential learning and practicals. Theory, practicals and work-integrated learning are regarded as one unit. Practical knowledge is gained through experience, simulation and exposure to the actual work process. Regular revision of the contents and outcomes of the work-integrated learning module as well as a good partnership between academic staff and industry mentors ensure that the guidance of learners in the workplace situation combines both academic and practical components to achieve competence. Procee (2001) argues that several dimensions must be integrated in a curriculum to achieve applied competency and job-readiness, namely academic disciplines, skills and attributes required of the future professionals, their work and community environments.

The integrated structure of the curriculum is illustrated in figure 1. The theoretical component includes fundamental and core subjects/modules like Anatomy and Physiology, Animal Diseases I-III, Epidemiology I-III, Pharmacology and Toxicology, Laboratory Diagnostics, Management, Occupational Communication and Computer Usage. These are offered by means of distance learning with study guides, written assignments and final written assessment. In addition, components of active learning in the form of practical contact courses are part of the teaching. The work-integrated learning component of the curriculum is represented by the module Animal Health Practice. This module is clearly defined with regard to specifically listed practical skills, research projects and community involvement. Provision is also made for final evaluation by means of a combination of various assessment tools.

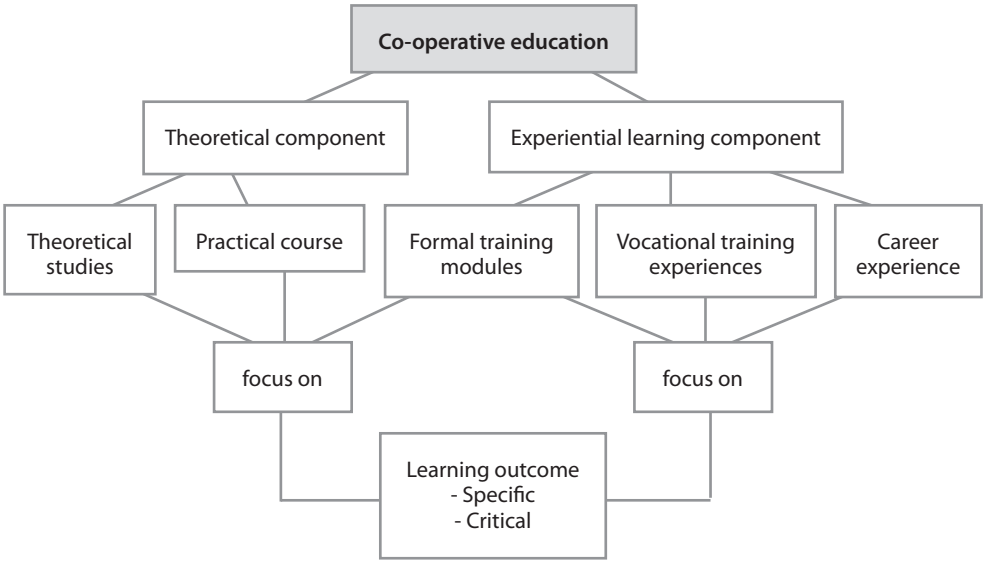


Figure 1: Integrated structural outline of the curriculum of the ND: Animal Health (Unisa Calendar, 1995)

Partners in co-operative education

The programme was initially developed at special request and with close involvement of the national and provincial veterinary services in South Africa. It was aimed at the education of animal health technicians who would be able to form an important part of the veterinary work force within the agricultural sector. Initially, only learners who were employed with the veterinary services were registered as learners with the institution, and industry was committed to strong involvement in all components of the programme. State veterinarians are contracted as external lecturers, moderators, examiners, authors or critical readers of study material or as guest lecturers in practicals and contact classes as well as workplace mentors. Animal health technicians in the field contribute to the success of workplace-based learning by assisting, training and evaluating learners with regard to the practical requirements of the logbook tasks and reflective practice. Competencies are viewed as a specific configuration of skills, knowledge and attributes required by both the theoretical and experiential components, which are applied in a well-defined context and characterise the professional performer. By comparing individual performances to professional performance by means of validated assessment instruments during experiential learning, individual strengths and weaknesses can be diagnosed and a personal development plan can be made up. Today, the integration of theory and practice through building co-operative education in a curriculum is a requirement of the new lifelong learning and knowledge-based economy that intricately links science, technology, knowledge production, use and

profit (Childs & Wagner 2003). Competencies make knowledge an instrument that can be used for an infinite number of applications. As a consequence, institutes of higher education are being forced to include co-operative education where students can handle or apply their knowledge in different contexts.

A few years after the introduction of the programme, access was opened for students not employed by the veterinary services. Consequently, other animal health stakeholders than those related to the veterinary services became involved as external staff and mentors. Those other veterinary fields include *inter alia* animal welfare organisations, private veterinarians, specialists at the Veterinary Faculty of the University of Pretoria as well as veterinarians involved in wildlife and zoos. The programme not only attracts learners from South Africa but also assists the State Veterinary Services of Namibia with the training of numerous animal health technicians.

The success of the programme is based on close collaboration between the three partners involved, as shown in figure 2. This close collaboration has advantages for all three partners as listed below:

1. **Advantages for Unisa:**
    - The input from industry ensures that the curricula are updated.
    - The academic staff is in close contact with industry.
    - The increased motivation of learners facilitates the educational task of the institution.
    - Unisa provides a skilled workforce through on-the-job learning.
2. **Advantages for learners:**
    - Learners can apply theoretical knowledge in the workplace, making studies more meaningful.
    - Learners develop interpersonal skills.
    - Improved job perspectives after graduation are likely, as learners gain practical experience.
3. **Advantages for industry:**
    - Industry can assess suitability of learners for further development and recruitment.
    - Career-orientated education is achived, as industry contributes to curriculum design.
    - Industry can ensure work-ready candidates for specific industries by contributing to the learner's experiences.

Knowledge is no longer defined as a static 'asset' but rather in terms of flows (Leijnse 2000). The circulation of knowledge is in fact becoming a genuinely circular process

with feedback loops between knowledge that is generated and disseminated by an institution of higher learning and adapted through fundamental and applied research involving all participants.

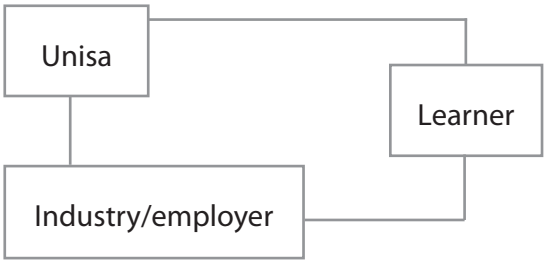


Figure 2: Partners in co-operative education in the programme: Animal Health

Advisory Committee

The success of co-operative education relies on continuous consultation between Unisa staff members involved in the programme and various stakeholders such as industry, government, professional bodies, community and learners. All stakeholders and Unisa staff form the Advisory Committee of the programme. During regular consultations the Advisory Committee makes recommendations and decisions regarding curriculum development, administrative matters of the programme, enrolment and recruitment planning, the quality of learning programmes and graduates, the relevance of staff qualification profiles and any other programme-related matters.

The Advisory Committee holds regular meetings, at least one per year, forms subcommittees to work on specific matters, for example recurriculation or curriculation of a qualification, and provides written comments on certain programme-related issues, if necessary. Close collaboration between industry stakeholders and academics is of advantage for staff to be informed regarding new technologies and developments in industry and with regard to research purposes. Kraak (1997:54) argues that continuous innovation of higher education and the industrial sector is highly dependent on the presence and feedback loops of two knowledge forms in society and work, namely on an abundance of theoretical scientific and technological knowledge provided by higher education institutions and on skilled workers provided by the community through context-based learning.

Context-based learning

As illustrated by Brandt, Bartkowiak-Higgo, Humphrey, Mahlangu, Prinsloo and Van Rensburg. (2005) the programme consists of two parts:

- An institution-based distance education component, which teaches theory combined with compulsory practical courses
- A context-based component, which is flexible and allows for workplace experience as well as for community services

Both parts are integrated to equip learners with the necessary intellectual and professional knowledge and to enable them to apply their knowledge in a professional situation. To prepare graduates optimally for the real work situation, strong emphasis lies on the context-based component of the programme's curriculum, with the following aims:

- To expose learners to challenging learning experiences in the work situation
- To assist learners to start with a career plan during their studies
- To realise a balance between conceptual or theoretical content and practical or explicit content
- To train learners according to the requirements of a specific industry
- To provide industry with potential workplace-ready employees once learners have completed their qualification, thus enhancing the employability of graduates
- To promote the development of core skills such as communication skills, numerical skills, information skills and problem-solving skills, as well as critical cross-field outcomes

To meet the required outcomes, the work-integrated learning component must be curriculated in such a way as to consider the organisational structures of the workplace with regard to the allocation of knowledge within this structure, the educational history of the learners and the external environment of the organisation in terms of the organisation's relationships with other institutions and the broader society. A curriculum at work is thus a dynamic, flexible and experiential process rather than a static and unstructured randomised learning experience (Moore 2004). The concept of the animal health work-integrated learning module takes the abovementioned factors into consideration to accommodate both industry and learners in the workplace environment.

Organisational structure of the organisation

Although primarily intended for training learners within the veterinary services, the curriculum is flexible enough to accommodate learners in a broad range of veterinary workplaces, such as state veterinary offices, veterinary laboratories, zoological gardens or game reserves. Different components of the curriculum or various tasks that form part of the module are adaptable to a variety of workplace requirements. Adaptations that might be necessary in individual cases are discussed and agreed on by the course leader, the mentor and the learner. Mentors and supervisors are allocated to the

learner by the organisation according to their specialisation, their workload within the organisation and their specific knowledge.

Educational history

The module Animal Health Practice is a second-level subject of the ND: Animal Health. A prerequisite for admission is the completion of the theoretical subjects Anatomy and Physiology and Animal Diseases I to equip the learners with basic intellectual knowledge that enables them to perform practical tasks and gain valuable practical knowledge from the workplace experience.

The minimum period required for the completion of the module is six months but registration is valid for five years to accommodate students who are full-time employees in fields other than the veterinary industries. Certain practical research projects that form part of the course can only be mastered by learners who are registered for various theoretical subjects, as they need specific subject-related intellectual knowledge. Eurydice (in Hovels 2003) argues that it is important for a programme to enable students of all ages to combine or alternate study with employment. He expects that the interface between higher education and economic life is likely to strengthen in the future.

External environment of the organisation

The work-integrated learning of the programme requires the learner's involvement in community work. This is considered in the curriculum by tasks and projects that the learner needs to perform outside of the organisation under supervision or with the assistance of his/her mentor. The curriculum is flexible and allows a broad range of community involvement within different workplace settings such as advising farmers or rural farming communities on animal health issues, presentations at farmers' days or at schools, etc.

Components of workplace-based learning

Although the compulsory practical courses are not part of the work-integrated learning, they will be included below as components of the practical education, as learners are exposed to a work-type situation and are provided with important practical skills that they will need for the workplace-based learning.

Practical contact courses

The curriculum of the diploma contains five compulsory practical contact courses as listed in table 1. Each practical is related to a theoretical offering that provides the learner with intellectual knowledge. The practical courses are offered in close collaboration with industry stakeholders at various venues like accredited laboratories or abattoirs throughout South Africa and in Namibia. Industry specialists are appointed as lecturers to offer certain parts of the practical courses. In the case of practicals

being offered by accredited laboratories or departments of the provincial veterinary service, industry staff members are involved in the teaching and assessment of learners. A detailed syllabus for each practical course has been developed by the Advisory Committee members to meet the requirements of the profession and the institution as well as these of the monitoring body, the SA Veterinary Council. Once the Namibian animal health technicians are registered as para-veterinary professionals with the Namibian Veterinary Council, this organisation will then also be involved in the evaluation of the qualification for Namibian professionals. The involvement of Unisa's academic staff in the planning and evaluation of the practicals and the assessment of learners ensures the quality and standard of the courses.

During the course of the practicals, learners apply their theoretical knowledge under standardised conditions in a laboratory situation and under the guidance and supervision of staff members, industry experts and lecturers. In addition, learners are exposed to the latest technology and methods used in the working environment and are taught practical skills that they need for the work-integrated learning.

The assessment of learners is performed by means of written, oral and practical tests during and/or at the end of the practical courses. Learners must attend and pass all compulsory practicals in order to be awarded the diploma.

Table 1

Year 1	Year 2	Year 3
Anatomy and Physiology (5 days)	Laboratory Diagnostics (10 days)	Artificial Insemination (10 days)
	Meat Hygiene (2 days)	Tuberculosis/Brucellosis (10 days)

Work-integrated learning (WIL)

WIL is based on the work placement of learners within the veterinary industry and focuses on the improvement of the work efficiency of each learner. The minimum period required for the WIL is six months, and learners may either combine the formal tuition and the work-integrated learning simultaneously or attend to WIL on completion of the theoretical component. Learners are responsible for finding their own WIL opportunity although the institution facilitates placement of learners where possible. The split of workplace-based learning between more than one organisation and institution is possible; however, each organisation and each mentor has to be approved by the course leader.

On registration, learners receive study material which includes a tutorial letter, a learner's guide, a mentor's guide, a logbook and manuals for practical courses. The learner's guide and the tutorial letter provide the learner with important general information regarding the course as well as the six practical research projects including the individual assessment sheets per project for mentor and lecturer. The mentor's guide informs the mentor(s) about the learner's responsibilities and tasks and provides

information and requirements necessary for the mentoring and assessment of the learner in the workplace. The logbook lists practical tasks which cover an extremely broad range of activities in large repetitive numbers for the learner to develop practical skills in inoculation, fertility investigations, inspections, sample taking, disease testing, clinical procedures, etc.

The six practical research projects cover areas such as epidemiology, animal breeds and diseases, pasture management and animal nutrition. Learners can choose their own research subjects within each of these disciplines and present their results in the form of essays, scientific reports and formal presentations at farmers' days, schools or other venues within communities or in front of peers and colleagues.

Close collaboration and personal communication between learners, academic staff and industry mentors ensure good practical and academic guidance for learners and efficient solving of any problems arising. While the collaboration between the academic staff and mentors in South Africa is functioning well, the same close relationship with and assistance for Namibian mentors still needs attention.

Assessment

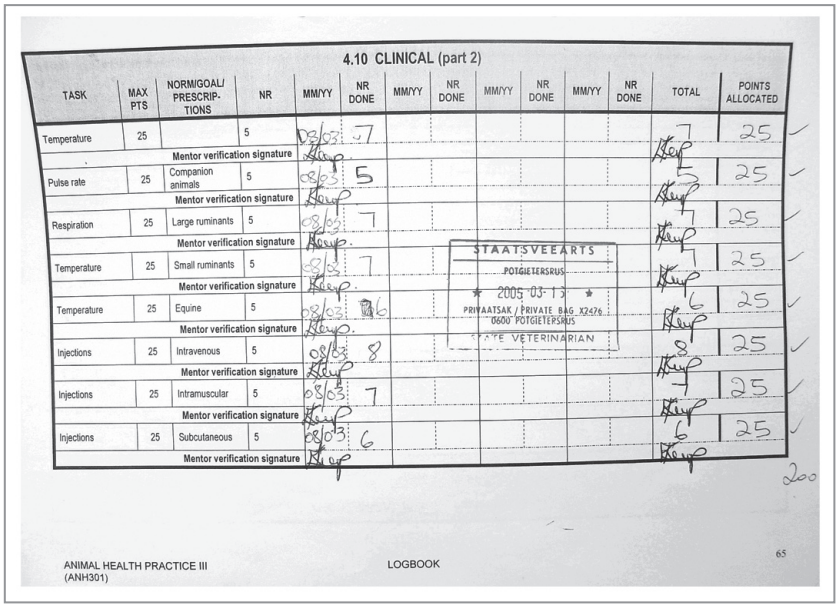
The work-integrated learning's curriculum is structured so as to be flexible and makes provision for continuous and integrated assessment by means of various assessment tools. Evaluation or assessment involves various parties, for example self-assessment, lecturers, workplace mentors or supervisors and peers. The logbook and the assessment sheets for each practical project make provision for assessment with performance descriptors and checklists and for qualitative and quantitative evaluation of the learner's performance.

Logbook

In the logbook, learners record their activities on a daily basis including the place/ premises, date, and number of animals treated or samples taken. All activities are signed off by the mentor or supervisor directly or the learner is provided with a letter by his mentor acknowledging the work recorded in the logbook. The assessment of logbook activities is based on repetition, with a defined number of repetitions per activity qualifying the learner for a maximum number of points allocated (figure 3). Points that are allocated to the various activities have a different weighting according to the level of difficulty of each task. Learners need a pass mark of 65%, which is calculated from the allocated points.

Practical research projects

Learners are tasked with six practical research projects. To master these projects, learners need vocational experience, managerial competency for the planning and practical performance, intellectual professional knowledge for each discipline covered in the individual projects, and writing and communication skills for the presentation



4.10 CLINICAL (part 2)

TASK	MAX PTS	NORM/GOAL/ PRESCRIP-TIONS	NR	MM/YY	NR DONE	MM/YY	NR DONE	MM/YY	NR DONE	MM/YY	NR DONE	TOTAL	POINTS ALLOCATED
Temperature	25		5	08/03	7							7	25
Mentor verification signature				Kemp								Kemp	
Pulse rate	25	Companion animals	5	08/03	5							5	25
Mentor verification signature				Kemp								Kemp	
Respiration	25	Large ruminants	5	08/03	7							7	25
Mentor verification signature				Kemp								Kemp	
Temperature	25	Small ruminants	5	08/03	7							7	25
Mentor verification signature				Kemp								Kemp	
Temperature	25	Equine	5	08/03	6							6	25
Mentor verification signature				Kemp								Kemp	
Injections	25	Intravenous	5	08/03	8							8	25
Mentor verification signature				Kemp								Kemp	
Injections	25	Intramuscular	5	08/03	7							7	25
Mentor verification signature				Kemp								Kemp	
Injections	25	Subcutaneous	5	08/03	6							6	25
Mentor verification signature				Kemp								Kemp	

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ANIMAL HEALTH PRACTICE III (ANH301) LOGBOOK 65

Figure 3: Logbook sheet for work-integrated learning (WIL) assessment

of their results. Assessment is done in a structured way by the workplace mentor, peers (where applicable) and the lecturer. Detailed assessment sheets for each project have been developed and each assessor concentrates on different performance areas. The weighting of marks allocated by each party involved in the assessment is defined according to their role in the individual project. Learners develop their projects with assistance of the workplace mentors and of regular and detailed feed back from academic staff, if required. The projects reflect typical problems encountered by animal health staff in their daily work and therefore learners are confronted with real workplace experiences that require an interdisciplinary approach to solve a problem. For example, learners are requested to perform research on a specific animal health problem that they experience in their work field, analyse their findings and advise farmers accordingly. Another project requires the participation of the learner in a state-controlled disease campaign and the submission of a detailed report including scientific information about the disease, description of control measures, the planning, conducting and results of the campaign and critical reflection on them.

Portfolio

For the final integrated assessment of the work-integrated learning module, learners have to submit a portfolio as evidence of all the professional practical and workplace-based training which they have undergone during the course of their studies (figure 4). As part of their study material, learners receive a detailed guide on how to compile a portfolio, and they are assisted by the lecturer through personal communication,

where necessary. The portfolio must contain the logbook and practical project reports including the points and marks allocated and the mentor's assessment sheets. Furthermore a CV, reports on the experiential learning and the workplace experience as well as evidence of practical experience and of the practical courses passed have to be included. The portfolio therefore represents a collection of evidence to show the learner's experience and achievement in practical competence.

All components of the portfolio are assessed and evaluated individually by the course leader or lecturer, and the marks allocated are used to calculate the final mark for the subject Animal Health Practice. For this a detailed evaluation form is used for each portfolio, which remains with the learner's workplace-based learning file. The form makes provision for all components of the portfolio as well as the different assessment criteria used. For quality control purposes, all portfolios remain at the institution for five years after submission.

Conclusion

The programme's workplace-based learning component is based on a thoroughly structured but flexible curriculum with continuous integrated assessment. It prepares learners well for the real work situation they will be working in as animal health technicians. Teaching with regard to all practical components is delivered at multiple sites and venues exposing the learners to more than one workplace or laboratory

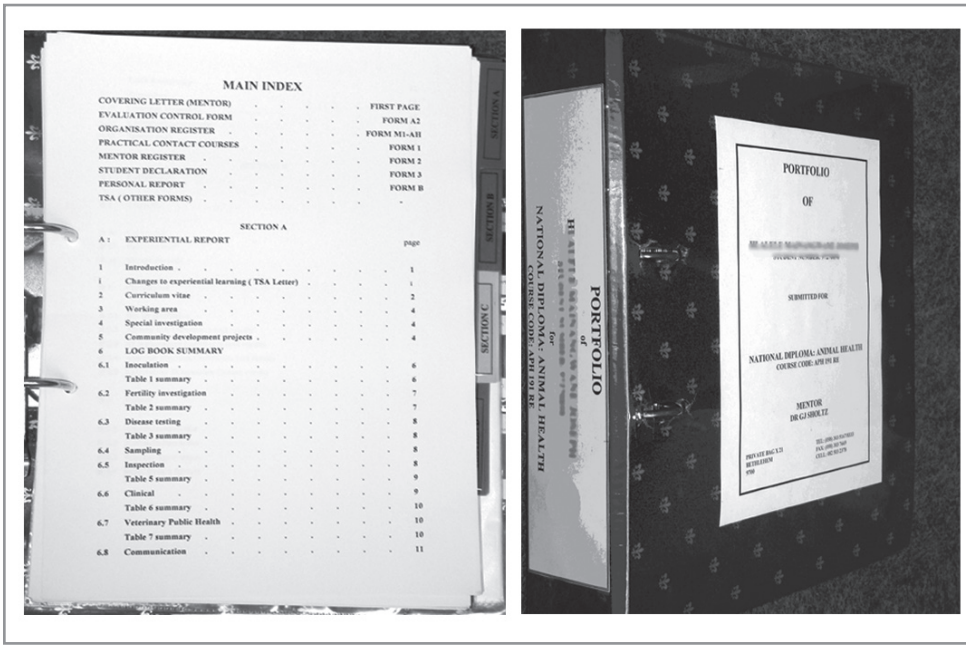

Figure 4: Example of a portfolio submitted for final evaluation.

setting. Strong emphasis on the practical component is necessary as the purpose of the programme is to train practitioners in the field. The guidance of learners by mentors, supervisors and academic staff is important for the success of learners and requires teaching competence, enthusiasm and profound technical knowledge. At present, 227 learners are registered for the work-integrated learning module, whose individual guidance and assessment is time-consuming for the mentoring and lecturing staff. Mentors in the workplace are not awarded for their involvement, which makes placement of learners not employed in the veterinary field difficult. However, because learners are work-ready on graduation, the acceptance of graduates of the programme in industry is very high.

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Broadening horizons - the experiential training of horticulturists at Unisa by developing human potential

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In the rapidly transforming economic and social environment in South Africa, it is essential that tertiary education and training institutions critically review their approach to developing the horticulture potential of learners. Universities face the challenge of making their horticulture courses relevant to the needs of the green industry and the community. These courses must also be cost effective, while maintaining standards of excellence.

The horticulture course at Unisa is offered via the medium of distance education in which use is made mainly of the written word as the medium of instruction, thereby enabling the horticulture students to study wherever they are. It offers the additional advantage that the student can continuously relate his/her theoretical training to the practical work situation.

This paper had its origin in the belief that there is a need for a text which would outline some of the issues involved in the experiential training of horticulturists via the medium of distance education at Unisa.

Initial concepts

What practical skills are required to train a successful horticulturist?

According to Robinson and Garratt (1996:4), 'we are all products of particular societies'. We do not 'make ourselves'. We owe much of what we consider to be our 'identity' and 'personal opinions' to the community in which we live. If we accept this Aristotelian 'Weltanschanung' as an overall picture of reality in horticulture, in which all of its parts are seen as being interrelated (Palmer 1997:146), we need to start by asking some questions if we are to understand the practical skill requirements for a horticulturist:

- Is there an ideal way of teaching Unisa students practical skills in horticulture?
- Who decides what these skills should be?
- What makes a good horticulturist?

- Are there certain kinds of practical skills that are a *sine qua non* for horticulture? If so, what are they? 'Practical' is defined by the *Concise Oxford dictionary* (1984:805) as 'inclined to action rather than speculation'. By comparison, the *Chambers twentieth century dictionary* (1977:1052) defines 'practical' as 'being concerned with actual practice: actually engaged in doing something'. In other words, is there an unequivocal definition of what exactly a horticulture student at a Unisa needs to master to become a successful horticulturist?

One response to these questions may be that of Michel Foucault (Fillingham 1993:7-8), who concludes that the 'might' of 'might makes right' may not be all that different from the 'power' in 'knowledge is power'. Could practical horticulture skills be just what a particular group of people decides is correct? When talking about practical horticulture skills, these could be 'constructed' capriciously by people deciding arbitrarily what are 'authentic' skills by getting enough people to believe what they have decided. Foucalt (Fillingham 1993:12) believes strongly that this knowledge/power relationship is the central mechanism whereby people acquire skills. If we accept these assumptions, then we have reached the point of having to decide who has the right to decide what should or shouldn't be taught in the green industry. Who then, has absolute power within the green industry to decide what the content of the horticulture education programmes should be?

These questions provide the theme for this paper, reflected in the question: 'Is there an ideal experiential training system for the practical education and training of horticulturists?'

This paper will attempt to provide an ontological and epistemological perspective to the experiential training needs of the horticulture sector: What horticulture experiential training needs are there (ontology) and how do we know that these experiential training needs are the authentic requirements (epistemology) of the horticulture industry?

The answers to these questions fit in with the paper's foremost aim to identify **critical issues** which need to be considered when designing an experiential training guide for horticulture students at Unisa.

We will endeavour to contextualise these questions by firstly considering the frame of reference of Unisa's horticultural experiential training. Secondly, this paper will attempt to generate ideas and suggestions which will hopefully help with the planning of future horticultural experiential training curricula in South Africa.

The challenge of practical training

All universities are involved in distance education when their courses encompass on-the-job training.

Horticulture students are often scattered throughout South Africa and beyond, making monitoring difficult for universities. Currently the most feasible manner in which to

control this aspect is by way of a logbook and of mentor system whereby written reports on the students' progress are submitted by approved employers.

The onus is on the student to select an appropriate practice setting and to do the required in-service training at an approved employer. Upon completion, the awarding of the diploma is still subject to the progress reports having being assessed as satisfactory by the university.

Area study – contextualising Unisa's horticulture experiential training

Unisa horticulture training is career-orientated training – that is, the experiential training should be orientated as far as possible to the practice of a horticulture career. The horticulture course is designed and devised with a horticulture career in mind in the private, the semi-public or the public sector, and is presented in a pragmatic way so that students who have completed their studies are productive in their chosen occupation.

Co-operative education can be described as a system of training in which academic tuition is continuously or periodically integrated with in-service training. Students who are already in occupations relating to their study programmes have the advantage in that theories and concepts dealt with in the tutorial matter can be put to the test in practice. Similarly, the theoretical course content can be more easily mastered in the light of practical work experience.

The training of Unisa horticulturists is presently undertaken in the following ways:

1. On-the-job training
2. Off-the-job training (work situation, e.g. training centre)
3. Unisa practical training
4. Unisa theoretical training

Most practical training, at present, takes place on the job. It is important to note that the Unisa training (theory and practical) is usually conducted under the supervision of a lecturer, whilst practical on-the-job training is usually conducted under a formally qualified horticulturist or instructor.

Thus practical training is possible in an institution and on the job. More important than the place where the practical training takes place is the matter of standards for the practical training. This implies the accreditation of a facility in terms of criteria for equipment, structured practical training programmes and instructors (who ideally should themselves have completed an approved horticultural training programme).

At present this function of monitoring training programmes is largely undertaken by the universities themselves, as the institutions which issue the diploma and therefore guarantee the quality of the qualification. Steyl makes the following observation in

this regard (as quoted by Kruger 1994:179): South African universities have decided that from now on in-service training will be monitored by means of a logbook system. Henceforth employers will keep a logbook for each student. A report, outlining the in-service training completed, and signed by both employer and student, will be handed in at Unisa after each period of in-service training. Alternatively, the student can complete the report on in-service training in the logbook and have it countersigned by the employer before handing it in at the university.

Universities also require from the learner horticulturist the mastering of general skills common to the horticultural profession. Use is made of practical guidelines that clearly outline the aspects that must be included for a final performance evaluation, but unfortunately not all universities are able to implement this requirement.

In addition, Pittendrigh (1988:9) observes that universities see co-operative education as taking place, in the broad spectrum, with an employer. This may include compulsory vacation work, placement of students with an employer for one or more days per week during the academic year, day-release, early morning or evening classes for persons in employment, as well as alternating periods of study and work. An attendance pattern must, however, entail a structured training relationship between the university, employer and student as illustrated by figure 2.1.

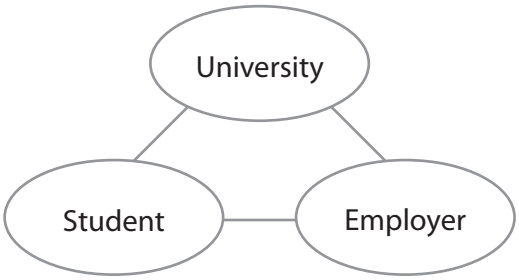

Figure 1: Co-operative education interaction Source: Pittendrigh 1988:9.

Deconstructing the existing process

This paper further explores the influence of structuralist and post-structuralist writers on experiential training. By deconstructing the existing process of developing an experiential training guide, this paper will suggest that there is no single way of devising a horticulture experiential training curriculum.

For all South African horticultural contexts, experiential training is invariably a construct produced by a particular sector of the horticultural industry. An experiential training guide may be construed as a means whereby the universities, and the horticulture industry, establish structures of power, defining skills, knowledge and attitudes, in essence giving meaning to what has value within the horticultural industry. This implies that experiential training can no longer be defined in terms of commercial horticulture only.

Underlying assumptions and principles

As has been seen from the preceding sections in the paper, it is easier to identify shortcomings than it is to identify guidelines enhancing the learning methods for the experiential training of horticulturists. This paper offers a possible way forward into maintaining and enhancing quality in horticultural experiential training courses, by deconstructing the existing process from which guidelines for the development of a horticulture experiential training guide may be developed.

The analogy of a map representing an experiential logbook containing directions implies a journey – a learning path with signposts signifying well-defined outcomes.

The conventional Unisa process can best be described as heuristic, whereby as many of the usual horticulture industry stakeholders as possible are consulted and in an eclectic fashion an experiential training guide is compiled. This is the traditional view of how an experiential training guide is crafted. The current process is based on reductionistic reasoning:

- One disadvantage of the traditional process is its reductionism. The range and scope tend to be narrow as only the world view of the consulted stakeholders is usually considered. The imposition of a particular horticulture viewpoint will certainly not encourage the student to question and even hopefully develop alternative viewpoints of the horticulture industry. Ideally, horticulture experiential training should be designed to give students a wider world view and not impose a particular judgement on how the industry 'ought to be'.
- Currently, experiential training is viewed as a didactic process prescribing rather than facilitating learning. Although the didactic approach is being criticised and challenged, it is, and will undoubtedly remain, a significant element of experiential training for the foreseeable future. The facilitative approach does not impose, but rather encourages the student to embrace and explore different horticulture systems. Learners are to be facilitated by the experiential training guide to defer judgement on the various horticultural systems until such time as they understand the context within which they view them.

The current centering of the commercial horticulture industry by the curriculum process, almost to the exclusion of alternative forms of horticulture, is an attempt to meet supposed training needs as opposed to real needs which are contextually appropriate to the social and economic regions of South Africa. The rationality of this logic is a subjective attempt to deliberately design an experiential training programme in favour of a particular sector within the horticulture industry. This orthodoxy of thought presupposes that alternative world views of horticulture are irrelevant. Variations on this orthodox approach are not actively encouraged. All that is necessary is to unpack the latest draft ensuring that the centre remains unchanged. In fact, variations are insignificant. Once institutionalised, it is difficult to entertain

alternatives. The curriculum designers tend to be products of the system and world view they speak to uphold. This isa 'self-fulfilling prophecy' approach to experiential training curriculum design.

Put differently, Vesey and Foulkes (1990:90) believe that what we need today is more learning and less education. In other words, there should be greater stress on acquiring knowledge from a desire to learn, and less emphasis on institutions and the attendant bureaucracy.

Based on this view, an experiential training curriculum planner should consider the following:

- An experiential training logbook needs to legitimise its content. Does this imply verification or falsification?
- Experiential training legitimises itself performatively, producing more of the same in the tried and tested ways. This self-verification approach neglects the need to authenticate the process of training. It could be argued that experiential training as it is currently constructed has tended to overlook the different horticulture contexts and has therefore marginalised the consideration of alternatives.
- Is experiential training a representation of reality? This paper has attempted to delineate the boundaries of what comprises horticulture experiential training. However, the traditional definition of what the content of experiential training is nowadays extends beyond the realities of technology into the postmodern world of culture, gender roles and cyberspace.
- Whereas until now the content has been structured much in the same way as an architect designs a building, the future design will take note of the diversity of the society it seeks to serve. This paper recognises that there are significant alternative structures or learning paths to achieve similar and even dissimilar ends.
- Deconstruction of the present experiential training logbook has revealed a notion of development whereby the requirements set by industry and Unisa in a process of co-operative education serve the needs of the horticulture industry. This ensures that the basic structure of the industry will not change. A commercial horticulture metaphor underpins the curriculum of the experiential training guide. Once this became established, it tended to become the norm.
- This institutionalisation of experiential training to serve commercial horticulture has influenced the development of experiential training content. Thus nature is regarded as a process that can be managed, focusing very strongly on a commercial horticulture approach. This represents reality as universally consisting of plant production, whilst the human aspect is incidental, almost an afterthought.

- Existing experiential training guides for horticulture may be regarded as a sequence of propositions that facilitate the learner's progress along a learning path. The emphasis on the existing configuration of structures in the experiential training has a compelling appeal for those with a vested interest in the existing structure of the industry. The established arrangement of the green industry is upheld *inter alia* by the education and training providers in the way the curriculum for the experiential training horticulture course is structured.
- Horticulture skills, knowledge and attitudes are not inherent in a learner. They have to be facilitated and developed by a process of experiential training (and also through a learner-centred, multi-media guide). This paper strongly suggests that there is no single way of defining an experiential training guide. The boundaries of experiential training are unstable and the content multifaceted, and should depend to a large extent on the particular green context.

Recommendations

The following recommendations are made with regard to the education and training of horticulturists:

- Experiential training should be seen as a process, the content of which has a 'moment in time' nature, remaining open-ended and continuously being modified.
- The transformation of the map of the South African horticultural industry requires that universities not only review but also continuously renew the experiential training the students must undergo.
- In future it there should be a shift from vested commercial interests to an inclusive societal orientation, from a closed inward-looking community to a wider outward-looking community.
- The author of the experiential training logbook should no longer be limited solely by the perspective of the commercial industry but should be open to the perspectives of all stakeholders.

Closing thoughts

The changing nature of the South African horticulture industry calls for a Unisa experiential education system that will meet the needs of the horticulture management student for interrelated areas of knowledge. The horticulture profession faces increasinglydiverse challenges and responsibilities. Learners must be well prepared not only in the fundamentals and applied phases of horticulture but also in its supporting disciplines. The trend in professional management demands that students be trained in an interdisciplinary systems-orientated and problem-solving way in subjects ranging from horticulture and the social sciences to business and personal management. Rapid

changes in the very character of the green industry (sustainable use of resources and the impact of the information technology industry) now require an experiential training curriculum to be more responsive to the needs of the horticulture community.

We will end by returning to our point of departure. In the rapidly changing economic and social environment in South Africa, it is essential that universities should rethink the way in which they are going to develop their students' potential in horticulture in order that they may manifest strong commitment to quality of life, equity and excellence in work. Consequently, universities face the challenge to make their experiential training horticulture programmes relevant and cost-effective, without sacrificing standards in an era of rapid change.

In conclusion, this paper advocates a horticulture experiential training process to be viewed as a series of maps embracing *inter alia* the following:

- The tenets of the NQF
- An understanding that experiential training is not only about things but also about relationships within the horticulture industry
- An appreciation that the process is holistic and therefore is present in each of the components of the system for educating a horticulturist

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Henri Jacobs has been Director of Co-operative Education at the Central University of Technology in the Free State for the past two years. Prior to this, he was Co-ordinator: Co-operative Education at the same institution for seven years. He has six years' secondary school teaching experience. He holds the following qualifications: BEcon (UFS), HDE (UFS), BCom Hons (Economics) (Unisa), and FDE Computer Literacy (RAU).

Janse van Vuren A.

Dr Janse van Vuren holds a DLitt et Phil (Library and Information Science) (RAU) and is currently the Assistant Director: Client Services, Library and Information Centre, at the University of Johannesburg. The focus of the position is on managing and developing services for library clients across all the University of Johannesburg campuses. Dr Van Vuren also has experience in lecturing Library and Information Science in both contact and distance education context.

Lotter G.A.

George Lotter is Professor in Practical Theology at the North-West University (Potchefstroom campus) and holds doctorates in Pastoral Counselling and the New Testament. Since 1993 he has read papers at 11 national and eight international conferences, guided 18 doctoral and 28 master's degree students, and authored/co-authored 16 peer-reviewed articles in accredited journals and three books. He is one of the African representatives on the Board of the International Association for the Promotion of Christian Higher Education (IAPCHE) in Iowa, USA.

Maphosa A.

Mr Maphosa is Director of Co-operative Education, focusing on the strategy and operations of co-operative education at the Vaal University of Technology. He is a dedicated co-operative education practitioner, and is secretary of the Southern African Society for Co-operative Education and workshop facilitator for the United Negro College Fund's special programmes to build co-operative education capacity in historically disadvantaged institutions. He has presented many papers at national and international conferences on co-operative education best practices. His latest project is to develop SADC guidelines on managing the placement of international students. He holds a Diploma in Electrical Engineering and a Certificate in Management Principles, and is presently studying towards the SAIM Business Management qualification.

Masango M.

McCrindle C.

Professor Cheryl McCrindle, BVSc (Hons), PhD, MRCVS, qualified as a veterinarian in 1969. She is currently Professor and Section Head of Veterinary Public Health in the Department of Paraclinical Sciences, Faculty of Veterinary Science, at the University of Pretoria.

McCurdy S.

Susan McCurdy works with the Cooperative Education Unit in the School of Science and Engineering at the University of Waikato. Her role as placement coordinator for biological sciences follows a natural progression from work in customer-oriented careers through to university study as a mature student. Susan was awarded a master's degree in Ecophysiology, graduating with first-class honours. Her research into co-operative education currently includes 'Moving on': the progression of co-op students into graduate degrees, 'Academic voices': the views of faculties involved in co-operative education, and the impact of current funding methods on faculty and research scientists. Research in the science field includes work on nitrogen isotope signatures in lichens, and a study of lichen species and communities in a regenerating forest in New Zealand. Susan is a member of the World Association of Cooperative Education and the New Zealand Association of Cooperative Education.

Mekwa J.

Professor Mekwa's professional and academic qualifications are a PhD, (UW, Seattle), registered nurse, registered midwife, registered nurse educator and nurse administrator.

She is currently Professor of the Mauerberger Chair of Nursing and Deputy Director of the School of Health and Rehabilitation Sciences at the University of Cape Town.

She has served in various capacities as nurse educator and nurse manager at various institutions of higher education in South Africa. In 2004 she served as Acting Deputy Vice Chancellor of the University of Cape Town, being responsible for student development services.

She serves on several national boards and policy formulation committees and is the only nurse appointed by the Minister of Health to serve on the Essential National Health Research Committee. She is a founder member of the South African Institute of Health Care Managers whose aim is to promote the development of health managers in the country.

In the past, her international leadership roles have included coordinator of collaboration projects between the University of the North and (i) The University of Oslo: Norwegian University Fund (NUFU), which served to promote women's health and community development in the rural Northern Province; (ii) the Free University of Amsterdam; (iii) the Free University of Brussels.

She is currently coordinating a collaboration project between the University of Cape Town and Jönköping University in Sweden.

Professor Mekwa is a member of several professional bodies including the International Network for Doctoral Education in Nursing (INDEN) and the Sigma Theta Tau International Nursing Honour Society. She is also a member of the Democratic Nursing Organisation of South Africa and the South African Association of Psychosocial Rehabilitation.

Meyer S.M.

Dr Salomé Meyer is a lecturer in the Department of Nursing Science at the University of Pretoria. She has been involved in distance education since 1998. Salomé teaches Nursing Education and is the coordinator for flexi-learning in her department. She is fascinated by computer- and web-based education and has a PhD in Computer Integrated Education.

Miller S.

Dr Stan Miller holds a BVSc (Pretoria), BVSc (Hons) (Pta), Diploma in Tertiary Education (DTE) (Pta), and the CTM (TI): Lecturer and Consultant in Animal Health.

Graduating as a veterinarian in 1970, he started his career as state veterinarian (SV) from 1971 to 1977 in the Gobabis and Windhoek districts of Namibia. On being transferred to Onderstepoort, he specialised in livestock reproduction while Chief of the Artificial Insemination Section until 1981. Further veterinary and tertiary training qualifications (infectious diseases, immunology and microbiology) authorised him to join the Faculty of Veterinary Science in 1982, where he taught a variety of pre- and postgraduate students for the next seventeen years until May 1998. Stan then returned to the Namibian Directorate of Veterinary Services (DVS) – first at head office and then at the SV office in Windhoek as principal state vet and training officer of the Directorate of Veterinary Services – while also acting as Registrar of the Veterinary Council of Namibia (from December 2002 to July 2005). Since his retirement in June 2005, he has continued to do what he loves best – training and disseminating information on Animal Health. He has just received his Competent Toastmaster (CTM) Certificate and is updating his book *Animal health handbook for stock farming in Southern Africa – a practical guide for farmers, students and scholars* for publication.

Ori S.

Shakeel Ori is presently employed at the Durban Institute of Technology as the Director: Co-operative Education. Previously he was Dean: Faculty of Science, ML Sultan Technikon and Senior Lecturer: Medical Sciences.

Positions held:

1997-2004:	Member: South African Qualifications Authority
2002-2004:	Member: NSB Committee of SAQA
2005-present:	Member: National Standards and Qualifications Committee: SAQA
2004-present:	Executive Member: South African Society for Co-operative Education
1995-1998:	Member: Minister of Education's National Transformation Task Team
1997:	Acting Chairperson: National Transformation Task Team

Presentations at various conferences and congresses:

1995:	World Health Organisation invited him as presenter at the African Federation for Technology in Healthcare
1995:	Portfolio Committee: Higher Education: Technikons Amendment Bill
1996:	Salzburg, Austria Seminar: NCHE Report (Rep: Higher Education Employees)
1997:	Member: HDI Submission: Portfolio Committee: Higher Education
2002:	Panelist and Presenter: Council on Higher Education (CHE) Conference
2005:	Presentation: Experiential Learning Policy Development: University of KwaZulu-Natal, Master in Education Group

Paku L.

Levinia Paku (MSc in Geochemistry, University of Waikato) is placement coordinator for Engineering students at Waikato and researcher into indigenous learning in science and engineering co-op degrees.

Pottas D.

Dr Dalenca Pottas is Head of the Department of Applied Informatics in the School of ICT at the Nelson Mandela Metropolitan University. She holds a BSc (Hons), MSc and PhD in Computer Science. After five years' involvement in the petro-chemical industry with Sasol (IT Division), she started a career in tertiary education with Technikon Southern Africa. She joined the NMMU in 2002 and her current research interests include the areas of information security management and governance.

Taylor S.

Susanne Taylor was a computer programmer before becoming a lecturer at Technikon Witwatersrand in 1979. She moved up the ranks to become Head of the School: Information Technology and was appointed Director: Cooperative Education at the University of Johannesburg in July 2002.

Susanne is passionate about education, especially the cooperative education model, which allows students to enter the world of work with confidence after completing the work-integrated learning component of their qualifications.

Susanne has masters' degrees in Information Technology and in Education (both from the Technikon Witwatersrand) and is in the process of formulating the proposal for her doctorate.

Tempelhoff J. W.N.

Professor Johann Tempelhoff is Director of the School of Basic Sciences in the Vaal Triangle Faculty at North-West University. He specialises in the cultural history of water in Southern Africa and the methodology of history.

Trumpelman M.H.

Professor Trumpelman was awarded a DPhil at the University of Pretoria in 1978 with a thesis on General J.C. Smuts, and subsequently obtained a DEd at RAU in 1981 with a thesis on political literacy and the secondary school.

At present, he is a professor at the University of Johannesburg in the Department of Teaching Studies (Faculty of Education). Twelve students have completed their doctoral studies under his supervision.

His involvement especially in the Methodology of History Teaching and Multicultural Education has stretched over the past three decades.

Van Niekerk A.

Dr Alvin van Niekerk graduated with a PhD from the University of Natal in 1988. He was a research scientist with the KwaZulu-Natal Department of Agriculture from 1974 to 1991. His areas of specialisation are beef production and reproduction. He is author/co-author of more than 30 scientific or semi-scientific publications published both nationally and internationally. From 1991 to 1997, he was Head of the Cedara College of Agriculture. He was founder and Director of AvN Consulting from 1998 to 2004. The consultancy specialised in academic masterplan development, curriculum development, management restructuring and policy development. He is also co-founder and chairperson of the Association of Principals of Agricultural Colleges (APAC), chairperson of the quality assurance committees for the colleges of agriculture acting under the auspices of the Certification Council for Technikon Education (SERTEC), and as from 2002, under the auspices of the HEQC, first chairperson of the National Standards Body for Agriculture, Nature Conservation and Forestry (NSB 01). He is chairperson and/or member of five national and international committees/task teams dealing with the positioning of the colleges of agriculture in the restructured higher education sector. He was managing editor of the book entitled *Ethics in Agriculture – An African Perspective* published in April 2005 by Springer Academic Press.

He currently pursues business opportunities in Brisbane, Australia.

Wessels M.

Mr Wessels' highest qualification has been an MSc. He also holds a BEd. He is completing a PhD in Cooperative Education, and is the Director: Cooperative Education, Tshwane University of Technology, Garankuwa campus.

His experience in higher education is as an academic in Microbiology, Biotechnology, Biomedical Technology and Public Health (more than 16 years), and his business experience in is the Food, Medical and Pharmaceutical Industry. He has been a coordinator in cooperative education for seven years and has been Director: Cooperative Education for six years.

Young M.H.

Dr Michael Young has been in the employ of the Cape Peninsula University of Technology for the last 19 years and holds the position of Head of Programmes: Horticultural Sciences. He has undergraduate qualifications in Forestry, Horticulture and Parks and Recreation Management. He holds a master's degree in Parks and Recreation Management and a PhD in Education, both from the University of Stellenbosch. He has presented several papers at local and international conferences.

Zegwaard K.

Karsten Zegwaard holds a BSc, MSc (Tech) and has recently submitted his PhD in Soil Physics and Agronomy. Karsten is based in the Cooperative Education Unit, School of Science and Engineering, at the University of Waikato in New Zealand, and is a member of the World Association of Cooperative Education, the New Zealand Association of Cooperative Education, and the Asia-Pacific Journal of Cooperative Education editorial board. Karsten has been involved in research into science and technology graduate competencies, student self-efficacy, student enculturation into a workplace of practice, and statistical modelling of the relationship between soil physical properties and pasture productivity.