BEST PRACTICE IN CO-OPERATIVE EDUCATION

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FOREWORD

In her book, *Global Information Technology Education: Issues and Trends (Series in Global Information Technology)*, 1993, Karen D Loch states:

“Industry’s future leaders will need multi-environment, multi-country, multi-functional, and possibly multi-company and multi-industry experience”.

A review of professional and industry training needs makes it very clear that co-operative education is a topic of considerable interest, concern and debate for industry and academia. The demand of industry for learners and workers to have a broader and more substantive understanding of workplace performance means that educators are under increasing pressure to address these training needs. In fact, in 1995 the South African Qualifications Authority Act recognised the need for workplace performance and outlined a new National Qualifications Framework with its emphasis on outcomes-based education. Furthermore, the Skills Development Act of 1998 and the Skills Development Levies Act of 1999 outlined mechanisms for controlling education and training in all sectors.

The resulting implications for education in general are profound. The challenge of curriculum development is therefore to define a coherent framework for course content that allows for a flexible body of knowledge, skills and attitudes that is constantly evolving. Failure of education to respond to these demands will directly affect the ability of the South African workforce to compete internationally. Literature on the topic further highlights the fact that successful educational programmes/courses are striving to create beneficial links between educational institutions and industrial corporations.

There seems to be consensus on two issues. Firstly, technikons must be prepared to compete in the fast-changing national and international educational and workplace arena. Secondly, educational programmes with an experiential learning component must play an important role in equipping the workforce with the necessary skills to enable it to be effective and efficient in the national and even international market place.

Against this background, it is essential for technikons to adopt a cross-functional approach that provides a curriculum content addressing real-world and real-work situations.

This manual should therefore be of great help to any institution or department that is in the process of rethinking its course offerings and methods of delivering teaching and training. It contains many key ideas that can be used profitably in any strategic planning calling for reform of the co-operative education component.

Papers on co-operative education delivered at national and international conferences formed the basis of the initial draft of this guide. We trust that this publication, which will be updated regularly, will provide co-operative education practitioners with information relevant to the South African situation.

Prof. B Khoapa

Chairperson
Committee of Technikon Principals

FOREWORD

The South African Society for Co-operative Education (SASCE) welcomes the collaboration with the Committee of Technikon Principals (CTP) on the joint production of this document and the companion volume *Essentials of Co-operative Education Practice.* The two documents are a direct result of the decision taken by the CTP in 1998 to look into issues regarding the promotion of co-operative education and to develop a closer working relationship between the CTP and SASCE. It is therefore essential that we continue in this direction to further develop and facilitate the practice of co-operative education. I believe that both documents will achieve greater significance in the light of current national policy on skills development.

The documents therefore serve as "living" documents, which will require that SASCE updates them regularly and makes additions where necessary. Whereas the document *Essentials of Co-operative Education Practice* gives a brief overview of current best practices in co-operative education, this document provides detailed information on these topics. It therefore serves as a supportive and cross-referencing resource. Both documents are non-prescriptive: they aim at guiding practitioners of co-operative education and serve as reference works.

I extend my sincere gratitude and appreciation to the members of the Committee for Tutorial Matters (CTM) Standing Committee: Co-operative Education, and to all others involved in the production of this valuable resource. A special word of thanks to Dr Dermot Moore and Mr Frank Coetzer for their tremendous contribution to the project.

G de Lange
President: SASCE

1. INTRODUCTION

The competitive edge of technikons is founded largely in the practice of co-operative education. The World Association for Co-operative Education (WACE) defines co-operative education as a method of education that combines learning in the classroom (theoretical studies) with learning in the workplace (experiential learning). The importance of incorporating an experiential learning component into the various instructional components is illustrated by the comment that "a competitive economy requires a close link between education and the world" [1].

The Green Paper on Further Education and Training states that the curriculum and qualifications framework of the future "will require a profound shift away from the traditional divides between academic and applied learning, theory and practice, knowledge and skills, and head and hand" [2].

The success of co-operative education programmes depends largely upon close co-operation with commerce, industry, government and the community. It is hoped that this publication, which was compiled in a consultative manner with members from each of these sectors, will provide guidelines for promoting co-operative education and experiential learning at technikons and closer collaboration with these sectors.

In addition to outlining guidelines for stakeholders in the existing co-operative ambit, it is important to note that legislation (i.e. the Skills Development Act of 1998 [3] and the Skills Development Levies Act of 1999 [4]) provides opportunities for technikons to consider the challenges that lie ahead in the provision of skills programmes and learnerships. Although experiential learning and learnerships appear to demonstrate synergy in many respects, there are also subtle differences between the two approaches that need to be taken into account.

2. NATURE OF CO-OPERATIVE EDUCATION

2.1 Introduction

The experiential learning component in the co-operative education principle brings the education and training aims to a sharp focus on the career proficiency of each learner. The academic and experiential learning components are interdependent. Whereas the academic component is usually offered by tertiary educational institutions, the experiential learning is usually completed in its entirety in industry, commerce and the public sector. The symbiotic unity of these two elements is shown in figure 1 [5].

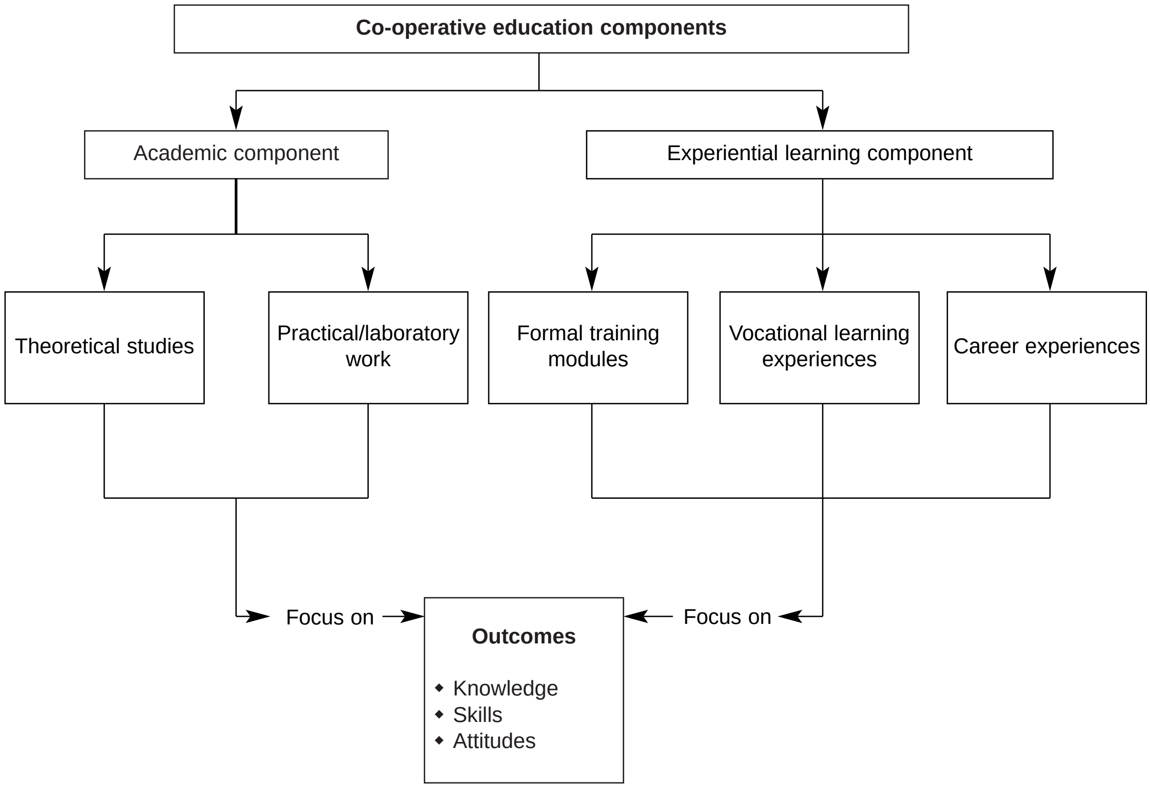


Fig. 1 Components of co-operative education

The experiential learning component has to allow for career development as focused on the **current needs**, the **short-term projected needs** and the **expected long-term needs** of both the worker (learner) and the employer.

A few aspects need to be explained in detail as regards figure 1:

a) Formal training modules refer to training opportunities with clearly defined learning outcomes. The progress of the learner's development and competencies are measured against predetermined criteria.

b) Vocational learning experiences (informal training sessions) refer to the experience gained by exposure to the real life of the actual work situation.

c) Career experiences refer to those aspects relating to career development to which the learner is exposed during his/her experiential learning, such as formal and informal lines of authority and the scope and relevance of his/her position in the company.

d) The primary focus of the outcomes is to describe the **knowledge** base that the learner should accumulate, the **skills** he/she should be able to apply and the **vocational attitudes** that should have been instilled when he/she has completed his/her course of study.

The required outcomes should be clearly defined at the outset. The outcomes should not only focus on predetermined, measurable skills, but should also allow for the acquisition of knowledge and personal skills which are not linked with planned training elements.

2.2 *Definition of co-operative education*

The World Association for Co-operative Education (WACE) defines co-operative education as a method of education that combines learning in the classroom with learning in the workplace.

Learners put their academic knowledge into action through relevant work experiences gained in commerce, industry and the public sector. Co-operative education includes the following features:

- It is a strategy of applied learning.
- It involves a structured programme developed and supervised by an educational institution in collaboration with one or more companies/organisations.
- Relevant productive work is an integral part of a learner's academic programme and is an essential component of the final assessment.

2.3 Aims and objectives

The primary focus of the "aims" is to describe what the learner should be able to do once he/she has completed the course. In other words, the required outcome should be defined before training commences. For this purpose, a job analysis and a job description are required. The aims should not only focus on predetermined, measurable skills, but should also allow for the acquisition of knowledge and personal skills which are not linked with planned training elements. The specific perspective will determine the focus of the aims and objectives. The following are aims of a co-operative education programme as outlined by different authors:

- To expose learners to challenging learning experiences related to work
- To establish a clear link between theory and practice
- To assist learners to start with a career plan during their studies
- To realise the balance between conceptual, theoretical and practical content
- To train learners according to their own specific needs as well as those of commerce, industry and the public sector
- To compile programmes which will address the needs of commerce, industry and the public sector in general
- To understand the relevance of theoretical aspects
- To obtain work experience in a specific discipline
- To improve communication skills
- To develop balanced interpersonal relationships in the work environment
- To establish contacts for future employment

From the above, it may be concluded that the general aims of a co-operative education programme should include the following:

- To develop a career-oriented course which satisfies the needs of the learners as well as those of industry, commerce and the public sector
- To focus academic content of the most recent technological developments on the relevant needs of industry, commerce and the public sector
- To guide learners in mastering skills in analysing, innovation, synthesising and integrating situations in the work environment

2.4 Advantages of co-operative education

The main advantages of co-operative education for learners, employers and technikons are as follows:

For learners

- It gives learners the opportunity to apply their theoretical knowledge in a practical situation. As a result, learners find that their studies become more meaningful.
- Learners can test career expectations against the realities of the workplace and make decisions based on experience gained, hereby reducing incorrect career choices.
- Learners develop better human relations when they work with persons of different backgrounds and disciplines.
- It improves job prospects after graduation, as learners gain practical experience during their studies for a qualification.
- During experiential learning, learners gain new personal attitudes and values which include time management, dress code and business etiquette.

For employers

- Co-operative education affords organisations the opportunity to assess the suitability of learners for further development and possibly recruitment.
- It strengthens the relationship between organisations and the technikon, leading to improved career-oriented education as organisations contribute to curriculum design.
- It improves staff efficiency as learners can assist in handling peak workloads and special projects.

For the technikon

- Maintaining regular contact with organisations gives technikon staff access to contemporary work practices and new developments in industry.
- Input from organisations ensures that curricula are updated regularly and serve the requirements of the employment sector.
- Increased motivation of learners facilitates the educational task of technikons.

All nations benefit from a highly skilled workforce prepared to compete in a global economy and from the educational programmes designed to create such workers. Co-operative education not only produces an able workforce, but reinforces the link between the technikon and work, and provides access to on-the-job earnings. It is an effective means of developing a nation's human resources, and of reducing training costs, the time lag between hiring and productivity, and supervisory time.

2.5 Planning the training

The following general guidelines may be used as a basis for planning:

- Description of the skills, both technical and non-technical, as well as the methods of assessing the extent to which these skills are to be mastered
- Indication of new technological developments on which information must be gathered during experiential learning
- Practical examination (or structured assessment) of the experiential learning
- Qualitative feedback with regard to the experiential learning per se

Training modules should be compiled by clustering tasks or projects. These training modules can quite often be grouped to form larger units, i.e. project subjects. Whether the unit is a training module or a project subject, the standards required can be described in specific objectives. Once these objectives have been specified, accreditation can be implemented.

Accreditation emphasises acceptable standards. Evaluation criteria should therefore be designed to measure the extent to which the aims of this whole exercise are met. The planning phase can be completed by compiling a training programme which specifies the total spectrum of tasks and the minimum number of projects which need to be completed according to a predetermined set of criteria in order to qualify. It is the responsibility of the technikons to verify that the level of proficiency is attained by each learner for both the academic and the experiential learning component before the specific qualification is awarded.

2.6 Projects

A project is a coherent group of **interrelated** and **interdependent** tasks. Tasks should be feasible, have realistic deadlines and be planned logically and in a cost-effective way. Tasks require technical data that should be correct and dependable, should focus on the needs of the task, and be logical and clear. Reports should be linguistically correct, compiled according to an acceptable format and factually correct. Completed tasks should require minimal or no modification, be completed by the deadline dates, and comply with acceptable cost-effectiveness methods and standards.

Project work may be used to advantage during experiential learning. The projects should be planned carefully as follows:

- Proficiency in mastering processes is best acquired by self-activity.
- To progress, a learner must achieve success.
- To master a project, there must be a clear procedure.
- Physical models are only used to supplement design skills.
- Solutions to projects must be open-ended.
- Projects should enhance the opportunity for self-discovery.
- Teamwork should be required to complete projects.

Projects should always require skill in identifying and solving problems. One such method involves the use of algorithms. The following procedure may be useful:

- Identify and describe the problem
- State the basic aims and steps of development
- Collect information
- Determine the limitations, assumptions and facts
- Generate possible solutions
- Evaluate each possible solution
- Synthesise by generating a detailed solution
- Determine whether the aims were met
- Report results
- Implement
- Control the success of the implementation

2.7 Assessment

Assessment must take place to determine the extent to which the aims and the objectives, which were originally set, have been achieved.

Progress or success depends on assessment. Assessment is the collection of data about learner achievement, using a variety of means and procedures so that learner's achievements can be measured as accurately as possible. The assessment and reporting are the responsibilities of both the co-ordinator (lecturer) and the mentor (employer). Assessment cannot be a one-off event, but must be an ongoing process. Reporting must describe the learner's progress towards achieving the outcomes and must include suggestions for improving his/her performance. Finally, the evaluation of programmes should lead to their improvement and should focus on their effectiveness in preparing learners for life and work.

2.8 Skills

A programme of co-operative education should develop the following core skills:

- Communication skills, which relate to the ability to produce written and spoken communication appropriate for a range of purposes and audiences and to respond appropriately to the same
- Numerical skills, which relate to the ability to use a range of fundamental arithmetical and mathematical skills to reach conclusions in a range of situations
- Information technology skills, which refer to the ability to use new technology to input, process and output information and to perform basic operations
- Problem-solving skills, which relate to the ability to identify and clarify the nature of problems, to plan and implement strategies to address problems, and to evaluate the effectiveness of strategies and solutions

The programme of experiential learning should include the aims and learning opportunities so that at the end of his/her training period each learner can do the following:

- Communicate effectively
- Solve problems and make responsible decisions using critical and creative thinking
- Use technology effectively and efficiently
- Demonstrate an understanding of his/her function in the work environment as a set of related systems
- Work effectively with others as a member of a team, group, organisation or community
- Make wise choices for a safer environment

3. ORGANISATION/MANAGEMENT STRUCTURE OF CO-OPERATIVE EDUCATION IN THE INSTITUTION

3.1 Functions

The co-operative education office forms a vital link between the formal studies of learners and the experiential learning component by liaising with commerce, industry and the public sector to negotiate suitable training positions for learners, and by placing learners in these positions. Determination of policy matters regarding co-operative education and a multiplicity of tasks flow from this.

3.2 Basic structure

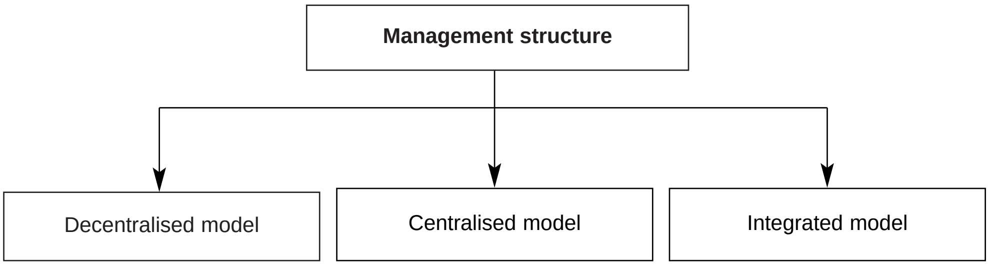
Co-operative education programmes are administered in either a **decentralised** or **centralised** manner. A decentralised system functions as part of an academic department and operates within it entirely. Thus, for example, a co-operative education programme for chemistry learners is centred in and operates from the chemistry department, and a programme for accounting learners would function within the accounting department. Under such an organisational scheme it would be possible for an institution to have many independent co-operative education programmes, one for each curriculum participating. More likely, however, co-operative education would be organised into larger clusters of curricula such as all engineering curricula or all arts and humanities curricula.

By contrast, there are centralised co-operative programmes in which there is a single co-operative education department responsible for all co-operative education learners within the institution, regardless of their specific field of study. As with other programme considerations, there are advantages and disadvantages to either of these approaches.

The principal advantage of decentralisation is that it places all elements of the co-operative education programme within the particular curriculum area and makes for an easier and more natural linkage between academics and experiential learning experiences. Decisions regarding the programme can be made for and by a smaller and more homogeneous group of staff. This fact leads to one potential disadvantage of decentralised programmes. Since each programme is independent, operative policies and structures may vary considerably among them. For example, starting dates for experiential learning experiences and patterns of placements and study may differ. These differences may not pose a problem for the institution, but employers who participate in more than a single programme are likely to find it confusing and annoying.

A centralised programme, on the other hand, may have a single fundamental set of policies that applies to learners in all areas of study and yet allows for diversity in the various fields of study. This structure is administratively convenient, but, according to Wilson [6], may have the disadvantage that the co-operative education programme becomes isolated from the departments that it serves. Some educators contend that whereas it is easier to emphasise educational issues with a decentralised programme, a centralised programme is administratively more efficient.

There is a **centralised-decentralised** (partly centralised) model that seeks to attain the benefits of both organisation types. This is sometimes also known as an **integrated model**. In these programmes there is a central co-operative education office that sets the programme's agenda and establishes policy that applies throughout the institution. Yet the programme is decentralised in that the co-ordinators are housed in and interact with the departments they are serving. This approach lessens or eliminates altogether the barriers that often develop between lecturing staff and experiential learning and can result in a closer integration of the two elements of the curriculum. This organisation requires a strong leader, because without strong leadership the organisation is apt to drift in the direction of decentralised programming.



3.3 Reporting

The following question arises: "To what administrative office will the co-operative education unit/department report?". With a decentralised system it generally reports to the dean or head of department. The decision here is generally not a problem. It can be a problem, however, if there is a central co-operative education office and learners throughout the institution are to be served from it. In the United States, there are two principal offices to which co-operative education programmes report. These are as follows:

- The chief academic officer (academic vice-rector)
- The dean, learner affairs

Co-operative education is a curriculum matter and should be administered as such. In the United States, when the co-operative education office reports to learner affairs, it is mostly because the institutions have a learner placement office that is responsible for helping learners find part-time employment while busy with their studies, or full-time employment after graduation. The rationale for putting co-operative education administratively in this area of the institution is that the placement office already "places learners in work situations" and thus there is no need to create another office to do the same thing. This rationale displays a lack of understanding of the nature and purpose of co-operative education. On the practical side, it also makes it easy for academic staff to dismiss co-operative education as nothing but part-time work with little educational merit.

3.4 Staffing

The traditional staff complement of a centralised co-operative education department consists of a director/head of department, who is the responsible administrator for co-operative education matters at the institution. Reporting to the director/head of department, at the professional level, are co-operative education co-ordinators. Co-ordinators are responsible for all co-operative education learners assigned to them. Depending on the co-operative education model employed, these **responsibilities** may include the following:

- Developing appropriate assignments for experiential learning
- Preparing the syllabus of learning material for specific courses
- Orienting learners to the programme
- Helping learners clarify their educational, career and personal goals as they consider possible experiential learning assignments
- Helping learners formulate learning objectives for their placement terms
- Monitoring learners who are busy with their experiential learning assignments
- Liaising with companies regarding learning opportunities and learner performance
- Attending advisory committee meetings
- Assessing the extent to which the learner has achieved learning objectives
- Helping learners to reflect on their experiential learning upon their return to the technikon and preparing them for any succeeding placements
- Bringing back information and questions from industry regarding new technology, courses, research, syllabuses, etc.

It is not a responsibility of co-ordinators in all programmes, but if, as suggested earlier, the position is taken that co-operative education is a curriculum model linking theoretical studies with experiential learning, then an important task of co-ordinators is to **collaborate** with the appropriate lecturing staff to plan a total educational programme that includes both theoretical studies and experiential learning. Together, lecturing staff and co-ordinators can speculate on the most appropriate kinds of experiential learning assignments, determine which curriculum objectives are most likely to be achieved through experiential learning and help learners relate their experiential and theoretical studies.

Owing to the necessary collaboration between co-ordinators and lecturing staff, it is important that co-ordinators have academic qualifications that ensure a collegial relationship. It is also desirable, but not always possible, that these qualifications be in the same field of study as that of the learners they serve.

It is difficult to say how many co-ordinators a programme should employ. This depends on the number of learners, the distribution of learners among different curricula and the availability of employment opportunities. Generally, when a programme is just being initiated, co-ordinators must spend a considerable amount of their time meeting prospective employers, explaining the programme and "selling" their learners. Consequently, learner loads are necessarily small, seldom more than 25 per co-ordinator. Later, as the "job bank" builds up, co-ordinators can work effectively with more learners, in some instances with as many as 100.

It is also the case that jobs for learners in some curricula are easier to find than in others. Locating jobs for engineering learners is often easier than for learners studying history or philosophy. Thus, it is not uncommon to find engineering co-ordinators having larger learner loads than arts and humanities co-ordinators.

In a recent survey (Jacobs) [7] with 53 responses from co-operative education offices (South Africa 10, overseas 43), 32 of the respondents reported that they had a centralised system of co-operative education, whereas 17 institutions employed a decentralised model. The other institutions regarded the co-operative education function as part of the normal duties of academic staff.

The ratios of experiential learning learners to co-operative education staff were reported as being as follows:

- Only overseas institutions 88 : 1
- South African technikons 234 : 1
- Average for all 53 institutions 101 : 1

For very large programmes, co-ordinators sometimes have assistants working with them, but this is infrequent. What is essential, however, is that there are support staff to handle co-ordinator correspondence, appointments, travel arrangements and records. The number of support staff needed depends both on the number of co-ordinators and the learner load of these co-ordinators.

Of course, decentralised programmes do not require elaborate staffing, although staffing is replicated for each programme. Typically, the only staff members needed are a director/co-ordinator and a support person. For very small programmes, both persons may devote only part of their professional time to co-operative education; the director/co-ordinator perhaps teaching and the support person having other support responsibilities.

3.5 Management board

A management board can be constituted in accordance with technikon policy to regulate the working of the co-operative education programme. The board may consist of the following members:

- The vice-chancellor or his/her nominee

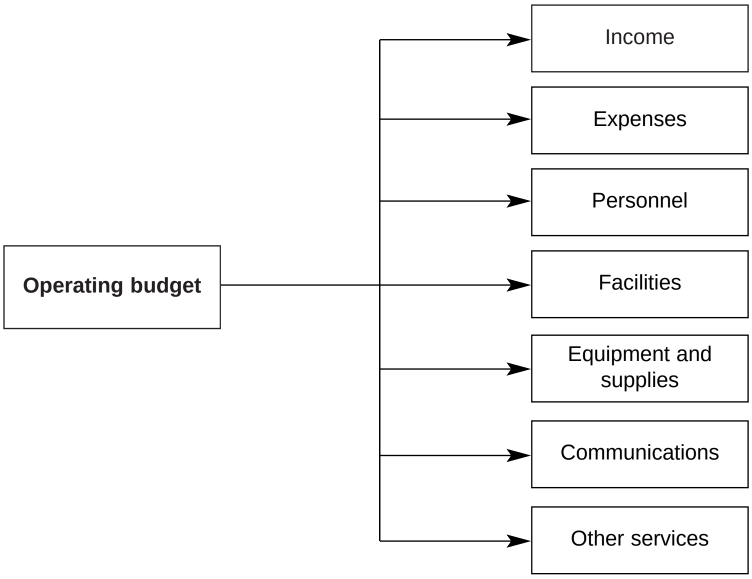
- A person not employed by the technikon (preferably a senior person from commerce, industry or the public sector)
- Two persons employed as academics by the technikon
- The director/head of department of the co-operative education unit

The management board typically meets at least twice each year.

4. ADMINISTRATION / MANAGEMENT OF A CO-OPERATIVE EDUCATION UNIT

4.1 Operating budget

The following aspects, shown in the diagram below, will be addressed when discussing the operating budget:



4.1.1 Income

Income for the co-operative education programmes will, most likely, depend on the technikon budget as it is unlikely that subsidies for experiential learning will meet salaries and other expenses. Other sources of income may include class fees, levies, donations by companies or additional services offered by the co-operative education unit/office.

4.1.2 Expenses

The budget usually has a format of salaries, capital items and running expenses. The direct costs of operating a co-operative education programme are easy to calculate. The basic cost elements are personnel, equipment and supplies, communications, and other services.

4.1.3 Personnel

Personnel costs include costs relating to all the human resources used to achieve the objectives of the programme. Typically, these resources include a programme administrator, professional co-ordinating staff and support staff. The number of co-ordinators needed, as discussed in 3.4 above, depends on several factors, including the number of learners to be served, the time needed for co-op job development and whether the co-ordinator has been appointed on a full-time or part-time basis. At the outset, an average of about 25 learners per co-ordinator is about the maximum that can be handled. The ratio of learners to co-ordinators will likely change over time as co-ordinators become more experienced and relationships with employers are firmly established.

The time that teaching staff contribute to the programme (for example, participating in group interviews, reading and marking reports) should be charged directly to the co-operative education programme.

4.1.4 Facilities

Co-operative education programmes need physical facilities such as offices, reception areas and workrooms. These are seldom included in budgets, but they must be provided and are therefore programme costs. They may constitute a direct outlay of funds if the institution must obtain property for the purpose, but even if the facilities already belong to the institution, they are a cost to the institution that must be charged to some unit. In addition to the facilities themselves, there is the cost of servicing them. Again, depending on the accounting practices of the institution, these may or may not be charged directly to the co-operative education department. They are, however, real programme costs.

4.1.5 Equipment and supplies

Co-operative education programmes are labour-intensive and do not depend greatly on costly equipment. There will, however, be need for a photocopier, a fax machine, and a computer for each member of staff. These computers should be linked by a server to the rest of the campus. The budget must make provision for maintenance and regular updating of this equipment.

4.1.6 Communications

Co-operative education staff spend much of their time communicating with lecturing staff, visiting companies and organisations, learners on campus, and learners on experiential learning assignments. Other than in person, the principal modes of communication are the telephone, e-mail, fax and the post. Hence, expenses relating to postage, the photocopier, paper and any other stationery must necessarily form part of the budget. The computers, included under equipment, could also form part of the communications budget. It is virtually mandatory that all computers be equipped with modems and be linked to telephone lines for access to e-mail servers and, possibly, the Internet.

4.1.7 Other services

This is a category for budget items that do not fit into any of the above categories, but are a part of the cost of operation. Other services include staff travel needed to develop placements away from the institutions and to attend appropriate professional meetings. They may also include membership fees for professional associations such as SASCE and WACE, consulting and training services, conferences and perhaps entertainment costs such as hosting luncheons or sponsoring "thank you" dinners for companies and organisations.

Besides these direct costs, there are possible hidden costs that are hard to quantify.

4.2 Co-operative education adminisrative unit

When starting a co-operative education programme, the question to consider is whether or not to establish a co-operative education unit/office. An administrative unit responsible for co-ordinating co-operative education must be established well before the starting date of the co-operative education programme(s).

The unit/office of co-operative education should, preferably, report directly to the chief academic officer of the institution. This officer should appoint the programme director/head of department. As regards qualifications for the appointment, the director/head of department should have a terminal degree in some academic field to be represented in the programme, have both academic and administrative experience, be able to relate well to all the programme constituents (learners, other administrators, academics and employers), have a strong belief in and commitment to the potential of co-operative education, and still be flexible enough to explore new ways of achieving objectives. It is not possible to suggest a specific salary for the director/head of department, but this salary should be commensurate with those of other academic department heads within the institution.

The director/head of department will be responsible for employing the remaining staff of the department. The first staff member to be employed should preferably be a support person/secretary and then one or more co-ordinators, as required. The support person should have word processing skills and be sufficiently computer-literate so as to experience little difficulty in using the required software. As this person, at least at first, will also perform the functions of a receptionist, the director/head of department should seek someone with good "people skills".

Co-ordinators become the heart of the co-operative education programme. It is they who interact most with learners to plan and reflect upon their work experiences, who establish collaborative and collegial relationships with lecturing staff, and who develop close working ties with companies. They need to act as educators, while also understanding the workplace and its employment needs. They must have appropriate academic qualifications, preferably in the same field as their learners, so that they can work with learners as educators and with lecturing staff as colleagues. Experience as practising professionals in their fields would be useful as they seek to establish working relationships with their industry and business counterparts. Their salaries should compare favourably with teaching staff with similar credentials and experience.

4.3 Administrative services

Here administrative services refer to the control and administration of all activities which serve as support services, so that the co-ordinators and directors/heads of departments can manage all the components of co-operative education effectively. These functions can be divided into six categories, i.e. advancement of co-operative education, employer data, public relations, reports, learner affairs and research development.

Support staff generally perform the following duties [8]:

- Preparation of reports/general correspondence/documents/pamphlets
- Internal liaison, liaison with visiting employers and liaison with SASCE
- Arranging interviews for co-ordinators with employers
- Data capturing
- Handling of logbooks, technical reports
- Registration of learners for experiential learning
- Enquiries (telephone and fax and visitors)

4.4 Advisory committee

The co-operative education unit may form its own advisory committee to provide counsel on proposed policies, planned procedures and unresolved issues. Alternatively, the co-operative education unit must interact closely with advisory committees of the academic departments. In any event, the committee(s) should consist of lecturing staff from the relevant subject areas, companies that have agreed to provide co-operative education opportunities, other institution administrators whose areas of responsibility may be affected by the programme and who can bring an institution-wide perspective to deliberations, and learner representation.

The advisory committee should be consulted frequently about real issues and problems. Nothing disillusions a committee faster than not being called upon to do what it was created to do.

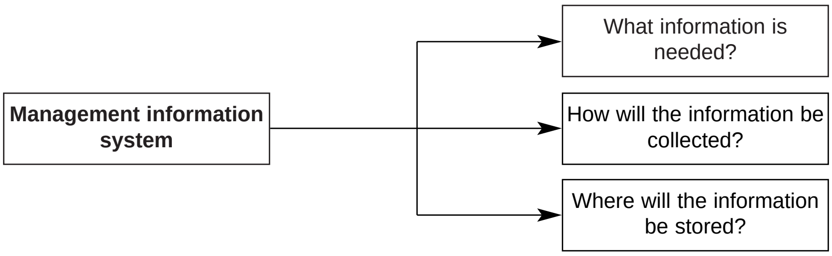
4.5 Co-operative education marketing plan

A plan to market the co-operative education programme is essential. The following elements should at least be covered by this plan:

- A general introduction to co-operative education for the institutional community and the surrounding community

- Publication of policies affecting the programme and participants
- Development of collaborative relationships with companies, professional bodies and control boards, and securing of placement opportunities

4.6 Management information system



The above diagram shows the three questions that need to be answered with care so that a management information system can access needed and accurate information.

A great deal of information is generated while enrolling learners, contacting companies, working with lecturing staff, placing learners on experiential learning assignments, monitoring learners in placements, and assessing learner's experiential learning performance and learning outcomes. This information needs to be accessed frequently, easily and quickly. This becomes the logic behind establishing a management information system before the programme begins. The objective of a management information system is to be able to **access needed and accurate information**. We now discuss in more detail the three questions that must be considered carefully if a management information system is to achieve this objective:

4.6.1 What information is needed?

Decisions regarding what information needs to be collected are determined by the information that is necessary to function properly and the reporting requirements of the programme. For example, to function it is obviously necessary to know who the learners are and what companies are involved. It is also important to know which learners are placed with which companies at any given time. Possibly, the administration or some outside governmental agencies will periodically require reports on the number of experiential learning learners, their fields of study, and where they are placed. Analysing one's information needs is the first step in building a management information system. It should be noted that there is a strong inclination among many co-ordinators to want more information than is necessary or than they will use. This can lead to cumbersome and overburdened systems. A good way to avoid this is to plot how each bit of information collected will be used in programme operation and to construct mock reports. Any data not used for either programme operation or reporting is probably not needed.

4.6.2 How will the information be collected?

Two principles should guide, but not control, the collection of data. As far as possible, it should be collected from its source and, if it already exists in an accessible form, it should not be collected again. For example, when learners first register for experiential learning, it would make sense to have them complete a form that calls for their name, major field of study and current address. This data certainly exists elsewhere in the institution, but it is probably simpler to ask learners to complete a short form. On the other hand, to determine eligibility, it may be better to obtain learners' results from institution records than from the learners themselves. Co-ordinators will be responsible for obtaining pertinent data regarding companies and for relating this to individual learners.

There is a tendency, to be avoided, to collect data redundantly. To illustrate, co-operative programmes need at least two databases: one of learners and another of employers. With regard to learners, we need to know their names and current addresses, their major fields of study, their academic records, and their co-op employers for each term for which they have been co-opted. Regarding employers, we need to know their names and addresses, the jobs (with descriptions) set aside for co-ops, and which of our learners have co-opted with them and when. Since, at some point, we will want to relate data that resides in these separate databases, we tend to collect the same information for both databases. As anyone who has ever worked with relational databases knows, it is necessary to have a link (usually a code number or name) between the two databases. However, storing the same information in both is unnecessary.

4.6.3 Where will the information be stored?

The simple answer to this question is that all information for the management system should be stored in a safe place where it can be accessed easily. For very small programmes, a lockable file drawer may be sufficient. For most, however, computer storage is warranted and preferable. The most efficient arrangement is for all staff to have workstations linked to a server. These workstations should provide access to learner records through modems or some hard-wired linkage. There are several powerful and "friendly" relational database software programs available with which an information system can be designed. These programs make it quick and easy to find the needed information from several different, but related, databases, and reports required on a regular basis can be pre-designed so that they can be reproduced at a moment's notice.

Regardless of whether a management information system is designed or not, data will be collected and stored, and someone will try to retrieve it. It is far more efficient and useful to design a system based directly on the programme's needs.

4.7 Evaluating the programme

There are two kinds of programme evaluation: **formative** and **summative**. Formative evaluation is evaluation of the programme as it is being developed and is functioning. It is a check of where the programme is in relation to strategic objectives. It will report answers to questions such as "Are we meeting our goals with respect to the number of learners co-opting from each of the participating academic areas?", "Are we developing sufficient co-op assignments for each of the participating academic areas?", "Are our learner recruiting strategies working?", "Are learners satisfied with their co-op assignments?", "Are we relating well to the academic areas?" and "Are co-op employers continuing to hire our learners after having hired one or more?". Many questions relating to how well the programme is progressing can be answered from information residing in the management information system and reports can be provided regularly.

Whereas formative evaluation is ongoing evaluation, summative evaluation is conducted after a programme has been in existence for some time. It is more formal, and is usually conducted by outside consultants. The purpose of summative evaluation is to provide the staff and institution with a comprehensive overview of the programme. The basic question for which it seeks a detailed answer is "How well is this programme achieving its stated goals?". By means of records, questionnaires and interviews, data is collected from co-op staff, teaching faculties, institution administrators, learners and co-op employers.

5. ROLE OF THE CO-OPERATIVE EDUCATION CO-ORDINATOR

Note that this document refers to two types of co-ordinators. The first is a co-ordinator who is assigned to the co-operative education unit/office on a full-time basis, and the second is a co-ordinator who is a member of the lecturing staff and teaches a number of subjects. This person has the additional responsibility of co-operative education work in his/her academic department.

The respective responsibilities of these co-ordinators will, to a large extent, depend upon the model (centralised, decentralised or integrated) of co-operative education that is used by the institution as well as the ratio of learners to co-ordinators.

5.1 Responsibilities of the co-ordinator

The co-operative education co-ordinator is a full-time member of staff who is assigned to the co-operative education unit/office. This person is also an academic in the full sense of the word. His/her primary responsibility is to co-ordinate and supervise the co-operative education of an assigned group of learners. However, the co-operative co-ordinator also serves in a multifaceted capacity as placement counsellor, salesperson, educator, administrator, and referral agent [9]. The role of the co-ordinator will, to a large extent, depend on the model employed for co-operative education.

The following list may serve as key performance areas for the work of the co-ordinator:

- Negotiate/identify placement opportunities
- Ensure quality placement opportunities
- Provide quality criteria for learners' experiential learning experiences
- Provide quality criteria for learner preparation for placement opportunities
- Assess learner progress (lecturer/co-ordinator)
- Administer and organise the co-operative education procedures
- Develop professionally

The duties of the co-ordinator may include the following [10]:

- Briefing learners on experiential learning positions, preparing a curriculum vitae and applying for placements
- Liaising with industry to secure suitable training positions
- Briefing learners on what is expected of them during experiential learning

- Briefing learners on work ethics and interview skills
- Conducting personal interviews with learners, assessing their expectations and referring them on an individual basis to companies with available training positions
- Visiting learners at companies to monitor their progress and to give guidance and assistance
- Identifying and recording inputs that companies want to make towards syllabuses and/or short courses
- Identifying experienced people from industry and inviting them to serve on the technikon advisory committees
- Acting as a clearing house for forms from mentors and learners
- Providing lecturing staff with lists of learners placed for experiential learning
- Acting as a link between the technikon academic departments and companies
- Establishing and maintaining learner records for counselling and placement purposes
- Preparing routine correspondence and other paperwork required for daily operations
- Developing documentation and other promotional materials
- Liaising with learners
- Liaising with companies

The primary aim of this system is to ensure a smooth and efficient transition from theoretical studies to the company, i.e. to match, as effectively as possible, the learner's expectations with the needs of the company.

In assisting the learner to integrate his/her academic studies with the practical demands of the workplace, and to become a productive and professional worker, it is helpful to establish a profile of both the learner and the company.

In addition, the co-ordinator should review the learner's initial curriculum vitae and make suggestions for improvements. The CV should then be typed and copies made for the co-ordinator's file. This file should also include notes from each meeting with the learner.

An important task of the co-ordinator is to collaborate with the appropriate head of department to plan a total educational programme that includes both theoretical studies and experiential learning. Together, lecturers and co-ordinators can speculate on the most appropriate kinds of assignments, determine which curriculum objectives are most likely to be achieved through experiential learning, and help learners relate their placement and classroom experiences.

5.2 Promotion/marketing of co-operative education

The following techniques have proven useful to co-operative co-ordinators in marketing the various co-operative education programmes [11]:

- Always identify and contact the "decision-maker" within a company first. This will require some prospecting. Leads can be obtained from sources such as membership directories, alumni, learners and the placement office.
- Show the company that you have their interests, as well as the learners' interests, at heart.
- Discuss specific aspects of a problem with the mentor and deal with problems one at a time, for example placement criteria.
- Explain to the mentor that you will assist with any problems that may arise relative to the learner.

5.3 Placement of learners

The placement process generally begins with group orientations to review the philosophy of co-operative education, required forms to complete, procedures of placement, types of placements, rules and regulations, the art of interviewing, and the writing of a curriculum vitae.

Once the learner has formally applied for an experiential learning position, the co-operative education co-ordinator may conduct a formal interview with the learner. During the interview, the co-ordinator should attempt to secure detailed answers to the following:

- Date to begin experiential learning
- Biographical information, e.g. address and telephone numbers
- Placement parameters, such as geographic and transportation restrictions and placement preferences
- Previous practical experience — full-time and part-time
- Extra-curricular activities
- Any questions or concerns that arise from orientation sessions

The process of matching the learner's qualifications and interests with a company's requirements is at best a difficult task. While it is nearly impossible to find the perfect match for each learner and company, the co-ordinator should attempt to find the most appropriate learner(s) for each placement position. The success of this effort can ultimately determine the success or failure of the technikon's co-operative education plan.

When assessing each learner, the co-ordinator should consider the following:

- Examination results
- Personal qualities
- Geographic and transportation preferences and restrictions
- Company requirements
- Learner preferences

Based on these placement parameters, the co-ordinator will normally guide the learner in selecting several companies with which to arrange interviews for placement positions. Most of these interviews will take place on campus; however, learners are sometimes reimbursed for any travel expenses incurred due to off-campus interviewing. This process of allowing learners to be interviewed by more than one organisation is called open interviewing. It also implies that organisations can and will interview more than one learner for each position.

In the final phase of selection, most learners will arrange interviews with a number of companies before an offer is made and accepted.

5.4 Follow-up

A primary duty of the co-operative co-ordinator and/or the faculty co-ordinator is to follow-up on learners in placement positions. This requires regular, scheduled, personal visits to companies as well as learner debriefing meetings.

Visits should be timed so that companies and learners have time to prepare for appraisal. The learner in the placement position is usually given two to six weeks before the initial visit. As some learners may be situated far from the technikon, the frequency of visits will vary; the telephone is of course also an excellent medium by which to gather follow-up information.

Once learners have completed their experiential learning experience, it is essential that they be debriefed once back on campus. This debriefing gives learners the opportunity to express their reactions and impressions of the experience and to review their mentor's evaluation with that of the co-ordinator.

5.5 Assessment of learner progress

The progress of learners in placement positions must be assessed from time to time. The mentor should be supplied, in advance, with assessment forms from the co-operative education unit/office.

The purpose of the mentor's assessment is to provide the learner with feedback on his/her performance and to summarise both strengths and weaknesses. Before the end of the semester/term, the assessment form should be completed by the mentor and then discussed with the learner. In addition, the progress of learners should be assessed by the co-ordinator designated by the academic department.

6. DOCUMENTATION

As the co-operative education function at the technikon is developed, it will become necessary to draw up policy documents governing co-operative education in general, and its participants. These policies cover matters such as eligibility to participate, registration for experiential learning, responsibilities before the first placement experience and responsibilities while placed at a company for experiential learning. All such statements should be collated into a handbook or guide. This handbook should provide clear details of procedures and responsibilities so that learners will fully understand all that is expected of them. It is also a sound practice to develop a companion handbook for companies delineating what they may expect from the institution and what is expected of them.

6.1 Policy document

A policy document setting out the principles and procedures of co-operative education at an institution is perhaps the most important set of guidelines for a co-operative education department/unit. **Ideally, the following topics should be addressed in this document:**

- **Mission statement of the technikon and the co-operative education philosophy**

  These should reflect the principles of co-operative education.

  As the new Act transforms accreditation criteria into standards based on outcomes assessment, co-operative education becomes even more attractive for staff and learners as the emphasis is on occupationally directed career development. Co-operative education should then be seen as the basis for partnerships with commerce and industry.

- **Definition of co-operative education**

  This should reflect that co-operative education is a programme formally integrating the learner's academic studies with experiential learning.

- **Principles of co-operative education**

  The academic and experiential learning components are interdependent, with the academic component usually being offered by tertiary educational institutions, and the experiential learning being completed with a participating organisation. See chapter 2, "Nature of co-operative education".

- **Advantages of co-operative education**

  There are a number of advantages of co-operative education for the technikon, the learner and the employer. For example, co-operative education strengthens relationships between companies and the technikon.

- **Respective roles of:**

  - the technikon, to provide theoretical studies and practical/ laboratory work

  - the participating organisation, to provide opportunities and support for experiential learning

  - the learners, to develop competence through the integration of theory and practice

- **Eligibility for experiential learning**

  This stipulates the criteria for participation in experiential learning.

- **Control of experiential learning**

  This is the management of experiential learning.

- **Recordkeeping**

  Each instructional programme should have an approved curriculum for experiential learning. Evidence of experiential learning activities should be maintained for recordkeeping purposes.

- **Learner registration**

  The learner should register with the technikon during experiential learning.

- **Learner assessment**

  An indication should be given of the methods used and the person/body responsible for measuring the outcomes of the experiential learning.

- **Monitoring of progress**

  An indication should be given of the methods used for assessing the progress of learners in terms of predefined learning objectives for a specific programme. This may include information regarding visits to the workplace, postal and electronic communication and accreditation of companies.

- **Recognition of prior learning**

  The method and criteria used for accreditation of previously acquired experiential learning should be stipulated.

- **Costing and funding**

  Guidelines to provide resources for co-operative education should be given.

- **Disclaimer**

  It is important that all contracts in terms of which the technikon places learners at a company or institution for co-operative education purposes contain a disclaimer whereby any delictual liability for accidents occurring at the institution/company/workplace is excluded. An example of such a disclaimer in the contract concluded with the learner reads as follows:

  > *Technikon XX is not liable to the learner or any third party for any damages, injury, loss of life or amenities caused in whatever manner to the learner at the workplace where the co-operative education takes place.*
  >
  > *Despite the aforementioned, it is the responsibility of the learner to inform Technikon XX in writing of any unsafe or unhealthy conditions in the workplace where the learner has been placed.*

  In cases where the learner reaches an agreement separately with the institution or company regarding his/her co-operative education, the technikon is not liable for any damages, injury, loss of life or amenities caused in whatever manner to the learner at the workplace and therefore no disclaimer is needed.

  Such a disclaimer should also be placed in the technikon rules and regulations, learner information books, etc.

The policy document should also outline the procedures or the course of events if a learner does not show satisfactory progress with his/her experiential learning. For example, the period of experiential learning may be extended and the learner can then be expected to demonstrate his/her proficiency by way of a competency-based test.

Guidelines should be given for dealing with misconduct and other misdemeanours, and care should be taken that these are in line with general policy of the technikon.

The policy document should be presented to the management/senate for approval and inclusion in the official documents of the institution. Copies of the policy document should be distributed to the heads of all the academic departments and the management of the institution.

6.2 Documentation of learning material

The syllabus or learning material for each course of study (instructional programme) should be set out in a logbook or other suitable format. While personnel of the co-operative education department/unit are not directly responsible for compiling this document, they are in a position to provide guidance and assistance.

The principal pedagogical issues to be resolved relate to the **"who"** and the **"what"**, i.e. who will establish the learning objectives, select the appropriate learning experiences and assess the learning; and what will be the learning objectives, learning experiences and means of assessment.

Co-operative education links theoretical studies with experiential learning. It functions within the fields of study of electrical engineering, management, clinical technology, and many others. An electrical engineering co-operative education programme is therefore a curriculum that includes theoretical studies in the experiential learning.

As experiential learning is integrated with theoretical studies, it should be treated as a "subject" within the curriculum, no different from other subjects within the curriculum [12]. Regarding the issue of **who** establishes the learning objectives, curriculum planning is the responsibility of the lecturing staff and the co-operative education professionals for that faculty who collaborate with the advisory committee. As a team, these people formulate objectives, select and devise learning experiences, and assess the learner's learning. Representatives of companies and organisations should also be included on the curriculum planning team, and the relevant professional board should be consulted. This inclusion may be of particular importance in professional fields of study for which they can communicate current practices and trends in the field.

Regarding the issue of **what** the learning objectives will be, we may ask ourselves the following question: "What learning objectives should we formulate?". It has already been suggested that the team of lecturing staff and co-operative education professionals is responsible for establishing learning objectives for the curriculum. In fact, some objectives to be achieved through co-operative education cannot be formulated until it is known where the learners will be placed. It would be quite appropriate for the experiential learning planning task force to familiarise itself with typical objectives and to discuss these with the curriculum team for its consideration.

It is important to bear in mind that we are not concerned with two sets of learning objectives: one for theoretical studies and the other for experiential learning. Rather, we wish to link or integrate the two so that they form a coherent set. Any or all of the following objectives may be appropriate, but decisions should be made within the curriculum planning team. The following learning objectives are often specified for co-operative education learners:

- Apply theoretical learning during their placement
- Assess their career choices

- Explore their career choices
- Learn about company expectations
- Develop interpersonal skills

These are appropriate and achievable objectives. However, it is suggested that whatever objectives are finally specified, they be formulated within the curriculum planning team.

Two additional objectives should also be taken to the curriculum planning committee for consideration. As behavioural statements, these objectives are **problem-solving skills** and **reflective practice**. They are generic objectives; their content areas will be determined by the field of study and the particular experiences of learners. They are also important thinking skills that most educators agree should be mastered for effective participation in a rapidly changing world. There is reason to believe that experiential learning provides a wonderful opportunity for learners to practise these skills.

Learning experiences are planned to help learners achieve stated learning objectives. Whether viewed as an addition to a curriculum or as a curriculum linking classroom studies with real-life situations, co-operative education is a complex of experiences designed to enhance learners' learning. The paradigm of co-operative education experience is straightforward.

The training manual may contain some or all of the following information:

- Advisory committee details
- Objectives of experiential learning
- Information for the company
- Information for the mentor
- Information for the learner
- Learning material/syllabus
- Projects
- Assessment of learner progress

6.3 Forms

The co-operative education department/unit uses a number of forms for administrative purposes. These usually include the following:

- Learner applications for experiential learning

- Data capturing of information regarding learners in placements
- Data capturing of company information
- Accreditation of placement stations
- Visits to experiential learning learners
- Reporting of results to examination departments

The co-operative education department draws up these forms to suit its requirements.

7. CURRICULA OF LEARNING MATERIAL

7.1 Introduction

Co-operative education, with its emphasis on career-oriented education, attempts to meet the interfaces between the future labour force and industry. It therefore needs the co-operative involvement of the learner, industry and educational institutions.

7.2 Aims

- Involving industry in defining the final product in terms of a career proficiency profile is not only useful, but essential.
- With a clearly defined proficiency profile as final product, a programme can be designed to meet this aim [13].

7.3 Method

Companies should translate competencies into a series of tasks that must be performed within a specific working environment in industry. This working environment is defined by a series of projects or subject areas. These projects can be divided into primary projects and secondary projects with the aid of a questionnaire specifying the scope, frequency, importance and level of tasks. An empirical formula can be derived to facilitate decisions. The tasks that need to be performed within these projects define the competency. The frequency and importance of these tasks determine the scope of the competency, and the level at which the tasks have to be performed indicates the level of the competency.

A final programme structure must be designed, and a decision taken on the level of development that would produce the first exit levels of competent workers. A programme must also be compiled for the required academic component supported by the relevant number of experiential learning projects; the extent to which this course structure and content comply with the course objectives must be determined. The tertiary educational institution has the educational mandate to ensure that the academic and experiential learning components comply with the required standard. The criteria for evaluation may be selected on the basis of usefulness, intellectual standards, aesthetic or ethical norms, product quality or process proficiency, depending on the specific aim.

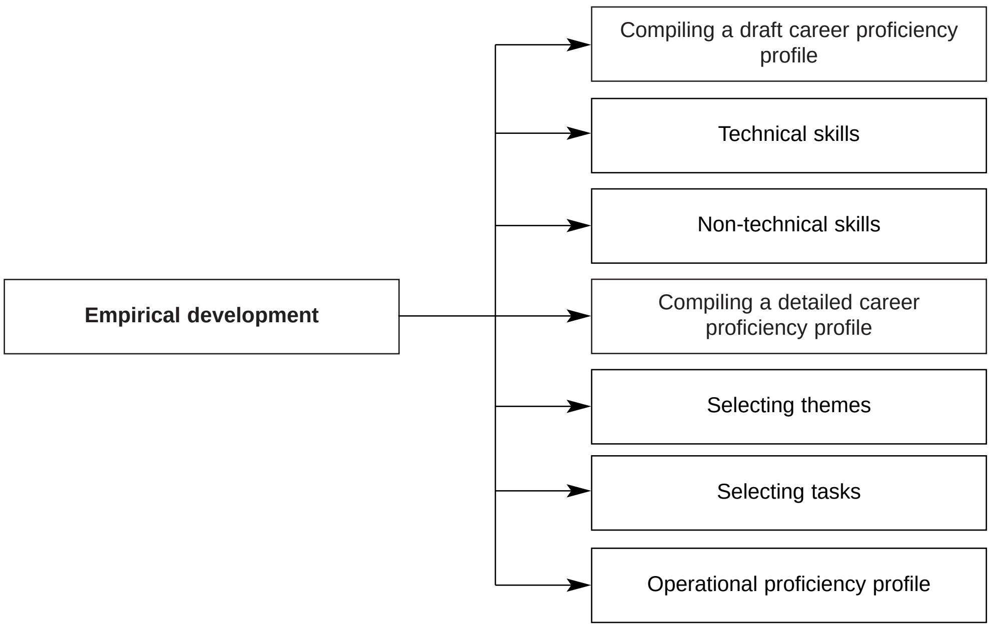
There should be optimal structuring of the total curriculum, i.e. the experiential learning and classroom/laboratory components should support one another. Compiling a market-driven experiential learning programme requires a well-structured curriculation process.

It is important to note the needs and expectations of commerce and industry, as these are the end-users of the educational product. However, learner expectations should also be taken into account during the process of curriculation. It is only by combining the efforts of higher education with those of commerce and industry that the new demands of an information society can be met.

To compile a market-driven experiential learning programme, the required outcome must be clearly defined. This outcome will reflect the needs and expectations of both the learners and the companies, and can be defined as the career proficiency profile. In turn, this career proficiency profile can be defined in terms of the total working milieu (primary and secondary themes) as well as the skills (technical and non-technical tasks) that should be demonstrated within this working milieu. In order to do this, an empirical investigation should be conducted by regarding the participating companies as the end-users of the product.

7.4 Empirical development

In addressing this topic, we will discuss the following aspects:



7.4.1 Compiling a draft career proficiency profile

When preparing the syllabus for a particular course, it is necessary to begin with some type of job description that will enable one to identify a number of themes as a framework for the course.

The relative importance of each theme can be determined by referring to the number of respondents who consider that the theme should be included in the course. In the method that follows, an empirical formula is used to calculate the level of curriculation for themes, and then for specific tasks within themes. This method may be used for theoretical subjects as well as for the content of experiential learning programmes.

Once the course content has been grouped into broad themes, these themes can be refined by presenting them to a panel consisting of academics and employer representatives. The purpose of this is to ensure that:

- the final theme matrix excludes any overlapping themes
- the course content is interpreted in themes which are relevant in the working environment
- each theme is also interpreted as a number (e.g. six) of competencies
- the list of themes is extended if it does not cover all the needs required

In order to group course content into themes and to refine these themes, information must be gathered regarding the following:

- Division of the existing curricula into themes
- Basic background knowledge required
- Categories of skills required to execute the tasks
- Tasks executed in the work situation
- Frequency of specific tasks
- Relative importance of the various tasks
- Level at which the tasks are to be performed

To divide the existing curricula into themes, skills that are common to various subject areas must also be grouped. Here we refer to certain modes of communication, calculations, as well as applications of theories and techniques.

Basic background knowledge is required to execute tasks or to acquire certain skills. The level of background knowledge can be divided into levels such as understanding principles, techniques and mathematical correlations, as well as making sample calculations and acquiring new knowledge.

We will now discuss the categories of skills that can be used:

7.4.2 Technical skills

Technical skills include the following:

- Handling skills
- Knowledge skills — Knowledge of specific facts and terminology; methods and techniques for dealing with certain facts, such as conventions, sequences, classifications of categories, methodologies and criteria
- Thinking skills and organisational principles, e.g. comprehension, application, analysis, synthesis and evaluation

7.4.3 Non-technical skills

Non-technical skills include the following:

- Communication skills, which can be subdivided into personal and interpersonal communication, and technical communication (compilation, use and presentation of technical information; design of technical reports, publications, training documents, etc.)
- Management skills, which refer to skills relating to planning, controlling, co-ordinating, evaluating and leading. The general management skills can be subdivided into self-management, leadership, administration, control and organisation. Technical management skills can be subdivided into planning and scheduling work/procedures as well as responsibilities/ accountabilities.

Tasks executed in the workplace can be reported under the following headings:

- Frequency of the task, such as daily, weekly or monthly
- Importance of the task, such as essential, important, useful or not important
- Level at which the task is to be executed. The advanced level should refer to the achievement of optimal performance and quality of work, by way of complex procedures, specifications, etc. The intermediate level should refer to the execution of routine procedures/standard practices with limited instructions and control. The basic level refers to tasks executed using examples/detailed simple instructions, with regular instruction and control.

From the information gathered, a draft proficiency profile may be compiled. This then needs to be refined into a more detailed career proficiency profile.

7.4.4 Compiling a detailed career proficiency profile

To compile a detailed career proficiency profile, an accurate selection of themes is required. From the list of themes which have been identified as being either directly applicable or merely background knowledge, the required level of curriculation must be determined. The purpose of these cut-off points is to decide on the level of curriculation (see levels (a) to (e) in table 1 below).

7.4.5 Selecting themes

An empirical formula can be compiled for which:

- each progressive level includes the previous level
- the weight (G) assigned to each level (a to e) is calculated using both the scale value (S) and the number of respondents (N) up to that level
- the scale value (S) is determined by the relative level of curriculation required
- the order of themes becomes clear

Table 1 Levels of curriculation

Level (a)	Background knowledge — understand principles	(a)
Level (b)	Background knowledge — understand techniques	(a) + (b)
Level (c)	Background knowledge — simple calculations	(a) + (b) + (c)
Level (d)	Background knowledge — master new skills	(a) + (b) + (c) + (d)
Level (e)	Direct application — full curriculation	(a) + (b) + (c) + (d) + (e)

Calculation of cut-off points

(i) Levels of curriculation

Level (a) — Understand principles: This is the first and most basic level. As a point of departure, three points are awarded. Because all the more advanced levels include this first level, all the respondents are included in this level, i.e. $\sum N = Na + Nb + Nc + Nd + Ne$.

(Sa = 3) Relative scale value, Sa = 3

Level (b) — Understand techniques: This level excludes level (a) but includes the more advanced levels. $\sum N = Nb + Nc + Nd + Ne$. The respondents of level (a) are not included.

(Sb = Sa + the added value for this level) Relative scale value, 3 + 1= 4

Level (c) — Simple calculations: The third level excludes levels (a) and (b) but includes levels (d) and (e). $\sum N = Nc + Nd + Ne$. The respondents of levels (a) and (b) are not included.

(Sc = Sb + added value) Relative scale value, 4 + 1 = 5

Level (d) — Master new skills: This level includes only level (e) but excludes all previous levels. $\sum N = Na + Ne$. The respondents of the previous levels are not included.

(Sd = Sc + added value) Relative scale value, 5 + 1 = 6

Level (e) — Direct application: full curriculation: This is the most advanced level. $\sum N = Ne$.

(Se = Sd + added value) Relative scale value, 6 + 3 = 9

Sum of the scale values: $\sum S = 27$

(ii) Weight (G) of level of curriculation =

$$\frac{\text{Scale value of the curriculation value (S)}}{\text{Sum of the respondents up to that level } (\sum N)}$$

The number of respondents suggesting that the curriculum of a specific theme be developed up to a certain level is indicated by (N), and the total number of themes identified is indicated by (T). A specific theme is indicated by (T_x).

(iii) The level of curriculation can now be determined using the following empirical formula:

$$\text{Level of curriculation for a theme} = \frac{(Na \times Ga) + (Nb \times Gb) + (Ne \times Ge)}{\sum G} \times \frac{\sum T}{T_x}$$

If this calculation shows a number of respondents required which falls between levels (c) and (d), then curriculation will take place up to the higher of the two levels, i.e. in this example level (d).

7.4.6 *Selecting tasks*

Tasks must be selected for each of the themes identified as being directly applicable and which require full curriculation. Again, companies should be asked to state which tasks are required for each theme. Using a scale of one to six, the frequency, importance and level of each task should be indicated. The arithmetic mean (X) for each element (i.e. frequency (f), importance (i) and level (l)) of each task can be calculated. The weighted average should be calculated in order to assign one value to a task that would include all three elements.

The weight of frequency, importance and level of each task can be calculated as follows:

$$\text{Weight (W)} = \frac{\text{Sum of scale values of task x}}{\text{Total number of respondents}}$$

The weighted average can then be determined by:

$$Wa = \frac{(f_X \text{ x } Wf) + (i_X \text{ x } Wl) + (l_X \text{ x } Wl)}{\{W_X(f) + W_X(i) + W_X(l)\}}$$

That is, the weighted average is calculated as:

$$Wa = \frac{[\text{Freq. x weight (f)}] + [\text{Importance x weight (i)}] + [\text{Level x weight (l)}]}{\text{Weight (f)} + \text{weight (i)} + \text{weight (l)}}$$

The tasks can be then be sorted in terms of the weighted averages. A cut-off point for determining which tasks to include or exclude can be based on the weighted average. From a summary of these tasks, an operational description of the profile can be compiled.

7.4.7 Operational proficiency profile

The relevant tasks render the information from which a job classification, job specification and job qualification can be defined.

The job **classification** refers to jobs according to the specific categories/ classifications. A classification can be made by referring to the tasks with the highest weighted averages and the skills required for these tasks. The six skills that are investigated are skills relating to handling, knowledge, thinking, communication and management as well as interpersonal skills.

The job **specification** refers to a specific job in a series. It is by describing the job in detail that the tasks and skills to be performed and demonstrated are highlighted.

A job **qualification** refers to the situation where proof of competency to fill a specific job is required. To determine the minimum entry level (into the industry) the job qualification must be defined in terms of criteria. These criteria refer to both (qualitative and quantitative) themes and tasks.

7.5 Setting aims and objectives

With the aid of the identified relevant themes and tasks, a detailed career proficiency profile can be compiled. This career proficiency profile serves as the point of departure for setting the aims and objectives of the course, i.e. designing the curriculum in detail.

To be able to perform a task, certain cognitive, affective and psychomotor skills must be mastered. The aims and objectives can be extended to include procedure outcomes and product outcomes. A systems approach would also include enabling skills (intellectual skills such as creative thinking and problem-solving; basic skills such as verbal communication and mathematical abilities; personality characteristics such as maturity and self-esteem) and functional skills (system concepts such as anticipation and monitoring; personal interaction such as functioning as an individual and as a member of a team; identification and evaluation; selection and application of technologies).

7.6 Evaluation

Planning of the evaluation concludes the curriculation design cycle. With evaluation, variables are measured using a valid, reliable and practicable instrument. Evaluating the information gathered helps to focus on aspects such as context, input, process, product and formative evaluation.

8. MONITORING OF EXPERIENTIAL LEARNING

To develop an effective system of experiential learning, it is essential to monitor the process in order to assess the progress of learners in terms of pre-defined learning objectives for the programme. Where problems or deviations arise, the department concerned should intervene with corrective action.

Accurate, up-to-date information concerning the experiential learning situation and learner progress is necessary to apply monitoring effectively, and therefore visits to learners and companies are necessary.

8.1 Visits by technikon staff

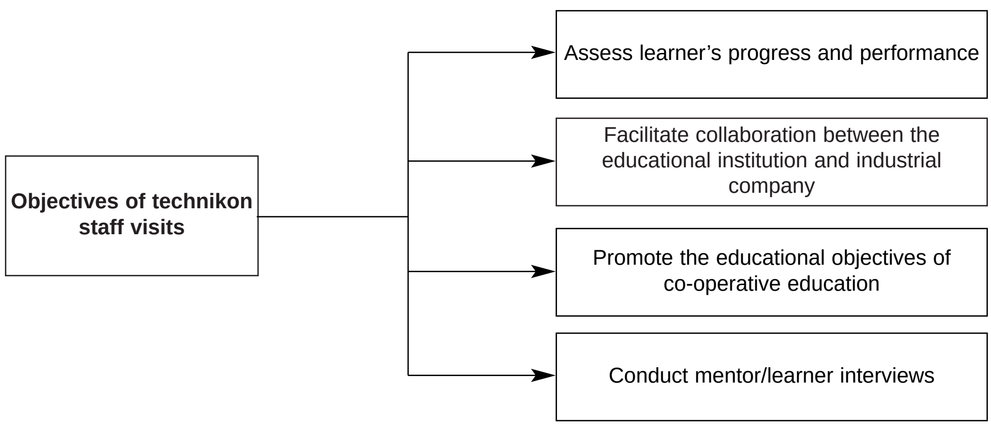
The following approaches may be considered:

- Visits by technikon staff
- Visits by an "agent"
- Postal communication
- Electronic communication
- Accreditation

Effective worksite visits by staff are essential for successful experiential learning programmes. These visits go beyond "seeing how the learner is doing" and achieve short- and long-term objectives [14].

The visits should preferably be carried out by persons who are suitably qualified and who have appropriate practical experience. For this reason, co-ordinators/lecturers should visit learners where they are placed in the company.

As part of our discussion of visits by technikon staff, we will address the following aspects, as shown in the diagram below:



8.1.1 Assess learner's progress and performance

The objectives of each visit must be clearly understood beforehand. Each visit should include discussions with both the learner and the mentor.

One of the most important objectives of the visit is to obtain the mentor's assessment of the learner's performance. Topics for this discussion have three main components, i.e. intellectual development, human/social development, and career or professional development.

It is advisable to prepare a form or rating sheet beforehand to serve as a basis for the discussions. This form acts both as a guide and a checklist to ensure that all the topics have been addressed.

Provision must be made for biographical information, e.g. company name, contact persons, learner names and student numbers. Discussion questions and/or rating scales may be used.

The completed forms and any additional notes must be filed and kept in the department as part of the academic records. Any action that may be necessary should be identified, implemented and recorded.

8.1.2 Facilitate collaboration between the educational institution and the industrial company

Staff visits should help to promote communication between the learner and the company/mentor, resolve conflicts/problems between the learner and the company/mentor and clarify the requirements of learner/company reports.

8.1.3 Promote the educational objectives of co-operative education

Staff visits should reinforce the objectives of co-operative education, and the role of the mentor as an educator. They should also strengthen the personal relations between the technikon, the learner and the company.

8.1.4 Conduct mentor/learner interviews

Some visits are routine, whereas others result from problems reported by learners or mentors. The most important visits are those made to determine progress. The crucial period of adjustment of learners to the placement position is the first five or six weeks, and this should be borne in mind when planning visits.

The visitor usually interviews the mentor first and then the learner.

Before focusing in more detail on the topics to be assessed, the learner's duties and responsibilities should be noted and details given of how they fit in with the company's plans.

If the visitor undertakes to attend to any matters, these must be carefully noted and the work completed as soon as possible.

Feedback should be given to the mentor and the learner. Most companies appreciate an appraisal of the training stations.

The number of visits to each mentor/learner during an experiential learning placement is determined by considering the following:

- Duration of experiential learning placements with each company
- Number of learners with the same company
- Geographical location
- Number of staff members available and times they are available
- Budget constraints

The route taken to visit companies must be considered carefully as it may be possible to include additional companies/learners along the way. When planning a succession of visits, the starting point is of course to identify the learners and companies that should be visited. The co-operative education unit/office can be of great assistance to co-ordinators in this regard as it compiles databases of learners who are busy with experiential learning for each term/semester.

During discussions with mentors, the visitor should try to determine whether the company will be prepared to place learners again in the following year/semester. This information should be passed on to the co-operative education unit/office.

Heads of department should identify certain members of staff to attend to experiential learning matters for the instructional programmes under their control.

Timetables and term/semester planning should allow for the release of these persons from some classes/labs/invigilation for experiential learning visits.

When designating experiential learning staff, the ideal situation is to use people who have exactly the right background for each programme so that they can manage learners in their particular field of study. However, this is not always feasible and one must consider using staff who have some related knowledge/experience of managing learners in two or more disciplines.

Studies of cross-programme worksite visits have shown that there are statistically insignificant deviations in the results of assessment by standard and cross-programme placement visits. The implications of these results are financially and educationally significant to co-operative education since cross-programme visits are cost-effective and meet the educational objectives of each programme [15]. Therefore, co-ordinators from one discipline may visit learners in another, or related, discipline. This is of considerable value when a company has learners across a range of disciplines.

8.2 Visits by an agent

In certain cases it may be necessary to consider appointing an "agent" to conduct certain visits on behalf of the technikon, or by collaboration between the technikons. For example, if a learner is placed in a foreign country for experiential learning, it should be possible to arrange with a university or other tertiary institution in that country to undertake a visit to the learner at the placement site.

It may also be worthwhile to consider using such an arrangement locally for visits to learners in remote parts of the country. As is the case for external examiners and moderators, a professional person in the area may be contacted for worksite visits. This may involve a fee, but could nevertheless lead to substantial cost savings.

Certain departments at a few technikons have implemented a "network" system whereby they undertake to visit learners from participating technikons who are busy with experiential learning in their area. The system has gained acceptance among those companies that have some experience with experiential learning.

Some training or a good set of documentation on procedures for visits to learners will be required to prepare such an agent, and companies must be informed of the arrangement beforehand.

8.3 Postal communication

To some extent it is possible to monitor the progress of experiential learning learners by using questionnaires and mentor/learner reports. Postal communication is, however, slow and is not directly interactive.

Questionnaires must be carefully designed to obtain as much relevant information as possible without becoming bulky or cumbersome, as the response to questionnaires is generally not good. A stamped, addressed reply envelope should be provided.

A method used by PACE University in New York to supplement visits consists of pre-printed cards which are given to learners before they leave for experiential learning. Once the learner has started with experiential learning, he/she is able to complete the cards and post them back to the institution at regular intervals.

8.4 Electronic communication

The telephone/fax/e-mail can be used to establish contact with companies/learners and is much more direct than the post. The telephone, in particular, allows for a spontaneous interactive situation.

While this method of communication can be used with the supervisor/mentor, it is not recommended for contact with learners.

8.5 Accreditation of experiential learning

Accreditation should be seen as a strengthening of the partnership between the technikon and companies. It is an expression of confidence in the experiential learning offered by a company.

Accreditation is preceded by discussions with the company and visits to the premises by technikon staff to ensure that the infrastructure is adequate for the prescribed experiential learning.

The technikon faculty/department must also be satisfied that learners will be guided by suitable mentors. A "checklist" must be prepared before the accreditation visit to ensure that all the aspects of experiential learning for the programme are addressed.

The head of department concerned notifies the co-operative education unit/office of the outcome of the accreditation visit, and the period for which accreditation is recommended. A certificate of accreditation may be awarded.

9. SKILLS DEVELOPMENT

The pace of change in the world of work requires a change of pace in the world of learning. Tertiary institutions have set out to equip graduates with relevant focused skills to meet the needs of today's society. Such preparation is no longer adequate. Radical changes are occurring in the work environment, and as a result the education of the graduate of the next century will also have to change [16].

Employment in the next century will be characterised by rapid and radical change. In business, especially, the global forces of competition, deregulation and new technology are creating the need for international organisations to respond rapidly to market demands. Consequently the shape of organisations is changing: delayering, outsourcing and the growth of multi-disciplinary team structures are some of the changes which are affecting the ways people work.

In the new world of work, graduate careers are very different. Gone are the days of having a job for life, with its planned career structure and company training schemes. Gone too are the clear functional identity and the progressive rise in income and security. Instead there is a world of customers and clients, adding value, lifelong learning, portfolio careers, self-development and an overwhelming need to stay employable. Future employers will require graduates who are **multi-skilled**, i.e. who have a combination of technological, economic and commercial knowledge as well as problem-solving, teamwork, linguistic, numerical and information technology skills.

A recent report introduces the concept of the **adaptive, adaptable** and **transformative** graduate of the future. The delayered, down-sized, information technology-driven, innovative organisation will require graduates who can work in teams, relate quickly to an evolving structure and not expect rigid lines of command and communication; people who can take responsibility, who are able to develop ideas, take on various roles and grow in the job. Ultimately, employers are looking for people who can do more than respond to change. They want adaptive, adaptable and transformative people to help them maintain, develop and transform their organisations in response to, or better still, in anticipation of change.

9.1 Evolving roles for graduates

The changing expectations of and new roles for learners will alter the “psychological contract” between companies and learners. In the past, learners offered loyalty and skills in exchange for the security of a stable placement. In the future, the new contract will be about flexibility and lifelong learning. Learners will need to develop a new range of skills to cope with the implications of flatter, leaner, more flexible organisational structures.

These adjustments will include the following:

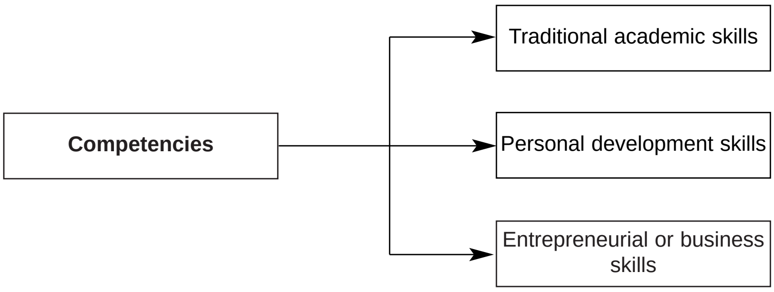
- Learners need to be prepared for a less clear career path and promotional ladder.
- Learners are likely to find that promotion and career advancement will be based on assessment of performance rather than on seniority.
- Working in a modern, delayered, flexible organisation requires the ability, tact and confidence to interact with a wide range of people, some of whom may be operating in a different cultural context.
- Learners need to be able to work effectively in project-oriented teams.
- Learners need to develop a horizontally and vertically integrated role — being self-sufficient in terms of secretarial and administrative skills, using information technology, and developing a broad range of knowledge and ability.
- Learners should expect to move around different areas within the organisation rather than stay within a specialist field.
- The flexible organisation of the near future is likely to impose substantial workloads and considerable responsibility on learners, with the expectation that they work flexible hours.

A new millennium demands new skills. The most significant challenge for learners will be to **manage** their ongoing **relationship** with **work** and with **learning**. This will require that learners have a field of specialisation, as well as a portfolio of enhanced personal skills such as those relating to negotiation, action planning and networking, added to qualities such as self-awareness and confidence. These are the skills required to be self-reliant in career and personal development; skills to manage processes rather than specialist, academic skills. They are as valuable in education as in the workplace, and as valuable to organisations as to individuals.

Learners, tertiary institutions and companies have a role to play in developing these self-reliant skills. Graduates must be able to flourish in a world of permanent change. The challenge is to identity those skills that should form an integral part of the teaching process and those that should be facilitated outside the academic curriculum. To achieve this change, it is necessary to move from a model of teaching knowledge to one of enabling learning that has an “outcomes-based” approach.

9.2 *Role of co-operative education*

A need therefore arises to educate the whole person. The "whole person" demonstrates three sets of competencies, i.e. traditional academic skills, personal development skills and entrepreneurial or business skills. The conventional academic model caters for the development of academic skills, but this model is no longer adequate to prepare graduates for the challenges of the next century.



In order to meet the changing requirements of companies, tertiary institutions must design programmes that go beyond content by encouraging independent learning strategies, while focusing on the ability to think systematically and to redefine problems. This innovative learning is not simply a question of relating the curriculum to the needs of the workplace; rather it is a matter of preparing individuals and society to act in concert in new situations.

Co-operative education plays a fundamental role in developing the personal and business skills that are part of the graduate's skills portfolio. The interaction of the academic world and the work environment will promote self-reliance in the graduate. The outcome will be a graduate who is aware of the changing world of work, takes responsibility for his/her own career and personal development, and can manage the relationship between work and learning throughout his/her lifetime.

How do we ensure that a co-operative education programme helps learners develop skills of self-reliance? What are the views of companies? What are learners' views? Are there models currently in use that achieve these objectives?

9.2.1 *Company's perspective*

Research conducted to determine the skills requirements of a representative sample of companies placing learners revealed the following:

- There were significant similarities across discipline boundaries, employment sectors and international boundaries, with many companies agreeing on the relative importance of the transferable skills or competencies required of the new generation of self-reliant learners.

- Interpersonal skills, along with flexibility, communication skills, and the ability to learn and apply new knowledge were the skills and attributes most highly rated by companies.

- Ironically, perhaps, relevant work experience or wider experience received the second-lowest rating. This would suggest that with the decreasing shelf-life of knowledge, companies are looking beyond content and focusing more on attributes and skills that will enable graduates to be adaptive, adaptable and transformative. In other words, specific experience matters less than the learners' capacity to learn and their motivation to do so.

- Computer literacy was in the top third section of desirable skills and qualities, reflecting a standard requirement for good information technology skills in a learner, regardless of the field of study.

- Interestingly, foreign language skills received a very low rating, even from mainland European companies.

- The low ratings of future leadership potential and commitment to the organisation reflect the reality that learners are not being placed with a view to lifelong employment within a single organisation, but rather with the realistic expectation that graduates will have at least six jobs in their lifetime, thus rendering company loyalty unimportant and future leadership potential almost irrelevant to a learner profile at entry level. This also has implications for the psychological contract between companies and graduate employees.

Overall, these findings are consistent with the earlier proposition that employers are seeking adaptive, adaptable and transformative graduates.

When asked about the role of institutions in preparing graduates to play a leading role in the changing work environment, companies expressed a remarkable consistency of views. In essence, they expect a qualification such as a degree to provide a **profound broad education** rather than attempt to train someone for a specific job. Companies expect learners to be intelligent, flexible, adaptable persons who are willing to learn and can deal with change. They assume that learners will have realistic expectations of the workplace and its culture, good team-working skills, be willing to take on responsibility, and be able to perform effectively. These are the characteristics of persons who can respond to change. Ultimately, however, companies are looking for agile graduates who can also anticipate and initiate change so as to help transform organisations.

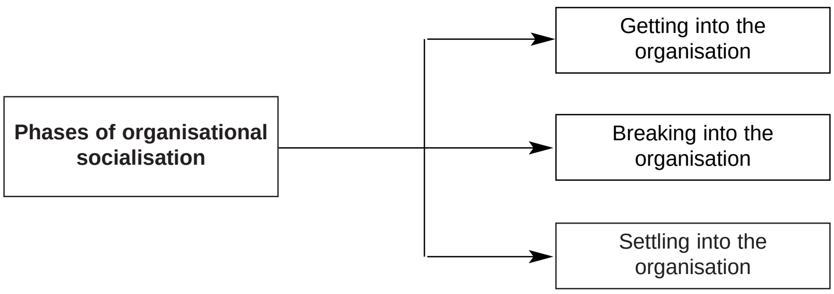
Companies were also asked for their views on the role of co-operative education in the development of personal and professional skills. There was consensus among organisations that co-operative education is the most effective means of helping learners develop attributes that ensure success at work. Companies also agree that placements help learners to develop specific work-related skills while providing a foretaste of workplace culture, thereby ensuring that graduates become effective more quickly.

9.2.2 Learner's perspective

In parallel with the above, it is interesting to examine undergraduate learners' perspectives on the ways in which co-operative education can enable learners to develop the most sought-after skills and attributes required by companies.

Many of these skills and attributes can be developed effectively through the socialisation process of co-operative education. A number of studies have been conducted by the University of Limerick to evaluate the experiential learning experience of learners. The first of these studies was based on in-depth interviews with learners during and after their placement experience, and the second study involved the administration of detailed questionnaires to a cohort of learners at different stages of their placement period. The purpose of this research was to determine to what extent the socialisation process experienced by the learner significantly influences the overall quality of the co-operative education experience.

Organisational socialisation is defined as the way in which employees are transformed from total company outsiders to participating and effective corporate members. The research studies conducted by the University of Limerick illustrate that the socialisation process is a complex one which is highly individualistic and influenced by a range of contingency variables within the organisational setting. Another study suggests that the process can be divided into three distinct phases, with different issues emerging during each phase. The three phases are as follows:



Getting into the organisation

This is a pre-entry phase when the learner starts building expectations. The relevant issues associated with this phase are sources of information, realistic placement previews, the recruitment process and anticipated outcomes of the placement experience.

Breaking into the organisation

This phase involves initiation into the placement position, establishing relationships and clarifying roles. The relevant issues are systematic orientation, ideal experiential learning characteristics, initial experiential learning assignments, the role of the supervisor, experiential learning experience versus expectations, initial surprises and reality shocks, and the degree of social support available to the learner.

Settling into the organisation

This is the final phase in the process when the learner will have adopted new values, relationships and behaviours. The relevant issues in this phase are actual outcomes versus initial expectations, personal change, and personalisation as a response to socialisation.

A number of factors are associated with learners' perceptions of a successful or unsuccessful experiential learning experience. These are as follows:

- **Realistic placement previews** play a significant role in providing the learner with a perspective on the placement and facilitate the clarification of learner and organisational expectations. This will result in a match between learners' expectations and the organisation's requirements by reducing the differences before commencing with the placement.

- The **recruitment process** plays an influential role in communicating the elements of the placement to the learner and in facilitating the formulation of initial placement expectations. Promises made at the recruitment stage that overstate the placement and its demands may disillusion the learner at a later stage.

- The role of **systematic orientation** and the need to match the initial tasks with the abilities and skills of learners are highlighted. These serve to minimise any initial fears the learner may have and act as a confidence-building mechanism.

- The **initial placement assignment** can set the framework for the overall placement experience. A learner who is presented with an appropriate initial assignment is more likely to internalise high standards and positive placement attitudes, and will be able to cope in a better manner with more challenging assignments later in the placement.

- Problems arise because of discrepancies between **expected** and **actual outcomes**. Learners should be encouraged to identify clear learning objectives prior to the experiential learning experience and to relate these objectives to the actual outcomes at regular intervals. This will allow them to monitor their own performance and to take ownership of the learning process.

- Relationships with, and support from, **supervisors and peers** within the workplace exert a strong influence on learners' perceptions of the experiential learning socialisation process. A supportive supervisory relationship is a prerequisite for effective socialisation. This highlights the need for supervisors to be made aware of the factors that contribute to a quality placement and to be informed of the programme's objective. They must be supported by top management and have flexibility in their role.

9.3 Conclusions and recommendations

Taking into account the main recommendations of companies and learner studies, how do we maximise the extent to which co-operative education enables learners to achieve the goal of self-reliance? How do we ensure that learners gain more than just relevant work experience and go on to develop the core skills most sought after by employers? The weaknesses in the co-operative education programme as identified by learners and companies are found in the preparation-monitoring-feedback cycle.

Company-learner-institution linkages that can enhance each of these phases often lack a formalised structure. This can ultimately act as a barrier to learning and limit the potential gains of co-operative education. In order to extract maximum value from the experience, the participation of companies, incoming and outgoing learners and the institution must be apparent across all stages of the preparation process.

9.3.1 Preparation

The process of preparation must start by involving both learners and companies. Companies should be more focused on preparing learners at the "getting-in" stage i.e. interviewing, recruitment and objective-setting processes. Formal structures must also be put in place to facilitate the transfer of learning between returning and outgoing learners. This would have the added advantage of enabling returning learners to think critically about their experiences, their achievements and the skills they have acquired, while also helping them to effectively communicate their learning to others, thereby extending the learning. Enhanced involvement of the returning learner and the company will ensure a closer correlation between learner interests and company requirements, creating more realistic expectations on both sides.

A work-preparedness skills programme [17] aims to empower learners with the skills that would assist them in finding employment in a highly competitive job market. Learners should be taught the value of career planning and career development from their first year onwards. There is also the need to ensure that learners have developed a sense of professional work ethics to confront the challenges faced in the world of work. Similar programmes should ideally be based in the co-operative education unit because of this unit's links with commerce and industry. Using learner performance feedback received during the experiential learning period, the placement officers, who market learners to companies, would be able to give advice on the needs of learners and the companies needs as regards recruitment.

The programme should be staffed by a co-ordinator who has a background in education or human resources, and who enjoys interacting with learners. It is necessary for the co-ordinator to be aware of the trends in recruitment and other work-related issues. As the position entails communication with various role-players, i.e. technikon staff and people in industry, the co-ordinator should have efficient written, oral and electronic communication skills. Other key skills include group facilitation, planning and organisational skills. The ability to design user-friendly materials for learners is also essential.

The following modules should be included in a work-preparedness skills programme:

- Self-assessment
- Skills required in the workplace
- CV writing
- Covering letters
- Interviewing techniques
- Networking
- Informational interviewing
- Work ethics and professionalism
- Presentation skills

Self-assessment: Continuous self-assessment is an integral feature of successful career development. Before compiling a CV, the learners should be encouraged to note their skills, interests, abilities and values, etc., in an inventory, because this will assist them in deciding on the type of working environment for which they would be best suited.

Skills required in the workplace: Learners should be made aware of the key skills required in their field of work, and should then work towards developing these skills through extramural activities and part-time work.

CV writing: Learners should be guided through this process by brainstorming ideas on the purpose, layout and components of a CV. They should be informed of the provisions of the Labour Relations Act so that they can guard against becoming victims of discrimination. Depending on his/her status, experiential learning or graduate employment, a learner needs to be able to compile a one-page CV or a more detailed CV, or both. Typical examples of CVs can be used as a guide. CVs should preferably be edited by the co-ordinator or a lecturer before being submitted.

Covering letters: The importance of a covering letter as well as its content and layout should be emphasised. Once learners have drafted such a letter it should, ideally, be edited by the co-ordinator or a lecturer.

Interviewing techniques: This module focuses on the purpose of the interview, preparation for the interview, behaviour during the interview and evaluation of the interview. Issues such as company research, dress code and body language should also be discussed. Learners should be briefed regarding common interview questions and guidelines for responding to these should be discussed. At this stage, learners would benefit from holding mock interviews with persons who will assess their progress.

Networking: The aim of this module is to raise learner awareness of networking as an effective means of finding employment. They should learn the strategies involved in tapping into the “hidden” job market.

Informational interviewing: This section focuses on getting learners to conduct some career research, and to make contact with practitioners in their field of interest. It is a similar concept to networking, and the two topics can be combined. Learners can formulate questions to ask their contacts and should be encouraged to visit a company. The aim is also for participants to draw up a database of employers, with contact details and other relevant information. These employers can then possibly be targeted for experiential learning, as well as graduate and casual employment.

Work ethics and professionalism: The aim is to educate learners about professional etiquette in the workplace. Attention should be paid to issues such as coping with criticism, dealing with unfairness in the workplace, sexual harassment, tolerance and conflict resolution.

Presentation skills: Here the focus is on preparing learners for delivering oral presentations, which have become a standard feature of the professional world. Emphasis is placed on preparation, delivering the speech, interaction with participants, body language, voice projection and controlling nervousness. If possible, a mock presentation should be taped and viewed by the learners afterwards, so that they can see what to improve for the "real" presentation.

The objectives of the programme may be achieved through the following:

- Workshops (organised in liaison with lecturers and class representatives) for learners doing the same courses, which allow for focus on practices specific to each industry
- Individual and group consultations
- Publication of a newsletter for learners, which will contain information on co-operative education and employment-related issues
- Self-help materials, pamphlets, etc.
- A resource centre maintained by the co-operative education unit or library, where learners can access information on careers and employers
- A mock interview programme which would also benefit learners, as they would get the opportunity to experience an interview with recruiters who will provide feedback on their performance
- An annual graduate recruitment programme or graduate fair organised at the technikon to assist final-year learners in securing employment

The work-preparedness skills programme would have the most value if all learners attended workshops from their first year onwards, or before they started experiential learning. This type of training should be supplemented with life-skills training, such as confidence-building, assertiveness and conflict resolution, and could be facilitated by the institution's learner counselling centre.

Prior to placement, learners must be able to identify clear and achievable learning outcomes. They should be encouraged to articulate their objectives in their own words and should be able to make and understand the interconnections between learning objectives. In getting learners to assume responsibility for learning, the first step towards effective learning and self-reliance has been taken. Companies too should participate in discussions about the anticipated outcomes. One method of enabling learners to define learning objectives is to get them to ask questions about the objective. These questions can be summarised by the acronym SMART:

S Specific — What does the objective mean?
M Measurable — How do you measure it?
A Advantageous — What is in it for me?
R Realistic — How realistic is it?
T Timescale — When should it be achieved?

9.3.2 Monitoring

There is a need to monitor learners closely during the “breaking-in” stage. Supervisors and peers play a critical role in ensuring effective learning and socialisation. Carefully monitoring the initial assignment and pitching it appropriately will build learner confidence and maximise the quality and learning potential of the placement.

It is also essential that there be clearly defined procedures for monitoring learner performance and relating learners’ predefined learning objectives to actual outcomes at regular intervals throughout the placement. This will help learners to monitor their own performance and to extend their responsibility for the learning process.

Monitoring should reflect the learners’ performance in the initial placement assignment as well as in successively more challenging assignments.

9.3.3 Feedback

The quality of feedback from learners on return from placement is often poor. This is partly because many learners find it difficult to reflect upon and internalise their experiences. Not only is there a need to reintegrate learners into the system, but there is also a need to “draw out” the learning process so that learners can extract value from experiences and develop them further in an academic and career setting. Adequate time must be allocated to ensure that learners reflect on their experiences, make the links, and are able to apply the learning to new situations.

It is also necessary to channel more effectively to companies the feedback received from both the learners and the institution subsequent to the placement experience. This would facilitate company involvement in the overall education of graduates and close the circle, thereby connecting learners, companies and the institution.

A more structured mechanism is needed to ensure that the learning outcomes of the placement are incorporated into the academic programme on return. The value of the placement is enhanced if it forms the basis of a final-year project or groundwork for postgraduate studies. This would exploit the educational gain of the placement and extend it to the final year, hence ensuring that co-operative education is fully integrated into the academic programme.

10. MENTORING IN THE WORKPLACE

10.1 Relationships

As one would expect, when dealing with co-operative education as part of the total developmental cycle of the learner, the upliftment/preparation of the learner-in-training has to do with relationships.

Therefore, for growth and experiential learning to take place, a climate of support and assistance must be created. This is closely related to a company's own organisational development strategy (which in the long run benefits all who come into contact with it).

Researchers are of the opinion that successful experiential learning benefits from an environment that supports the physical, intellectual and psychological needs of the newcomer/protégé.

Mentoring as a means of transferring knowledge/expertise is but one of many methods employed by commerce, industry and the public sector.

When asked to reflect on their major satisfactions and frustrations at work, people consistently mention others who influence them. Relationships with superiors, peers, subordinates, friends, and family members are **essential sources of support** both during periods of **major transition** and throughout the **ongoing process of career development** [18].

10.2 The mentor

Mentorship is the prototype of a relationship that enhances **career development.**

The secret of assimilation (into a company/team/group) is the assignment to each new member of a mentor who will perform the role of **host, friend, confidant** and **advisor** for a period.

Serving as **sponsor**, the mentor may **facilitate** the young entrant's advancement. He/she may be a **host** and **guide**, welcoming the initiate into a new occupational and social world and acquainting him/her with its values, customs, resources and cast of characters.

Through his/her own virtues, achievements and way of living, the mentor can set an example that the protégé can admire and seek to emulate. He/she may provide **counsel and moral support in times of stress**.

It is, however, sufficient to say that mentoring is a deliberate pairing of a more skilled or experienced person with a less skilled or experienced one, with the agreed-upon goal of having the less skilled person grow and develop specific competencies.

In the working environment, it is often found that the immediate supervisor is assigned the role of mentor.

Mentorship is more than just supervision, leadership and/or sharing ideas — **it is a way of life**.

10.3 The mentoring task

It is essential, especially in the training/educational sphere in which we operate, to remember that in many instances the mentor in the work situation takes over the role of the lecturer. He/she should therefore act in such a manner that trust and understanding are fostered to allow a trust relationship to develop between the mentor and protégé.

We will now discuss the new employee, existing members of staff and high achievers.

10.3.1 The new employee

The responsibilities of the mentor may be defined in three phases:

- Orientation before the protégé starts
- Guidance during the protégé's arrival and for the first two weeks
- Follow-up training and continuous development

10.3.2 Existing members of staff

Existing members of staff should be developed through interactive training and/or participant-led training. This is of course provided that the organisation has drawn up such a strategic plan for personnel development. Participation in this phase should be **voluntary** to allow everybody the opportunity to participate — including low achievers and middle-order achievers. Should this not be allowed, participants will view such an intervention as being "selective and biased".

10.3.3 High achievers

There should be direct and participative involvement in developing "high achievers/key performers". These are individuals who through their effort/merit have been identified as being potential managers of people.

The following form the basis of the mentoring task:

- **RAPPORT** creation
  - † First-time meeting
  - † Getting to know you
  - † Introduction
  - † Sharing information
- **LISTENING** and listening skills
  - † Reflective/active listening
  - † What to listen for
- **OWNERSHIP**
  - † Total commitment
  - † Persistence
  - † Accepting responsibility
- **FOCUS**
  - † Achievement
  - † Awareness
  - † Understanding
- **QUESTIONS**
  - † Thought directors
  - † Empowering mechanisms
  - † Catalyst for change
- **OBJECTIVES**
  - † Identification of main and sub-objectives for achieving success

The mentor must be sensitive and empathetic to the needs of the protégé and understand the finer detail of human functioning within the work environment.

10.3.4 Identifying the mentor

The success of any upliftment programme depends largely on the **selection and training** of the person who will accept the role of the mentor.

Identifying/selecting the mentor is closely linked to the concept of partnership between the prospective host company, the tertiary educational institution and the learner. This in itself presupposes an **active** and **continuous** negotiating process to ensure that the learner-in-training is placed in contact with and is trained by a "seasoned" mentor.

It remains essential that the tertiary education institute be involved in the accreditation of the mentor to ensure specifically that the learning objectives are met.

The following guidelines for the selection of a mentor may be of assistance:

- A proven career record based on performance
- A rational, logical and systematic approach towards work and life
- Social adaptability
- A well-rounded higher education background
- Empathy and patience
- A role model/example par excellence
- Ability to be a coach and give direction
- Willingness and commitment to accept all the functions related to mentorship

10.3.5 Principles for designing education on mentoring

When dealing with co-operative education as an education model, one may ask the following question: "What are the most important principles to be considered in allowing the learner-in-training the opportunity to gain hands-on experience by means of a period of experiential learning?".

The following may prove useful:

- Cognitive learning, which may be described as an ongoing academic process leading from the technikon to the workplace
- Focus on behaviour and attitude modification

When dealing with the learner-in-training, it is important to **give the necessary direction** and **to stimulate thought processes**.

Strategies for designing such programmes are varied and complex, and cognisance must be taken of the needs and specific circumstances of the organisation and/or individual or group.

The appropriate objectives, design and target populations for education on mentoring depend on the role of training activities and the needs of organisation members. For example, some organisations integrate education on mentoring into career planning workshops that contain both cognitive input and skills training elements.

Such a strategy therefore indicates that it is not necessary to have separate programmes on mentoring and that integration with career planning programmes gives wider acceptance to the topic and its relevance to individuals at all career stages.

Regardless of the target population or special interest objectives, however, certain principles of laboratory education are important for reorienting attitudes and developing new behavioural skills.

The following guidelines, focusing on behaviour and attitudes, are provided to clarify the importance of a specific "plan" to deal with the principles for designing education on mentoring:

- Define learning objectives for a specific target population.
- Emphasise exploration of **attitudes** towards mentoring and the **behaviour** required to initiate and manage relationships that provide mentoring functions. Supplement skills training and self-reflection with cognitive learning about life and career stages and the role of mentoring in career development.
- Provide opportunities to **practise the interpersonal skills** of active listening, communication, building of a rapport, conflict management, collaboration, coaching, counselling, etc., in role-play situations and/or in discussions of on-the-job relationships.
- Provide opportunities for **constructive feedback** from instructors and participants on interpersonal style and on specific strategies for initiating relationships that provide mentoring functions.
- Provide opportunities to **experiment** with **new behaviour**, and to see models of **effective coaching and counselling**.
- End with **planning for back-home** application of skills to current and future relationships.

It is clear from research and experience that for any training-assisted programme, such as mentoring, to be successful, the mentor must be identified and trained in all aspects of mentoring. In other words "the effective supervisor/individual must be trained to become an effective mentor".

10.3.6 Conclusion

The tripartite arrangement between tertiary educational institution, commerce and industry, and learner has much to gain from establishing a positive mentoring relationship and/or programme.

Learners should work under the supervision of a mentor to whom they should report directly. The mentor should also be responsible for assessing learner progress in the work situation.

11. ASSESSMENT OF EXPERIENTIAL LEARNING

Co-ordinators of co-operative education plans have the task of measuring learner performance that is quite unlike that of formal academic courses. Their unique assessment problem is that of measuring performance (achievement) of the placement experience. Not only must they measure progress (because their purpose is to help learners advance towards their career objectives), but they must also measure performance in order to determine a mark or symbol for these experiential learning learners.

Co-ordinators use several methods for measuring learner performance at the placement stations. These include the following:

11.1 Rating sheets

Almost every co-ordinator uses rating sheets as one method of measuring learner performance. Unfortunately, all too many co-ordinators rely solely on this method for assessment purposes.

A question that often arises is whether the mentor's rating should be used as part of the final mark for the experiential learning experience. It is good practice not to use a rating sheet that requires report-card letter grades; instead, co-ordinators should use a rating sheet that describes performance in the language of the vocation. The report then becomes a matter of combining the message of the rating sheet, observations and discussions with mentors.

There are many reasons for supporting this practice. Firstly, mentors at the different companies have varying standards: an A to one may be a C to another. Secondly, many mentors tend to overrate learners rather than risking being "too critical" on paper and, thirdly, there is the temptation to overemphasise personal qualities and minimise actual skills and abilities. Rating sheets are usually not mailed back to the technikon but are discussed personally with the co-ordinator.

In summary, assessment of experiential learning progress should take place regularly, and learners should be involved in the process so that they can discuss strengths and weaknesses and commit themselves to improvement.

11.2 Experiential learning term reports

In most lists of skills that companies require prospective learners to have, writing, reading and listening are at the top [19]. Experiential learning experiences tend to exercise all these areas. To ensure that written communication is reinforced, most technikons require learner reports to be submitted at the end of the experiential learning term and these then form part of the assessment criteria for gaining credit for the overall experience.

The rationale for requiring a written report at the end of each placement period is that the written report will provide an opportunity to develop and practise the much-demanded written communication skills.

A critical component of co-operative education is the integration of experiential learning with theoretical study terms. For each co-operative education programme, it is essential that there be opportunity for learner growth and development. For programmes with more than one experiential learning period, the major objectives are developing and increasing the challenges of the experiential learning experience, as well as increasing academic sophistication as the learners progress through the programme.

Experiential learning term reports should be an integral part of a successful co-operative education programme. At the outset, it was determined that the main focus of the experiential learning term report should be to integrate lecture room theory with the experiential learning the learners obtain from their placement site, and ensure that the level of academic sophistication becomes more rigorous as learners progress through the programme.

At one tertiary institution, an award for an experiential learning term report was instituted as a means of giving learners an incentive to prepare quality reports. Companies have supported this initiative by way of monetary awards for the learners. Lecturing staff have also shown their support for the idea by choosing the award winners, and learners have produced quality reports.

In certain instructional programmes, it is mandatory for each learner to successfully meet the experiential learning term requirements established for the programme by the academic department and the department of co-operative education.

All placements undertaken by the learner during his/her experiential learning should be approved in advance by the lecturer/co-ordinator.

The criteria for approving experiential learning placements should include the following:

- The extent to which the experiential learning experience relates to the theoretical studies
- The learner's progress with his/her theoretical studies
- The learner's previous experiential learning experience
- The placement opportunities available

Experiential learning terms may be graded as acceptable, incomplete or unacceptable. The grade will be determined by the co-ordinator. The criteria for grading the learner may be based on the following:

- The mentor's assessment of the learner's performance
- The learner's experiential learning term report
- The co-ordinator's assessment

Usually the assessment will be determined mainly by the mentor's assessment coupled with the submission of a satisfactory experiential learning report.

Credit for experiential learning may be denied if the learner:

- accepts a placement that has not been approved by the co-ordinator
- is dismissed or removed from a placement owing to poor attitude
- leaves an approved placement without obtaining the approval of the co-ordinator
- fails to clear a grade of "incomplete" (see below) in the time or according to the conditions specified by the co-ordinator

A grade of "incomplete" may apply if the learner:

- receives an unsatisfactory mentor's assessment
- fails to complete a satisfactory experiential learning term report

A grade of "incomplete" may be improved to "acceptable" by meeting the requirements specified by the co-ordinator.

For the first item, this usually requires the satisfactory completion of a future placement term and for the second item the satisfactory completion of the report within the time specified by the co-ordinator.

Any learner who fails to meet the stipulated experiential learning term requirements may arrange to complete the necessary experiential learning terms or upgrade any "incomplete" grades within a period of time as specified by the technikon.

An experiential learning term report must be satisfactorily completed for each placement term in order for the learner to obtain credit. While the exact nature of the report may vary for each programme, there are certain basic requirements.

The experiential learning report will provide the learner with a vehicle for focusing attention on the experience gained and its value as a total learning experience. It will give him/her an opportunity to illustrate understanding of the significance of this experience as it relates to career objectives and the programme of studies followed. Written communication skills can also be developed as this report provides a practical exercise in report writing.

We will now discuss the basic requirements for preparing a report:

Planning and structuring the report

- **Planning**

  Any report must be planned keeping in mind its purpose and the persons to whom it is directed. Planning is also necessary with regard to its content and organisation. Report planning should begin as soon as the learner is familiar with the placement situation.

- **Content**

There are no set rules governing the content of the report. However, in most cases it should relate to the learning objectives set for the learner. In fact, these objectives may provide the basis for early planning. The learner will probably wish to describe some of the day-to-day activities and special assignments to show that they were worthwhile from the point of view of providing a good learning experience. He/she should discuss the report with the mentor as he/she progresses.

The report should state its intent exactly, using clear, concise and unambiguous language so that the reader has no doubt as to what is meant. The chief objective should be to inform rather than to impress. Unnecessary words and sentences should be avoided. Being too brief, however, can lead to an incomplete statement of facts or ambiguity in meaning. The judicious use of illustrations, graphs, calculations and tables will help to clarify descriptions of duties performed or projects completed.

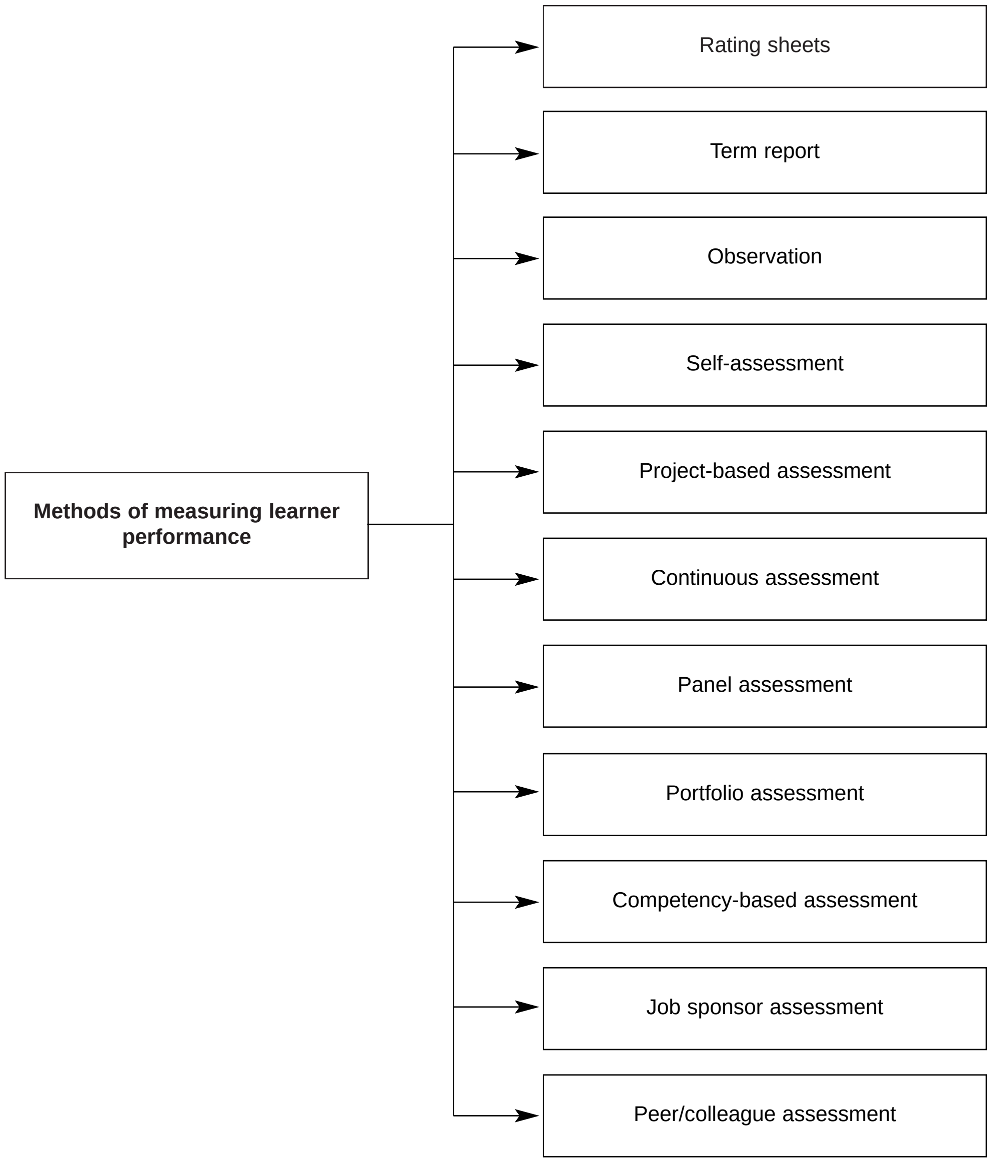
The report is to be completed during the placement term and should be cleared by the immediate supervisor/mentor. It must be handed in to the co-operative education co-ordinator before the due date.

- **Quoted material**

Material quoted from any printed sources is to be acknowledged by placing the passage/paragraph/sentence in inverted commas and using footnotes. Failure to reference correctly constitutes plagiarism.

11.3 Other methods of assessment

While the rating sheet and experiential learning term report are commonly used for assessment, they may need to be supplemented by some of the following:



- **Observation:** On-the-spot observation of attitudes, skills and knowledge is essential, through visits by the co-ordinator to the placement stations.

- **Self-assessment by the learner:** Rating scales and self-rating sheets can assist the learner with self-assessment.

- **Project-based assessment:** Learners are assessed on the basis of projects completed while engaged in experiential learning. This is an indirect mechanism and has to be closely monitored with the workplace supervisor and technikon mentor to ensure that projects are relevant and linked to the experiential learning.

- **Continuous assessment:** Learners are assessed during the course of their experiential learning. A major part of this technique involves the workplace supervisor. While strict criteria may be laid down, this technique may still be subjective.

- **Panel assessment:** Learners present a verbal portfolio/project to a panel consisting of academics and representatives of the organisation. Assessment takes place according to pre-set guidelines.

- **Portfolio assessment**: Learners compile a portfolio during their experiential learning. This applies especially to fields of study such as public relations, architecture and programmes in art.

- **Competency-based assessment**: This method assesses competencies/skills acquired during experiential learning. It has the potential to be the most attractive assessment mechanism in that it assesses whether a learner "can do the job" and to what extent he/she will be successful. A team of assessors can conduct such an assessment on site at specified times with the co-operation of the company concerned. The team may comprise technikon specialists, the workplace supervisor and members of the relevant professional body or society. Should the learner not meet the required standard, the period of experiential learning may be extended for a specified time, at the end of which a competency-based test will have to be passed. This means of assessment also provides an excellent guide for potential employers as to the competency of the learner.

- **Job sponsor assessment**: In addition to checking the rating sheet, many mentors are quite willing to assist in assessing assignments/projects suggested by the co-ordinator.

- **Peer/colleague assessment**: Learners may be encouraged to enlist the assistance of colleagues to assess their progress and tell them how to perform in a better manner.

- **Production standards assessment**: There are of course realistic measures based upon production, such as value of sales in the retail store, units of production in the industrial establishment, pieces of correspondence produced, or number of items processed or filed in the office.

11.4 Facilitation of learning during the placement period

Experiential learning learners usually begin a placement period with high expectations. For some learners, further motivation may not be necessary, but for many these outcomes do not occur automatically. Though more foolproof than most forms of higher education, the experiential learning plan requires that organised attention be paid to facilitating the learners' learning.

The mentor's report and the co-ordinator's personal interview notes are not sufficient to determine what the learner has learned from the placement experience. A more formal structure is needed in the form of experiential learning reports to be written by learners as part of their placement experience.

Each report should include the following:

- A description of the experiential learning followed by how it affected the educational development of the said learner. This should take the form of an essay and should discuss in some detail what the given assignment meant to the learner personally in terms of insights gained, skills development, knowledge acquired and career orientation.

- An evaluation of the experiential learning and supervision, as well as any comments on the institution's relations with the mentor/company.

This form of communication between the learner and the institution is a key element in improving the functioning of the experiential learning programme. The successive experiential learning reports together with learner interview notes provide a documented picture of the learner's progress throughout his/her course. They form the main framework for counselling and long-range planning with individual learners.

Along with the instructions for preparing the experiential learning report, the following suggestions may be given to learners entering the first experiential learning placement:

- How does the placement experience meet your expectations?

- What are the important sources of learning in this experience — the placement itself, the placement environment, other sources?

- What kinds of skills development does this experience offer — in experiential learning performance, communication, interpersonal relations?

- In what ways does your placement relate to any of your past and current theoretical studies? Does it suggest the need for certain future studies?

- What contribution does your experiential learning experience make to your understanding of the occupational world?

- What kinds of technical and/or general knowledge are you gaining from this experience?
- How has this experiential learning period affected your educational and career goals/your future plans for studies and experience?

The challenge in formulating guidelines is to ask questions and make suggestions that will stimulate the learner's observations beyond the normal vision of the job. Much of the induced learning and knowledge gained from a placement experience will come from alert observations.

Writing about a placement experience is different from writing an assignment or class test. In assignments, learners are inclined to rely on the writing of others for ideas and for quotations. For the experiential learning report, learners have to depend on their own observations. Writing from experience is more interesting, but also more difficult for some learners.

Experiential learning reports offer a better opportunity for learners to improve their writing skills than do many academic courses. Good writing skills are an important qualification for occupational advancement. The use of guidelines during the placement period and the keeping of a weekly journal of significant happenings will be of great help to learners in articulating the results of their experience.

11.5 Assessing and crediting the educational outcome

The learner, mentor and co-ordinator are the central participants in the assessment process of the placement experience. The learner assesses his/her experience in terms of learning and other development outcomes through a written essay followed by a conference with the mentor. The mentor makes a written assessment of the learner's experiential learning performance and other observed outcomes, and the co-ordinator uses the assessment data to make the final judgement for awarding credit.

The mentor's rating is a vital part of the assessment. The report should be designed to give a picture of the learner's approach to the experiential learning placement, decisions he/she made, acceptance of suggestions and criticisms, and adjustment to the organisation. The mentor should also give an overall rating of the learner's performance. Although the company is not responsible for educating the learner, mentors and associates do contribute markedly to his/her education. Valuable responses come from asking the mentor for his/her comments on what the learner has learned from the experience.

11.6 Report-back sessions and debriefing

Report-back sessions and debriefing are essential components in enhancing the experiential learning experience and in improving the functioning of the experiential learning programme. They also form an integral part of assessing the learner's performance for awarding credit, and are of considerable value to staff and potential experiential learning learners.

Along with the mentor's report and other forms of communication with the learner and mentor, the learner's experiential learning report and its follow-up discussion provide the central focus around which the final assessment and crediting can be made. The report will embody the "knowing how" as well as the "knowing that" aspects of the educational outcomes. In understanding and interpreting the learner's report, cognisance should be taken of those forms of knowledge and insight not readily communicated in words.

Follow-up discussions of the report and the placement experience held between the learner and the lecturing staff are an educational process as well as an evaluative one. It is through the total evaluation of outcomes that learners gain self-understanding, self-direction and the self-confidence to manage their own education and career development during and after their course of study.

Recommendations for debriefing sessions

The following suggestions can serve as guidelines:

- Debriefing sessions should be well structured and organised to form part of the assessment of the learner's placement experience.
- A panel should be appointed for assessment purposes.
- Oral presentations by learners of their experiential learning to an audience are a method of assessing learners' presentation and communication skills.
- The audience should include learners who still have to go on their first experiential learning experience.
- Group discussions pertaining to positive and negative experiences highlighted in the presentation sessions are recommended.
- Learners should receive guidelines regarding debriefing sessions as part of the experiential learning programme and counselling should be provided where necessary.
- Debriefing sessions should be regarded as learning experiences and an integral part of the experiential learning programme and skills development.

12. RECOGNITION OF PRIOR LEARNING

A person's readiness to successfully enter into a course of study or occupation may be the product of different study or career routes. Prior learning and experiences may therefore show a different pattern for different people and should be accredited accordingly. This section explores the meaning of accreditation of prior learning (APL) and establishes the need for APL. Access to training courses in the company environment and further education are made possible by a process of APL [20].

12.1 Accreditation

Accreditation authorities officially recognise that:

- the contents and standards of a course or training programme fit the certification or award that learner will acquire
- the course or training programme and methods of teaching it will achieve the purpose for which it was introduced
- the curriculum and assessment methods will enable the learner to achieve the required competencies and national standards

> Accreditation is therefore the recognition and approval of the academic standards of an educational institution by some external, impartial body of high public esteem.

Accreditation declares an official connection between course/programme standards and certificates or awards issued/to be issued.

In a broader sense, a person's ability/capability/competency though not obtained by means of a formal curriculum, course or programme may also be measured against the yardstick of the criteria for a specific certificate. If the outcome of such an assessment meets the requirements of the certificate, the concept of accreditation may also be applied in describing the process.

Accreditation of prior learning (APL) may also be described as a process through which an individual may obtain formal recognition for achievements of past learning and experiences.

Formal recognition of standards reached in illustrating competency therefore seems an important prerequisite for accreditation.

Accreditation may also be seen as the dual process of assessment and certification — a candidate for APL has the opportunity to obtain a certificate, which confirms that candidate's competence in specified occupations

For our purposes, accreditation refers to the formal recognition by the relevant authorities of prior learning or experiences. The learning and experiences may be expressed in some combination of:

- what they have demonstrated they know, understand and can do (the learning outcomes achieved)
- the degree of complexity, learner autonomy and required range of their achievements (the level of a unit within a specific or National Qualifications Framework)
- how much has been achieved (expressed by the number of teaching/training and learning hours it has taken the average learner to achieve the learning outcomes successfully)

12.2 The need or rationale for and benefits of APL

Researchers have observed that thousands of frustrated workers, who either dropped out of school or never attended school, may for a number of years have been operating the same machines in industry with great efficiency, without assessment of their experience and acquired skills.

Many so-called unskilled and semi-skilled workers who are employed in industry possess competencies that need to be assessed and accredited in a National Qualifications Framework. These workers are often denied access to further training courses in industry because of their lack of traditional entry qualifications. They may, however, possess relevant knowledge and skills to enter into these training courses successfully.

In countries such as Australia and New Zealand which have well-established National Qualifications Frameworks that support national standards in a vast number of areas (academic or general, vocational and occupational), APL is done in a systematic way and by means of established norms. There may, however, still be learning experiences being acquired outside of the QF environment. Many adults learn through experience or through instruction with non-accredited providers. Where this is the case, it makes little sense to require a period of formal instruction followed by assessment. Policies and procedures are therefore needed to recognise, assess and accredit these forms of prior learning.

The White Paper on Education (1995) expressed the policy statement that a learner should be able to articulate his/her level of learning with any entry anchor point on the NQF. The principle of APL is also set out as a cornerstone of reconstruction of learning pathways. The overall approach to assessment of learning will, therefore, have to include the accreditation of a variety of learning outcomes acquired within formal, non-formal and even informal education and training environments.

Many companies may resist a venture such as APL because the formal recognition of competencies in their organisations could lead to demands for an automatic pay increase. On the other hand, APL may be attractive to companies, because if existing competence can be formally recognised and certified, training time (and therefore cost) will be reduced. Individuals will need to be trained only in those areas of work for which they have been unable to demonstrate competence.

The same applies to APL in education. Institutions for Higher Education are being subsidised by the state on the basis of the number of learners who eventually graduate. Study time will be reduced if learners obtain credit for prior learning or experience. They will in fact be exempted from specific units of prescribed study courses and may complete a qualification in less time than school leavers.

The **broad benefits to learners** of the recognition, assessment and accreditation of prior learning can be significant and include:

- a reduction in the duplication of learning
- the completion of qualifications in a shorter time
- recognition of knowledge, skills, attributes and achievement, thus increasing opportunities for a return to learning
- increased motivation associated with more challenging course content
- greater flexibility of learning options
- increased self-esteem

The **benefits to providers** are as follows:

- A formal process for the recognition of non-credentialled learning
- Retention of control over quality by formal assessment of prior learning
- Increased opportunity for equity provision
- Opportunities to foster partnerships and/or articulations with industry and other organisations

12.3 The process of APL

The process of APL should start with a policy statement by the council/management of the institution/organisation regarding principles underlying APL.

For example:

- The organisation/institution will accredit prior learning and experience of workers/trainees/learners if they furnish proof of achievements/ competence in accordance with standards set/endorsed by the board/ management.

Although it is not advisable to tamper with the autonomy of institutions of higher education and companies in the private sector, it is also true that standards, which are set and recognised on a national basis, favour the progress of the individual person and organisation in the long run. Some researchers, for instance, view the lack of a system of national training qualifications as one of the main weaknesses of manpower training in South Africa.

The Congress of South African Trade Unions [21] agrees with the Department of Manpower and has set the following key principle:

> *There shall be nationally determined standards for accreditation and certification for formal and non-formal education and training with due recognition of prior learning and experience.*

Such a principle also forms part of the British and Australian Systems for Vocational Education and Training. The Employment and Skills Formation Council in Australia set the following policy statement:

> *Multiple pathways through vocational education and training should provide for articulation and credit transfer including recognition of prior learning so as to facilitate progression to higher levels of competence, including diplomas and degrees.*

Candidates have to apply for APL and spend some time with a counsellor at the organisation/institution. The important point is that the onus will be on the worker/learner/trainee to make the first move. In South Africa, Britain and Australia motivation for and initiative towards self-development are valued highly.

The counsellor and candidate should at first establish the present and future career and study pathways or routes valued by and open to the applicant. A company with clear functional, job or task analysis charts of the different work roles in the work environment will provide the necessary information for the task at hand. Such information could also be conveyed in the form of diagrams on notice boards and/or handed out to employees. The candidate should form a clear picture of his/her position in the company and set realistic goals with the help of the counsellor.

The counsellor will assist the candidate in identifying specific units of competence for which he/she can realistically claim credit and will advise him/her on the preparation of a portfolio of evidence of competence. This evidence has to be matched to the standards of each unit. The candidate may be supplied with a checklist of standards that have to be met.

In higher education as well as at professional levels of occupations, the complexity of defining competencies/outcomes should be acknowledged. A great deal of underlying knowledge, understanding and capabilities have to be identified by way of tests and simulations. Syllabuses and examination papers of courses recently passed will also help to establish evidence of competence.

In Britain, people working towards National Vocational Qualifications (NVQs) can obtain their own National Record of Achievement (NRA). The NRA contains brief personal details, a summary of qualifications and credits, and a summary of other achievements and experiences — for school leavers the achievements within the school curriculum and for adults an employment history. In New Zealand, a national Record of Learning will reflect lifelong achievements, measured against the standards of national qualifications and will include school-leaver documentation.

The evidence, compiled into a portfolio, is then presented to an expert assessor who will make a judgement concerning the individual's current competence. The assessor may decide that the evidence presented is not sufficient and may ask for an interview with the candidate. In practice it may happen that such a large number of employees request APL by means of presenting “raw” portfolios that the assessment and verification process will actually come to a standstill — if it even took off at all. This could be the situation if large companies in South Africa announced today that they will start applying a system of APL tomorrow.

The above statements, however, do not mean that portfolios may not portray past performances not already assessed and accredited within QFs. Portfolios have a rightful place in addition to traditional assessment methods. Within a specific field, articulation agreements within consortia will facilitate the accreditation of prior learning and prior experience. This refers to prior learning expressed in work-related capabilities — interpretable between education/training and work environments.

In Britain, a system of internal and external assessment is in operation concerning General National Vocational Qualifications (GNVQs) and National Vocational Qualifications (NVQs). Whereas internal assessment takes place inside the school, college, institution or work (simulated or real), external assessment supplements the evidence obtained internally. External assessment is normally done by an expert (qualified) assessor from one of the major awarding bodies. In the workplace, assessment for APL and Accreditation of Prior Experiential Learning (APEL) will be a much easier task as assessors will often be supervisors who have experience of candidates’ performance.

The expert assessor decides on the units in the relevant qualification to be credited and makes a recommendation to the awarding body concerned. A **certificate** is awarded for each unit, or a full qualification is awarded (i.e. NVQ level 2) if all the units within the specific qualification have been passed.

The counsellor then **informs** the candidate of his/her recommendations and a **career and study route** is planned accordingly.

The above process of APL may seem time-consuming and costly to employers. However, the benefits to the company in the long run may be vast. Better utilisation of skilled and competent workers will result in higher production, and employer-employee relationships will also benefit. Once the process is completed, it is only a question of assessing new appointments and updating the computerised database.

The benefits of APL for institutions and learners of higher education have already been touched upon in 12.2. These institutions have well-established centres for assessing a learner’s readiness to continue with a specific qualification or study course. In South Africa, these institutions are also currently investing a lot of time and money in assessing learners from underprivileged backgrounds as part of the process of widening access.

13. ADVISORY COMMITTEES

A technical advisory committee is usually appointed for each instructional programme offered by the technikon. The duty of the committee is strictly advisory; educational policy remains under the control of the Department of Education and the institution. The advisory committee should remain a sounding board for advice on operating procedures, revision of curricula/syllabuses, and planning and guidance regarding co-operation with commerce and industry. The committee may be asked for advice on public information programmes and may assist in these activities. It may also suggest sources of experiential learning placements and sources and types of instructional materials, assist with learner organisation events, provide resource personnel for related classroom instruction, recommend minimum standards for learners, and suggest improvements to syllabuses.

13.1 Committee members

An advisory group of seven to twelve persons selected from the following representation is suggested:

◆ Technikon:	Lecturing staff, administration, guidance personnel, co-ordinator
◆ Business:	Chamber of commerce, civic or professional clubs, companies
◆ Labour:	Organised labour
◆ Learners:	A capable learner, perhaps the president of the SRC
◆ Professional boards:	Institutions, societies

Staggered terms of appointment for advisory committee members provide for both experienced and inexperienced members, but also ensure continuity in the functioning of the committee. A separate advisory committee for each co-operative occupational education area is recommended to take advantage of specialised interests and talents. It is possible to appoint a single advisory committee to serve all co-operative education plans, but a single committee cannot devote its attention to the specialised problems of the individual plans for each discipline as effectively as can separate committees.

13.2 Duties

The committees will function efficiently if each member plays a definite part in planning and monitoring the overall operations of the co-operative education plan. Such activities might include:

- speaking about co-operative education plans

- helping to obtain suitable placement stations
- suggesting and helping to secure training materials and equipment
- making arrangements for learners interested in certain activities to gain additional insight into them
- investigating sources of trade magazines and other trade publications and acquiring these publications
- acquainting co-ordinators with influential persons at companies and labour leaders in the community, and making arrangements for co-ordinators to talk to various groups

One of the ways of making advisory committees meaningful for ongoing programmes is to use the collective wisdom and talent of their membership in a continuing public relations programme. Advisory committees can be involved in activities such as the following:

- Developing brochures on employment opportunities that can be used by learners, employers and counsellors
- Assisting in the institution's activities regarding open days, etc.
- Making speeches at meetings of the members' trade and professional associations
- Publicising the co-operative education plan in internal publications of the members' firms
- Appearing on radio and television programmes with learners and co-ordinators

13.3 Meetings

As with lecturing staff, business persons are busy people. Their time should be used efficiently. Usually two, or at most three, formal meetings a year will suffice, supplemented by the co-ordinator seeking informal counsel from individual members during the academic year.

Co-operative education issues should be a standing point of discussion on the agenda of the advisory committee meetings. The advisory committee will be in a position to give guidance on the following:

- Economic activity, the availability of placement positions and experiential learning possibilities for learners. These tendencies have a direct bearing on the number of learners admitted to the various courses.
- Changes in technology and their influence on curricula/syllabuses: These may influence the decision to introduce new courses or to phase out redundant ones.

- Learning material to be included in the experiential learning phase of each course

Once formed, the advisory committee should be consulted frequently to consider real issues and problems. Nothing disillusions a committee faster than not being called upon to do what it was created to do.

14. IN-HOUSE EXPERIENTIAL LEARNING

In previous decades, most learners who enrolled at technikons were sponsored by companies. The companies usually paid the student fees and provided the necessary experiential learning. With the decline in the world economy, the situation has changed to such an extent that many companies are no longer in a position to assist learners in this way and most first-year learners are now enrolled as "private" or non-sponsored learners. After completing their formal studies, a number of these learners are placed with companies for experiential learning where they are exposed to "real-life" situations and problems. Some of them are placed in "training centres" for part, or all, of their experiential learning.

14.1 Training centres

Typical models of training centres include the following:

- **Company "on-site" centre:** This centre is usually part of the company. The company often uses the centre to offer specialised courses on new equipment or technology. Companies that participate in co-operative education plans place learners in the training centre for part of their experiential learning, such as orientation, or for specialised short courses that are offered from time to time.

- **Technikon training centre**: This is a special unit within the institution that has the equipment and infrastructure to offer experiential learning for certain instructional programmes, e.g. Information Technology.

- **Centralised training centre** (Institutes for Co-operative Education) [22]: These institutes offer experiential learning opportunities for certain instructional programmes, such as Mechanical Engineering and Electrical Engineering.

Ideally, learners will follow a structured training programme in which they will be exposed to typical problems that arise in practice. Some of the work may be "simulated". The learner is actively involved with work and problem-solving under the guidance of a skilled mentor. In certain cases, the learners will also undertake projects.

Mason et al. [11] define the following five models of experiential learning:

- **Observation**: The learner is exposed to real problems in practice, but does not actively take part in the work or solution of these problems. He/she is usually not paid.

- **General experience**: Learners perform some duties, and may become involved in projects. There is no structured training and the duties are not necessarily related to the formal training. There may be some remuneration.

- **Vocational-study plan**: Learners are appointed by companies and their duties may (coincidentally) be related to formal studies. They are dependent upon the company for what they learn, and usually receive some remuneration.

- **Experiential learning and career development**: Here the main objective is to promote the competency of the learner through participation in the practical situation. Learners are placed in experiential learning positions. The experiential learning is directly related to formal studies and the institution liaises with companies and learners. There is often some form of remuneration or other benefits.

- **Internship**: The purpose of placing learners is usually twofold. Firstly, it offers learners the opportunity to become familiar with the demands and dignity of work and, secondly, learners are able to test their abilities and shortcomings in actual situations. Internships are used in the training of medical personnel, accountants, professional engineers, etc. There is usually some remuneration during training.

The first two models of experiential learning stated above should preferably be avoided because although coincidental relevant experience may provide sufficient opportunity for training in the long term, there is no assurance that a learner will be able to meet the requirements within a certain time for the qualification for which he/she has enrolled.

Some technikons offer another form of in-house training whereby academic or other departments make use of learners as research assistants, laboratory assistants or secretaries, etc.

Here it is important to note that there is a vast difference between experiential learning and practical experience. Experiential learning consists of a programme of structured learning whereas practical experience may consist of repetitive tasks that have little or no value for experiential learning.

When experiential learning is offered by a technikon department, care must be exercised that the training meets the requirements for the course.

14.2 Industrial Centre, Hong Kong Polytechnic University

The Industial Centre is a department of the Hong Kong Polytechnic University, a tertiary education institution emphasising teaching and applied research [23]. The Industrial Centre illustrates how a training centre is structured and utilised.

The Centre's mission is to provide quality experiential learning opportunities that are effectively integrated with and complementary to the academic studies of learners. Local industry finds it costly and non-productive to render such a service and shuns away from it. Training in the Centre is aimed at arousing the interest of the learners and at helping to develop their innovative abilities. It is structured so as to promote professional awareness and good practical attitudes. A tutorial system is used to stimulate and satisfy the inquisitive minds of learners.

The Centre is a multi-discipline training centre encompassing mechanical, manufacturing, electrical, electronics and construction engineering. It is equipped with industrial equipment ranging from conventional machines to the latest laser-cutting machines and stereo-lithography apparatus.

The main objective of the Centre is to provide learners with experiential learning in a large spectrum of engineering activities relevant to their studies based on practice and procedures of an industrial nature. To achieve this objective, the Centre operates in a simulated factory environment. Most of the learner exercises and projects are brought in from industry. Through these projects, learners can appreciate the actual production processes and problems that are usually encountered in industry. At the same time, staff can brush up on their expertise and keep abreast of technological advances.

The Industrial Centre has the following four divisions focusing on different areas:

- **Machining and general engineering**

  This division serves to provide training opportunities for learners in a wide range of metal cutting processes, advanced machining and industrial metrology. It also covers training in common industrial practice such as maintenance, pneumatic and hydraulic system design, and the use of hand tools.

- **CAD/CAM and industrial automation**

  This division provides training opportunities for learners in the operation, application and development of CAD/CAM, CNC machines 3-dimensional digitising and scanning devices, rapid prototyping, and CIM systems. It also covers training in production planning, project management and manufacturing resource planning.

- **Electrical, electronics and construction**

  This division provides training in three major areas: electrical, electronics, and building and construction. In the electrical and electronics area, learners participate in surface mount technology, printed circuit board design and manufacturing programmable logic controller computer controller and industrial-type power switching systems. In the construction area, learner activities include plumbing, brickwork, formwork and reinforced concrete structures.

- **Material and process technologies**

  This division provides training opportunities for learners in a variety of production techniques and technologies. Learners participate actively in sheet metal fabrication and welding, press tool work, plastics fabrication, injection moulding, foundry work, die-casting, forging, heat treatment, and a wide range of surface treatment processes including vacuum coating, anodising and electroforming.

15. PLACEMENT OF LEARNERS

15.1 Placement development

Placement development refers to finding placement positions for learners that will provide them with learning experiences, convincing commerce, industry and the public sector that they will benefit from co-operating with this educational model and creating employment opportunities for learners after graduation.

Placement development is therefore the act of creating opportunities (training opportunities, part-time employment or full-time employment) that did not exist previously or whose existence was not known to the technikon. It is an aggressive rather than a passive function. As such, co-ordinators should distinguish it from the mere matching of learners with existing part-time or temporary placement, and it certainly involves far more than simply meeting a company's request for "someone to work on a part-time basis".

Co-ordinators may put in considerable effort (in some cases this may extend over a period of as long as three years) in convincing companies of the merit of a plan to place a learner. Plans cannot be effective without so-called desk co-ordinators who accept company requests for learners and match learners with the specific requirements.

Tax benefits for participating employers would be a definite incentive for creating training positions. As new legislation unfolds in this regard, co-ordinators can play a more aggressive role in placement development activities, such as developing plans for experiential learning.

Aggressive placement development can ensure meaningful co-operation with employers who understand their role in the educational process. Placement development obviously takes place when a learner's career choice becomes known or when the choice changes and necessitates a shift from one placement to another. However, even after all learners have been placed, placement development must continue so that future placements can be effected. Unfortunately, co-ordinators do not always continue with the placement development function. This can result in hasty searches for placement positions, indiscriminate approval of any placements the learners can find, or reusing the same stations without any real regard for the learner's career goals.

It is very important that the co-ordinator's seniors know and understand the major resource input for placement development. If they are not aware of the amount of work involved in such an activity, they may see the co-ordinator as being a mere placement officer.

Placement and placement development

In working with companies, co-ordinators usually find the following guidelines regarding placement development useful:

- Always contact the "decision-maker" within the company first. The co-ordinator should not be required to work up through the ranks. Instead directives should flow from the top down, stating the company's participation in the co-operative education plan.

- Show the company that you have its best interests, as well as those of the learners, at heart.
- Always negotiate in terms of a particular learner, not the plan.
- Discuss specific aspects of a problem with the company and deal with problems one at a time, for example placement restrictions.
- Use all available resources — companies, the state, employment services, wholesale distributors, instructors, personal contacts, successfully placed learners, and the advisory committee members.
- Convince the company of the value of employee upgrading.
- Assist the company to redefine placements where necessary.
- Explain to the company that you will assist the learner with any problems that may arise.
- Relieve the company of the burden of dismissing a learner. Before the learner is placed, assure the company of your help in such a situation.

It is most important that you are honest and do not "over-market" a learner.

Criteria for selecting placement positions

The following criteria are used in selecting a training station:

Type of occupation: The placement position should provide experience in occupations that require both skill and knowledge.

Career goal: The placement position should relate directly to the learner's career goal.

Opportunities for rotation: The placement position should provide a wide variety of direct experiences associated with the occupation. This should not merely be routine experience of a repetitive nature.

On-the-job supervision: The placement position should be supervised by someone competent in the skills and technical aspects of the occupation. The supervisor/mentor should show a keen interest in assisting with the training programme.

Working conditions: The working conditions of placement positions should be safe; the company should have a good record of accident prevention.

Reputation: Establishments that furnish placement positions should have a reputation of ethical business practices in the community.

Hours of duty: A sufficient number of hours per week should be worked.

Facilities and equipment: Up-to-date facilities and equipment should be used for work in the placement position.

Supervisor and learner-trainee: Good supervisor and learner relationships should be in place at the placement position.

Location: Some consideration should be given to accommodation and travel time.

Wages: The issue of wages/allowances should be discussed with the company.

15.2 Orientation programme

Pre-placement orientation programmes for learners are available at some institutions in order to acquaint them with the system and to prepare them for their experiential learning.

These programmes may consist of eight to ten working sessions. Each session lasts approximately one hour, and may even be included in the learner's classroom attendance schedule [24].

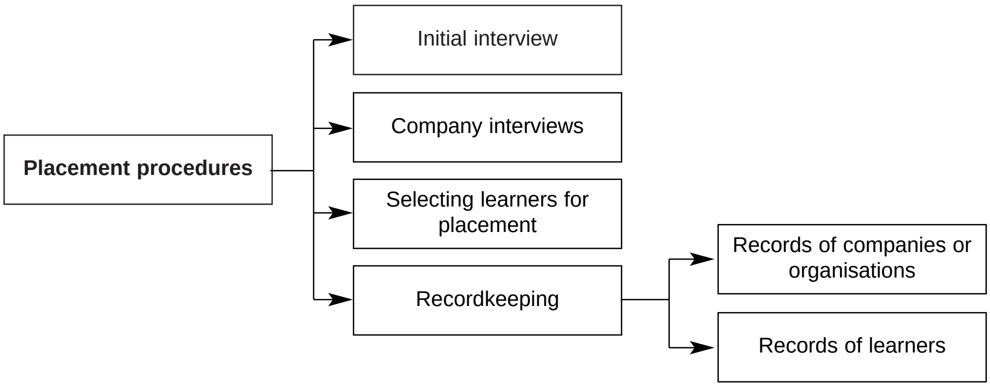
An orientation programme may include the following elements:

- Introduction to the principles of co-operative education
- Review of the instructional programme requirements
- Preview of the organisation of work sessions
- Explanation of the role of the programme co-ordinator
- Researching of placement opportunities
- Role of the technikon in placing learners
- Assessment of learners by the mentor and the technikon
- Preparation of a CV
- Interview techniques
- Registration procedures, registration fees, etc.
- Writing of technical reports/projects
- Verbal presentations
- Transition to the work environment: dress code, relationships with colleagues in the company environment, etc.

15.3 Placement procedures

The placement process begins after group orientations to review the philosophy of co-operative education, the required forms to complete, procedures of placement, types of placements, rules and regulations, the art of interviewing, and the preparation of CVs.

We will discuss the following, as illustrated in the diagram below, in more detail:



15.3.1 Initial interview

Once the learner has formally applied, the co-ordinator and/or the faculty co-ordinator should conduct a formal interview with the learner. At this point, the learner must understand the importance of mutual trust and communication. It should be noted that many problems arise as a result of the learner not communicating with his/her co-ordinator.

During the interview, the co-ordinator should attempt to gather information on the following aspects:

- Course of study
- Date to begin with experiential learning
- Personal information regarding citizenship, scholarships, extra-curricular activities, etc.
- Placement parameters, such as geographic and transportation restrictions and career preferences
- Previous full-time/part-time experience
- Any questions or concerns that stem from orientation sessions

In addition, the co-ordinator should review the learner's initial CV and make suggestions for improvement. The amended CV should be typed and copies made for the co-ordinator's file. This file should also include notes from each meeting with the learner.

15.3.2 Company interviews

Final selection of learners is usually done by the participating companies, and not by the co-ordinator. However, the co-ordinator can assist with decisions regarding how many learners the company should interview and which learner(s) to interview. The following methods of placement are possible:

- All interested learners are allowed to apply for a specific placement position
- One learner is selected and others are successively chosen if the first one is not hired (not recommended, however)
- Several learners are given the opportunity to be interviewed
- Learners are allowed to find their own placements, subject to the co-ordinator's approval

If the career objectives of the learners have been well defined, the first method allows for the most natural competitive employment situation and leaves the final choice with the company. In the second case, the co-ordinator is almost choosing a particular learner for a specific placement, even though the company has the option of not selecting that learner. In the third case, several learners are sent for interviews without much effort being made to match career objectives with opportunities offered in established placement positions. This method increases the chances of many adjustments and placement changes being made early in the year.

The last method, that of allowing learners to find their own placements, is the weakest method. It usually indicates that the co-ordinator has made little or no attempt to establish placement positions for the purpose of matching learners with placement opportunities. Programmes attempting to operate in this manner are almost destined to fail, and often become just plain work experience plans rather than experiential learning.

15.3.3 Selecting learners for placement

As stated earlier in this manual (see 5.3), the process of matching the learner's qualifications and interests with a company's requirements is at best a difficult process; the success of this effort will ultimately determine the success or failure of the experiential learning plan.

15.3.4 Recordkeeping

Records should be kept of learner placements in order to facilitate communication and follow-up procedures. Learners should be required to complete a form when they apply for a placement position, stating particulars such as name, student number, course of study, address, telephone numbers and past experience. Once learners have been placed, this data should be captured in another form which contains details of the company's postal and physical addresses, telephone numbers, mentors, etc.

The unit/office for co-operative education will be able to build up records/databases using the above forms and information gleaned from co-ordinator visits to companies, correspondence and telephone communications.

The following should be useful in this regard:

- **Records of companies/organisations**

  Records should be kept of organisations relevant to each field of study, e.g. mechanical engineering, information technology and tourism. There will of course be some overlap in cases where companies have interests in more than one field of operation.

  One computer screen may be allocated per company detailing the name of the company, contact persons and mentor(s), titles and positions held, physical and postal addresses, telephone/fax and cell numbers, and types and number of placement positions. Codes may be generated for each field, such as for the position of the person in the company [25]. For example:

Code	**Position**
ACC	Accountant
BMR	Branch manager
CEG	Chief engineer
DIR	Director
IMR	Industrial manager

- **Placement records of learners**

  Data for each learner should consist of at least the following:

  † Student number
  † Surname and initials of the learner
  † Instructional programme
  † Part of course completed
  † Registration details (technikon registration)

  As learners are placed, details of where they will be doing their experiential learning can be entered into their records.

  Information can now be drawn from the system as required. For example, when planning visits to learners the co-ordinator can request a list of companies (giving addresses and names of mentors by area/province) and the names of the learners who have been placed there for a certain field of study. The possibilities are limited only by the resourcefulness of the person setting up the databases.

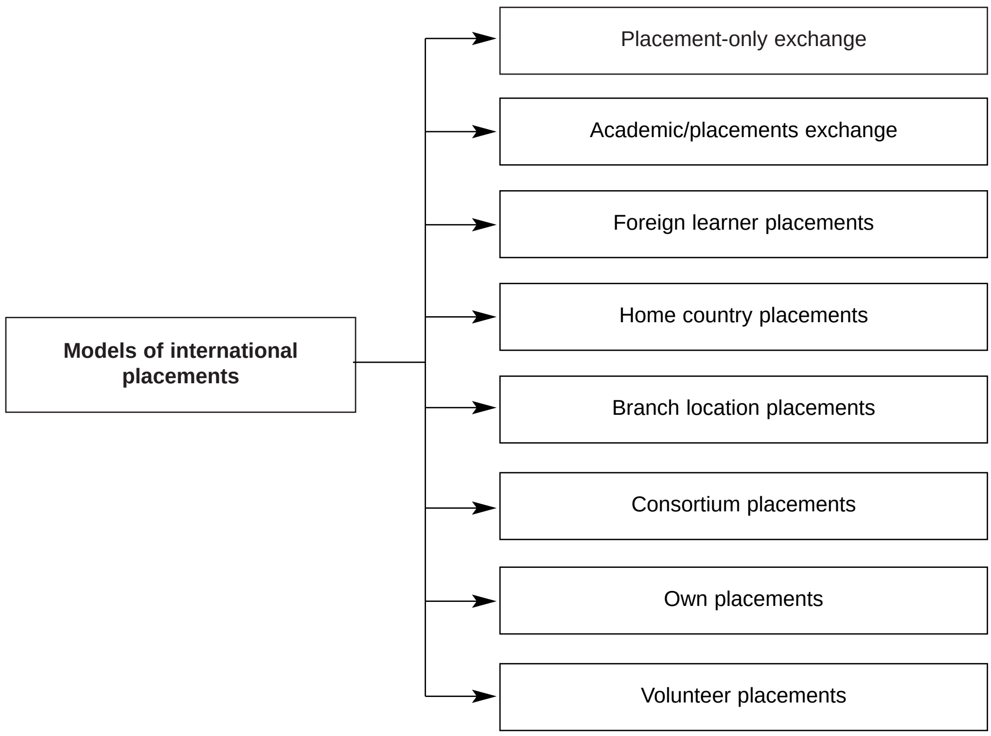
  As an example: Learner placements per qualification per area

Area	**Qualification**	**Company**	**Contact person**	**Learner**
Bellville	ND Electrical	Sparks & Co	VD Merwe, Koos	961122 Walker, J
Cape Town	ND Electrical	Fuse & Co	Cloete, James	950123 Makoena, K

16. INTERNATIONAL PLACEMENTS

16.1 Models

International co-operative education programmes can be divided into two main categories: **exchange** and **one-way**. With an exchange programme, different countries collaborate in placing one another's learners. Both host programmes take responsibility for identifying suitable placements for the incoming foreign learners. One-way programmes can be quite varied in operation and facilitation, but in all cases the learner placements abroad are not reciprocated by incoming foreign learners [26].



16.1.1 Placement-only exchange

With the placement-only exchange model, learners are placed at companies and do not complete any academic studies during their stay in the foreign country. This model can be adopted simply by the two partners drawing up a memorandum of understanding that identifies the nature of their agreement. Its purpose is not only to clarify the intentions of the collaboration and who is responsible for what, but also to gain support and recognition from governing bodies and even immigration authorities.

16.1.2 Academic/placements exchange

There are exchange models in which learners complete periods of academic study as well as experiential learning terms while in the foreign country. Typically, the learners first complete a number of courses which apply to their degree programmes back home, and then obtain placements in fields related to their studies through the hosting institution's co-operative education programme. If it can be shown that the period of a placement is an integral component of the learner's education (which will be the case if the learner has been admitted to the co-operative education programme) then the learners can convert their student visas into valid work permits with supporting documentation from the institution.

Academic exchange agreements can also be arranged by educational institutions working with their respective governments for support regarding funding and visa requirements. The agreement can include exchanges of learners at both the undergraduate and graduate levels for periods of study and of experiential learning, and of lecturers selected to teach disciplines not offered by resident staff.

16.1.3 Foreign learner placements

Some countries allow foreign learners who are registered in academic studies to replace their student visas with work permits for defined periods of placement if it can be shown that the placement is an integral component of their education. If the foreign learner is admitted to that institution's experiential learning programme then the "integral component" issue is conveniently satisfied. The documentation required to convert the student visa to a work permit includes an offer letter from the company (stating things such as start/end dates, salary and placement description) and a letter from the institution confirming the learner's status as an experiential learning learner. This process can be repeated in those instances (e.g. in Canada and the United States) where experiential learning programmes require learners to complete four or five different experiential learning terms before graduation.

Foreign learners can gain international experience by taking advantage of an option in some countries that entitles them to a valid twelve-month work permit upon graduation. The institution's experiential learning programme may assume responsibility for identifying suitable placement positions for these learners.

The foreign learner model can be used effectively when learners from developing countries study abroad in a developed country. The combination of study and experiential learning abroad can be very useful, not only to the learner but also to the developing country once the returning learner is able to apply any new technology with which he/she has had experience.

Another model that uses the student visa/work permit conversion is the concept of the satellite campus. Here, an academic institution may set up a satellite campus in a foreign country for its own learners to study abroad. While there, the learners could be eligible to convert their student visas into work permits as discussed above. Again, a co-operative education unit at the satellite campus would take responsibility for identifying appropriate placements for these learners, by taking advantage of its local network.

16.1.4 Home country placements

There are both formal and informal arrangements whereby learners studying abroad at co-operative education institutions can return to their home countries to complete their experiential learning terms. These can be accomplished at an individual level, using the learner's connections back in his/her home country, or at an organisational level.

16.1.5 Branch location placements

The branch location model is the one most often used by companies to facilitate international co-operative education placements. Typically, a company may take on a domestic learner for a fixed period of time and then send that learner to one of its branch locations or associated companies abroad for another fixed period. Alternatively, after placing a domestic learner for one experiential learning term, the company may then recommend that learner to one of its other locations abroad for a subsequent term. The domestic company may also simply facilitate the connection for the local experiential learning programme, conducting interviews with the learners on behalf of its branch location.

16.1.6 Consortium placements

When government, industry or university strategic planners identify a particular need for technology transfer or human resource development on a large scale, a consortium may be created to meet the challenge. A good example of this is the Co-op Japan Programme in Canada. Established in 1991, it was the first programme of its kind to pioneer the consortium approach to the development of international placements. With government funding, four (initially) co-operative education universities in Canada created an administrative unit to facilitate the one-way placement of science and engineering learners in Japan. Working directly with Japanese industry, which has very little if any experiential learning experience, Co-op Japan has been able to develop suitable placements in various industry sectors.

The consortium model may also be the most effective way for countries and their industries to work through government agencies, paving the way for international educational activities including experiential learning, full-time learning and lecturing staff exchanges.

16.1.7 Own placements

Enterprising learners have initiated their own international placements with or without support from the institution. Whether the learner worked through an association with an international student exchange programme, friends and relatives, previous companies or his/her own co-ordinator, the net result is that the learner obtains a placement abroad in a related field and receives experiential learning recognition for it. The most common form of this model is where the academic institution provides preparation workshops and guidance for the learners, giving them support in creating effective résumés and covering letters, identifying sources of information on potential companies and assisting in matters relating to immigration.

16.1.8 Volunteer placements

There are programmes that offer no salary from the hosting company. Learners are rewarded with experiential learning alone. This service may be provided by an association in the hosting country, by an academic institution or a national government. Financial support for the learner may come in the form of living expenses covered by the learner's own government or perhaps accommodation paid for by the company. This model may not meet the criteria for experiential learning programmes in some countries because of accreditation standards that require all learners to receive a salary during their experiential learning terms.

16.2 Learner selection criteria

International placements differ from domestic ones in many ways. More variables are involved that can adversely affect the outcome for the learner, company and institution. These variables include distance, foreign regulations, culture, homesickness, medical emergencies, political unrest and travel costs.

The greatest benefits of international placements accrue to the learners involved. They can gain experiences not available in their own countries, grow to new levels of maturity and self-reliance, and satisfy their general need to travel and meet new people. However, a successful international placement must also satisfy the needs of the company and the academic institution. An unhappy learner may spread the word to his/her fellow learners, a dissatisfied company may cease placements and the institution may decide that international placements do not warrant the time and effort required and so cancel funding. It should be no surprise then that learner selection is the most important issue for consideration.

When selecting learners for international placement, several aspects need to be considered. The right learners should preferably have:

- third-year minimum academic standing, prior experiential learning or related, relevant technical skills
- fluency in the language of the country concerned
- good communication and social skills
- enthusiasm for and commitment to the aims of the international programme

The right learners should preferably be:

- flexible, adaptable, self-reliant and motivated
- sensitive, tolerant and non-judgemental
- outgoing, mature, reliable and independent
- good ambassadors and open to new cultures

- a close match to the requirements of the placement

It is important to note here that some flexibility surrounding the above criteria must be observed, otherwise no learners would qualify for international placements!

16.3 Procedures for selecting learners

There are probably as many different methods for selecting learners as there are programmes around the world. Each method must be able to gather sufficient information to predict with a high degree of certainty whether the learner will be successful. If the learner is a member of your own experiential learning programme and is someone with whom you have worked closely during his/her tenure in your programme, then you would probably have most of the information you need to make this prediction. Although close to the ideal, this situation is often not possible. Programme administrators must therefore design other systems to gather equivalent information about the learners.

Some or all of the following are often used when assessing learners for international experiential learning placements:

- Personal interview of the learner with the programme administrator
- Covering letter, CV
- Short résumé and copy of transcripts
- Letters of reference from lecturers and previous companies
- Learner agreement form (rules and regulations, “fine print”)
- Experiential learning term report from previous placement experience
- Recommendation from learner’s co-ordinator

16.4 Company selection

Anyone experienced with co-operative education is familiar with the amount of time and effort involved in finding suitable companies for placing learners. The same difficulties with this activity are experienced by international experiential learning programmes.

Placements for learners can be found by dealing directly with companies by taking advantage of existing relationships with them, utilising the exchange partner for this purpose and allowing learners to locate their own placements.

16.4.1 Company concerns regarding the placement of foreign learners

The following are some of the concerns facing companies when confronted with the prospect of placing a foreign learner:

- The company does not place anyone who is not eligible for full-time appointment upon graduation.
- The company does not place anyone without holding a face-to-face interview.
- The company places only domestic citizens.
- Will the company have to cover the learner's travel expenses?
- Will the learner be covered by medical and accident insurance?
- Can the company ensure that the confidentiality agreement with the foreign learner will hold when the learner returns to his/her home country?

These problems can be solved, in the case of exchange partners, by letting the exchange partners use their own record of trust and reliability to allay the company's fears. Another method is to point out to a company that placing a learner through an exchange actually creates an opportunity for a domestic learner to learn abroad.

Technology has certainly played a part in providing good alternatives to personal interviews. Some programmes rely on telephone interviews, and others have access to video conferencing, etc.

16.4.2 Locating international companies

Two basic issues are involved here: finding domestic companies that will place foreign learners and finding foreign companies that will place domestic learners. It is common in an exchange scheme for the partners to identify these companies. On occasion, foreign countries may be approached directly via networks and contacts. Once such links have been established, the ongoing liaison should then include the exchange partner.

The following suggestions may be useful in locating suitable companies abroad for the placement of learners:

- Consult lecturing staff in the learner's discipline who may have colleagues or research partners working in foreign countries.
- Consult foreign learners at your institution who may have knowledge of or family connections with companies in foreign countries.
- Check your own domestic company contacts for those with branch locations or main offices in foreign countries, or those which operate on an international scale.

- Consult with your own company contacts who have connections with other countries through birth or education.
- Go through trade journals.
- Look for international companies' advertisements.
- Use the Internet to identify international or foreign companies.
- Contact your local government for the departments of international trade and commerce.

16.5 Matching learners with placements

An important issue is to ensure that the placements being offered to the learners are appropriate for their discipline requirements and experience levels. A good learner/company match is important to enable the chosen learner to carry out the responsibilities of the placement and fit in easily in the company's environment. Companies usually make their placement decisions by referring to learner résumés and conducting telephone interviews. This can be accompanied by consultation with an intermediary such as an exchange partner of the sending institution.

Most of the potential problems can be avoided by following the procedures that practitioners adhere to when making domestic placements: obtaining detailed placement descriptions from companies that set out clearly the requirements of the position, working with résumés that are informative and facilitating discussions between supervisors and potential learners. However, when dealing with international placements, other problems can arise due to differences in culture and religion.

16.6 Work permits and visas

All countries have regulations governing employment, whether for their own citizens or for foreign visitors. In order to obtain a placement in a country of which an individual is not a citizen, it is necessary for that individual to obtain authorisation to undertake a placement, e.g. a work permit or visa, prior to entering the country. Ease of access to work permits varies depending on the country, the discipline learners are studying or whether they are part of an exchange scheme. In almost all cases, contact is made through the country's immigration authority, often most easily accessed through its nearest consulate. Programmes with access to the Internet may find the Embassy Page very useful, as it provides access to embassies and consulates for most countries around the world. Visit their homepage at **http://www.embpage.org/**.

Processing times vary, as do fees, supporting documentation, forms and jargon. The various terms used to describe the permit include "work authorisation", "work permit", "work visa", "traineeship" and "visa". Attitudes displayed by consulate staff towards co-operative education co-ordinators can range from indifference and tolerance to enthusiastic support.

The most common method of procuring work permits is to leave it up to the individual learner to pursue, often with support from the institution or the hosting company. Some programmes have sufficient numbers of international placements and the institution consequently has staff dedicated to such activity. It is clear that this activity is very time-consuming and often represents a "make or break" situation for international placements.

16.7 Monitoring and assessment

Virtually all experiential learning programmes require their learners to be monitored and assessed during each period of placement. In addition, most require that some form of written report on a topic relating to the nature of his/her duties be completed and submitted by the learner. This common practice has meant that many companies around the world are quite aware of these requirements of experiential learning programmes and are happy to comply.

With the exchange models, the hosting institution usually takes responsibility for conducting site visits, submitting reports and overseeing the delivery and collection of performance appraisals of the learners. Programmes without exchange partners can make good use of technology, and send forms directly to the companies via fax or e-mail. Some programmes have adequate budgets to enable staff to take regular overseas trips to conduct site visits, whereas others take advantage of lecturing staff travelling to conferences in the foreign country to conduct personal visits.

16.8 Scheduling

When arranging placement terms abroad, programmes must pay attention to differences in the scheduling of placement periods. In Canada and the United States, for example, many experiential learning programmes operate on a cycle of four-month placement terms beginning in January, May and September. There are of course variations to this schedule. Some feature placement terms as short as three months or as long as twelve. In the UK, New Zealand and Australia the norm tends to be twelve-month terms, most beginning in July. As a result, the companies in these countries tend to schedule their learner placement procedures in concert with the timing of the learner supply from domestic sources. Some resistance or difficulty may be encountered in attempting to place foreign learners whose availability dates differ from the domestic scheduling. In such cases, programme requirements such as length of work periods may have to be compromised.

16.9 Language and culture

The easiest way is to place learners in countries whose people speak the same language. However, the ability to speak the local language can be included in the criteria used to select learners. There are programmes that require learners to complete at least one year of language training prior to registering for an international placement in a country whose people do not speak the same language. The consortia that place learners in Japan are a good example, as are programmes in the European Union that place their learners with member countries.

International placement learners who are about to travel to a foreign country must be prepared for and be able to adjust to cultural differences. These can be as trivial as variations in vocabulary ("take-out" for "take-away" food; "truck" for "lorry") or as significant as differences in attitudes towards equality, ethics and religion.

The following are a few examples of practices that can be used in preparing learners for cultural differences:

- One-month immersion studies in the foreign culture
- Presentations by learners returning from an international placement
- Use of international student associations present on most campuses
- Mandatory readings on and videos about the specific foreign country

It is important to help learners have more realistic expectations of taking international placements. Lower salaries, fewer experiential learning opportunities and reduced responsibilities are important issues for discussion. Learners must also remember that while being on an international placement, they are guests in the foreign country and must therefore act as good ambassadors.

16.10 Salary, travel and legal issues

Learners will usually be paid a salary during their overseas placements as will the foreign learners placed locally. In some cases, learners are not paid a salary but are provided with accommodation and a living allowance. In other cases, learners receive grants or scholarships from their home institution or government. Learners often value the opportunity to travel and learn overseas so highly that the monetary return is of almost no importance.

Surveys generally indicate that salaries are the highest in North America and lowest in developing countries. This gives rise to other important considerations for programmes arranging exchanges between developed and developing countries. One is that the developing country may not be able to provide much, if any, salary to the learner. The other is that learners from developing countries may end up earning the equivalent of a year's salary in their home country for each month of their term abroad. A solution is for the learner from the developing country to be placed for a shorter duration. Another is to split the combined salary evenly between the two learners in the exchange.

It is important to be aware of the legal implications of international placements; liabilities must be identified and investigated. One could anticipate the possibility that a learner, unhappy with his/her placement, quits the placement, returns home prematurely and sues the academic institution for negligence and financial loss. In most cases, programmes clearly identify their responsibilities as being the identification of the placement opportunity and ensure that the learner is well aware of all the risks. Also, in most countries placement standards are such that learners being paid a salary are covered by accident insurance. It is important that a learner be fully insured against personal injury and damage to company equipment and property. However, this is not guaranteed and must be determined by the sending programme. In those models where learners do not receive a salary, the association managing their placement carries umbrella liability insurance coverage for the learner. Here, in summary, are some of the liability issues institutions may wish to discuss with their legal advisors:

16.10.1 Liabilities to the learner

- **Company selection**: If the institution recommends a particular company for the learner, it has a duty to determine whether the placement environment is safe and whether the learner is protected by insurance.

- **Accommodation**: If the institution recommends accommodation or provides a list of available accommodation, it may have a duty to determine that the facilities are physically safe and suitable.

- **Travel**: If the institution recommends or makes travel arrangements with foreign carriers other than international airlines, it has a duty to investigate the carrier's safety record and insurance coverage.

- **Waivers of liability**: If the institution acts as the agent of a foreign company which sends a waiver of any claims to liability by the learner against the foreign company for negligence or injuries, the institution may be breaching a duty of care owed to the learner.

- **Medical coverage**: The institution may have a duty to ensure that learners have adequate medical insurance coverage while abroad, including the cost of repatriation for some countries.

- **Disease**: It must be determined whether the institution has the duty to advise on immunisation against disease.

- **Civil unrest**: Does the institution have the duty to advise of civil unrest in some countries? Information can be obtained through most home country External Affairs Travel Bulletins.

16.10.2 Liabilities to the company

There must be an awareness of potential claims by a company if a learner's conduct has caused harm to the company's business or property.

The extent of the institution's duty to warn the company of a learner's prior record of misconduct in the workplace or a learner's medical disability must be determined.

16.10.3 Liabilities to host families

There must be an awareness of potential claims by the host family if the learner's conduct has caused harm to the host's person or property.

The institution's duty with regard to revealing the learner's medical or physical disabilities, history of threatening behaviour or criminal record of theft must be determined.

16.11 Learner checklist

The following is an example of a checklist that learners must go through prior to departing on an international placement:

Example

- You must have a passport which is valid for at least six months beyond your return date. Check whether you need a visa or work permit.
- Photocopy all important information (e.g. passport, visa, birth certificate) and keep another copy at home.
- You must have supplementary health insurance for the foreign country. Prepay the health insurance coverage for the period of your stay abroad.
- Obtain immunisation vaccinations, if necessary.
- Check with your student affairs department to find out if there are any issues that might affect the status of any student loans.
- Undergo a medical and dental examination.
- Arrange power of attorney for both general and banking purposes.
- You should have a return air ticket (where possible).
- Give your experiential learning programme the address, contact names and numbers of the overseas company and details of your travel plans.
- Keep the telephone numbers of co-operative education staff at home and with you in the foreign country.
- Keep the address of your country's nearest embassy or consulate in the case of an emergency.
- Check that you are registered for an experiential learning term for the whole period of your stay and that tuition and experiential learning fees have been pre-paid.

- Register in the semester following your placement term if required.
- Formally change your postal address on file with your institution's records department. Obtain foreign currency and buy traveller's cheques as needed.
- Make sure that you have a basic understanding of the local language and customs.
- Your clothing should be appropriate for the climate. Take enough quantities of any personal items that may be difficult to obtain abroad.
- You may want to obtain a youth hostel membership and/or an international driver's licence.

Getting connected

Once an exchange partner or institution has been found, it may be useful to draw up a memorandum of understanding (MOU). An example of one is shown below to serve as a guide for others. This particular MOU has been created by Canada's External Affairs, Youth and Personalities Exchange Section for use between educational institutions in Canada and other countries. Once approved, such exchanges are recognised by the Canadian Consulate in the collaborating country, making the procurement of a valid Canadian work permit almost straightforward.

Example

AGREEMENT
ON SCHOLARLY CO-OPERATION
BETWEEN
(Educational Institution A)
AND
(Educational Institution B)

In order to promote scholarly co-operation and exchanges, (Institution A) and (Institution B) join in the following Agreement:

I. The two Institutions seek to promote scholarly co-operation by encouraging direct contact and co-operation between their faculty members and departments, subject to the provisions of this Agreement.

II. The two Institutions will co-operate in those fields that both find desirable from among the following areas:
(e.g.) Management Studies
Computing Science
Engineering
Applied Sciences

III. The co-operation will be extended to other areas if both Institutions find it desirable. Within the fields specified above, both Institutions agree to the following general forms of co-operation, subject to available resources:

a) Exchange of scholars to participate in conferences, symposia and seminars
b) Exchange of curriculum materials and research information in fields of interest to both Institutions
c) Short-term exchange visits of teaching faculty members and administrative staff in the fields covered by the Agreement
d) Joint research activities
e) Exchange of students for study in degree programmes in the fields covered by this Agreement on the understanding that the normal admission standards for these programmes are satisfied
f) Exchange of students registered in a co-operative education programme or for whom experiential learning placement is a compulsory part of the curriculum and who wish to complete a work term in Canada or in (foreign country). (The placement arrangements to be described in section VIII.)

IV. Specific conditions for scholarly co-operation and the financial and social arrangements for specific visits, exchanges, etc., will be developed jointly and spelled out in detail as addenda — one for each specific case — to the present Agreement.

V. The two institutions will jointly seek support from funding organizations to help pay for the travel and living expenses of the visiting faculty.

VI. The Agreement will become effective upon the date of signature by the Executive Heads of the Institutions or their delegates.

VII. The present Agreement will be valid for a period of (time to be determined) from the date of formal signature by both parties. Either Institution may terminate this Agreement by giving six months' written notice to the other. It may be extended for an additional (time to be determined) after appropriate mutual review.

VIII. There will be an exchange of an equal number of experiential learning students from each department/faculty per calendar year. Student eligibility: participants should be nationals or permanent residents of Canada or the country of the foreign institution able to obtain appropriate work visas in either country. Furthermore, they shall have as minimum requirements excellent command of the English or French language; academic criteria are determined by the participating institutions. The placement period will normally be between 4 to 8 month duration. Travel costs and living costs will be the responsibility of the individual students. Salary and benefits will be the responsibility of the work placement company. The host institution will attempt to secure on campus accommodation for these exchange students or will assist students in locating appropriate housing. The designated liaison officers for placement students will be (foreign institution's contact) and (Canadian institution's contact).

N.B. Exchange participants agree not to prolong their stay in the host country beyond the conclusion of their exchange under the programme. Furthermore, it is understood that participants may not seek other placement or employment opportunities while residing in the host country.

17. PLACEMENT OFFICE FOR GRADUATES

The establishment of a placement office for graduates provides a service to learners, employers and the community. The placement office acts as a type of "broker" in assisting learners to find employment and in helping companies and organisations to find suitable employees. It also provides a mechanism for a tertiary institution to derive an income from the educational product it delivers.

Since the placement office functions as a service to graduates, the pool of applicants will consist primarily of technikon graduates.

Apart from the usual infrastructure needed (staff, offices, furniture, filing cabinets, computers and software, telephones and fax machines) there are other considerations to be kept in mind for the proper functioning of such an office.

17.1 Documentation

The following are examples of contracts and agreements for the proposed placement office:

17.1.1 Undertaking to conduct a search for personnel

Agreement between.. (Client) and the Placement Office based at the Institution.

Client:
Name ....
Address ....
....
....
....
Telephone ....
Fax ....
E-mail ....
Placement Office: Tel.:...
Fax:...
E-mail:..
Address:..

1. Job specification:

1.1 Title of post ....
1.2 Qualifications required...
....
....
1.3 Language proficiency ....
....
1.4 Experience ....
....

1.5 Short description of work to be performed ....
....
....
....
....
....

1.6 Appropriate starting salary range
....

1.7 Fringe benefits offered ....
....
....
....
....

1.8 When must duty be commenced? ....

1.9 Closing date for applications ....

1.10 Specify particular requirements for the incumbent ....
....
....
....
....
....
....

1.11 Will the client reimburse applicants who are invited for interviews for their expenses? ....
....
On what basis? ....

2. Psychometric/psychological services

The Placement Office may provide additional support with the aid of a registered psychologist. Such services include behavioural assessment, counselling, training, etc. A separate quotation can be provided on request for these services.

3. Terms of the undertaking

(PO = Placement Office, IA = the Institution)

3.1 PO based at IA will undertake to advise and make details of the post/s known to applicants. The cost of advertising will depend on coverage required by the client as well as the number of insertions.
Advertising cost quote R ....

3.2 Applicants will be advised of receipt of their applications/CVs within five working days of receipt of applications.

3.3 PO will perform an initial screening of applicants to ensure that they meet the job specifications. Details of the most suitable applicants will be made available to the client and, if desired, those that do not meet the specifications. This will be carried out no later than eight working days after the closing date for applications.

3.4 After consultation with the client, the PO will make arrangements for interviews with the selected applicants. Interviews are to be arranged on dates mutually agreed upon with the client.

Suggested dates: ....and..

Interviews can be conducted:

3.4.1 By the client alone ❑
3.4.2 Together with PO ❑
3.4.3 Entirely by PO on behalf of the client ❑

Indicate preference by placing an X in the appropriate block.

3.5 As agreed with the client, the successful applicant will be advised accordingly and given details of salary and conditions of employment.
Advice to successful candidates by:
- PO on behalf of the client ❑
- Client ❑

3.6 Unsuccessful candidates to be advised by PO by a date agreed upon with the client
(..)

3.7 Should the person appointed resign/leave within a period of two months after commencing duties PO will undertake to:
- Re-advertise the post without additional cost to the clients and provide the services outlined in 3.2 to 3.6 above ❑
- Refund the client ❑

3.8 PO fees are based on the gross annual remuneration for the post at a rate of x%.

Service Fees	R ....
Advertising Fees	R ....
Psychological Services	R ....

Signed at .... on ....

Signature .... (Client)

Signature .... (PO)

Witness ....

Witness ....

17.1.2 Terms and conditions

(Conditions of contract between employer and placement office)

1. In these conditions –

1.1 "Applicant" shall mean the person providing personal information to the Placement Office (PO) of the Institution (IA) for purposes of use by any Client.

1.2 "Client" shall mean the person or his/her assignee who uses or intends to make use of information provided to the PO of the IA, and who intends to become the employer of an Assignee.

1.3 "Assignee" shall mean the person who is hired as an employee by a Client by making use of the information as supplied by the PO of the IA.

1.4 "Contract" shall mean these terms and conditions together with any further terms and conditions laid down by the IA in this regard.

1.5 "IA" shall mean the Institution A as constituted in accordance with e.g. Technikons Act 125 of 1993.

2. Recruitment Procedure

2.1 The PO will perform an initial screening of Applicants to ensure that they reasonably meet the job specification as indicated by the Client.

2.2 The PO will within a given number of working days after the closing date for applications, and within a given number of weeks after receipt of the Client's request in this regard, inform the Client of suitable and other applicants whose curriculum vitae were received.

3. Handling Fee

3.1 In addition to all other amounts mentioned in the contract, a handling fee of Rxxxx-xx is payable for every recruitment request after providing the Client with information regarding suitable and other Applicants whose curriculum vitae are received.

4. Advertising

4.1 The PO shall, if required by the Client, prepare a written quotation in respect of a recruitment advertisement. Although the PO will use its best endeavours to ensure that such quotations are accurate, recruitment advertising quotations shall be governed by the advertising rates (of the publication) which actually prevailed on the date of publishing of the advertisement. In the event of a dispute the parties agree to abide by the rate as actually certified by the Advertising Manager of the publication in which the advertisement appeared.

4.2 The PO accepts no responsibility for advertising copy in the instance where such copy has been signed off by the client. All fees and costs relating to the production, preparation and placement of such advertisement shall by payable by the client to the IA.

4.3 Although the PO will use its best endeavours at all times to ensure that all client requirements and specifications relating to the publishing of an advertisement are complied with, it is specifically recorded that the IA accepts no responsibility whatsoever in instances where the advertisement as published, did not comply with the Client's requirements and specifications.

4.4 Payment due to the IA in respect of recruitment advertisements shall be made within 7 (seven) days from the date of invoice, and the Client shall be liable to the IA for a further 20% (twenty per cent) of the invoiced amount if payment is not made within the said 7 (seven) days.

5. General Conditions

5.1 Terms and conditions herein shall be deemed to be exclusive and applicable to each and every contract entered into between the parties. Any variation thereof shall not be binding unless stated in writing and on behalf of the IA.

5.2 The parties hereto consent to the jurisdiction of the Magistrates' Court in accordance with section 45 of the Magistrate's Court Act 32 of 1944, as amended, notwithstanding the fact that the amount may be in excess of the Magistrate's Court Jurisdiction.

5.3 The address as stated on the invoice will be deemed to be the *domicilium citandi et executandi* of the Client, and any letter, notice or process shall be validly sent to such domicilium as set out in the invoice.

5.4 If at any time payment by the Client shall be overdue, then without prejudice to any other legal remedy, the IA may refuse or defer the granting of further services until payment is made; alternatively, the IA may immediately cancel the contract and recover from the Client payment of all monies then due or owing and payment of such damages as the IA may have sustained. Strikes, differences with employees, employees absent because of leave, accident to the Client, failure of the usual sources of supply, civil commotion, act of government or quasi-government or legislation of any other contingencies whatsoever shall be sufficient excuse for any delay or suspension in the providing of services by IA to the Client.

5.5 A certificate signed by a financial manager of IA reflecting the amount of the indebtedness of the Client, and if applicable, that such amount is due and payable, shall be prima facie proof of its having rendered the required service to the Client. In the event of a dispute, as to the quality or otherwise of the service, the onus of providing such allegations shall rest upon the Client.

5.6 No concession, latitude or indulgence allowed by the IA to the Client shall be construed as a waiver or abandonment of any of its rights hereunder.

5.7 If any of the terms and conditions herein contained shall be invalid, the same shall not invalidate the remainder of the contract.

5.8 In the event of the Client breaching any of its obligations and/or failing to timeously make payment of any amount to the IA, the Client agrees to pay, and shall be liable to pay, all legal costs incurred by IA on the attorney/own Client scale.

5.9 The Client shall not be entitled to any claim set off or deduction in respect of any payment due by the Client to IA for service rendered.

5.10 The IA has the sole action to refer any dispute with the Client to arbitration, which arbitration shall bind both IA and the Client. An arbitrator shall be appointed by the chairman of the (local) Bar Council.

5.11 In all cases where the Client uses the postal services to effect payment, such postal service shall be deemed to be the agent of the Client. Acceptances of the Client's orders and requirements by IA are governed by the terms and conditions herein, notwithstanding any receipt or acknowledgement of the Client's orders/instructions or conflicting oral representation by IA.

5.12 The PO may provide additional support with the aid of a registered organisational psychologist. Such services can include behavioural assessment, counselling, training, etc. Upon request, a separate quotation can be provided for these services.

6. Indemnification

6.1 The Client hereby acknowledges that he/she has never had nor ever will have any claims against the IA, arising from or related to:

- any invitation to him/her to employ an Applicant recruited by the PO.
- any request to the PO to recruit Applicants for purposes of employment.
- the provision to him/her of the particulars of an Applicant by the PO.
- his/her appointment and acting as the Assignee's employer.

6.2 The Client hereby acknowledges that the IA made no suggestions to him/her with regard to the Applicant, which were not stated in this or any other written agreement with the IA.

NAME OF CLIENT:..
COMPANY/PRIVATE CORPORATION/IDENTITY NUMBER:........................
....
NAME OF AUTHORISED REPRESENTATIVE:..
....
ADDRESS:..
....
TELEPHONE NUMBER:...(...................)
FAX NUMBER:...(..................)

....
CLIENT DATE

17.1.3 Conditions pertaining to curriculum vitae of applicant

I, the undersigned, hereby request the PO (the IA), subject to the conditions below, to retain my particulars and curriculum vitae on a database or otherwise, and to make these known to interested potential employers.

Particulars

Surname and names____
Identity number____
Postal address____
Telephone number____
Fax number ____
Cell phone ____
Job interests ____

Conditions

- Admission fee: Rxx-xx payable on signing.
- Administrative levy: Rx-xx per month, for a minimum of twelve months, payable annually in advance, the first payment to be made on signing.

The IA:

- may advertise, in the manner, place and time which the IA deems suitable in its discretion, particulars of the Applicant or jobs available;
- will retain the particulars of the Applicant (without accepting accountability for the correctness thereof) on a database of the IA's choice or otherwise, and will make these particulars available to interested potential employers.

The Applicant:

- hereby indemnifies the IA from all claims with regard to and arising from the publication or announcement of the Applicant's particulars and any service which the Applicant may consequently accept or render at any employer, as well as from all costs with regard to the dispute or settlement of such claim or claims;
- hereby distances himself/herself from any claims against the IA as a result of any loss, damage or injury which may arise from or be related to any position which the Applicant accepts or any action which arises from or is related to the service which the IA subsequently puts at the disposal of the student;
- acknowledges that the IA does not act as his/her representative;
- acknowledges that this document concerns the entire agreement between the Applicant and the IA with regard to the subject thereof.

____________________ ____________________

Applicant Date

17.2 Finishing course

Candidates for posts negotiated by the PO can apply to attend a short finishing course arranged by the IA. The main thrust of the course is as follows:

- Compiling and maintaining a comprehensive curriculum vitae
- Preparing for interviews
- Teamwork and coping with conflicts as part of a survival strategy when starting in a new position

These courses may be arranged as and when sufficient demand arises.

18. QUALITY MANAGEMENT OF CO-OPERATIVE EDUCATION

Quality implies a systematic and continuing evaluation and a search for data, both subjective and objective, that will help identify the strengths and weaknesses of the effort. Accountability focuses on results and shifts the principal focus from input to output, from teaching to learning.

Feelings of dissatisfaction or satisfaction (or even delight) are experienced by a customer in every transaction. Future developments and the ability to hold that customer will depend greatly on the current experience. Consequently, it is critical to make certain that stakeholders in the current transaction obtain a high-quality experience. This objective is of considerable importance in the activities of arranging experiential learning placements for learners. In this scheme, the learners have only one opportunity to achieve a valuable placement experience which will comply with the course requirements. It is crucial, especially for these learners, that all agencies which arrange the placement take the necessary steps to assure a quality experience. Development of current and future learners, continued relevance of courses and the support of industry depend on successful outcomes for all partners [26].

18.1 The quality standard

Since their introduction in 1987, the ISO 9000 [27] family of standards has achieved widespread acceptance as a model for quality assurance. Several main requirements of this standard are interpreted and shown to be relevant to activities in learner placement.

18.2 The customer

In the tripartite arrangement between placement company (employer), learner and institution there is a complex set of supplier and customer relationships. Fundamental to achieving a quality partnership is an understanding of who supplies and who receives and what is involved in the transaction. Currently, learners are considered to be the prime customers and employers the secondary customer, with the institution being the supplier of learners and tuition. Learners are suppliers of intellect, effort and work to the companies. Organisations are also suppliers of vocational experience, whereas the institution continues to be a customer for further placement opportunities, case studies for the teaching programme and applied research funding. Clearly, it is necessary to ensure that both learners and companies fully understand the purpose of the placement, especially the objectives of the prime customer.

18.3 Quality requirements

A quality partnership results when the requirements of placement, as a minimum, are achieved, whereas delight with experience emerges from extra care and attention to detail.

18.3.1 Policy

The policy in respect of courses should be to provide relevant tuition and experience which prepare young professionals for a successful career. Achieving this requires an attitude at personal level which continually seeks a quality experience for the customer. Commitment to quality achievement must be stated in policy and course documents with the support of the staff.

18.3.2 Process control

This requirement in the standard seeks to ensure that capable processes are applied consistently, and are controlled, to achieve the requirements of each step in the overall placement process. Many processes are employed, ranging from the first contact with the prospective employer and the new learner to the awarding of the diploma.

18.4 Internal evaluation

Internal evaluation occurs daily as each lecturer/co-ordinator asks, "How did I do today?". It continues as the lecturer/co-ordinator consults with the institution's administrators, the mentors at the placement stations, and, most importantly, the learners. It culminates in end-of-year reports to the administration and with the learner's final grade.

18.4.1 The critical factor technique

The critical factor technique is very valuable to busy administrators who need to use their time wisely by looking carefully at only a few items to judge the quality of the operation. This technique is a form of management by exception and tells administrators whether they should investigate further.

The following are among the crucial questions or factors:

- Are suitable lecturers/co-ordinators being used?
- Is the related class lecturer responsible for the co-ordination visits and does this person have adequate co-ordination time?
- Is related instruction that is appropriate to each learner's career goals provided?
- Is the classroom for related instruction adequate in space and equipped and laid out in such a manner as to facilitate individualised instruction?
- Are experiential learning plans developed and used?

- Are experiential learning stations selected and developed by the co-ordinator?
- Are advisory committees for each occupational area operative?
- Are there plans in place for meeting the special needs of learners?

18.4.2 Process-oriented evaluation and/or product-oriented evaluation

Should the process and/or the product of co-operative education programmes be evaluated? Can one be evaluated without the other being evaluated? Which should it be — process or product? Process-oriented evaluation requires looking at the procedures (instructional strategies, instructional facilities, including laboratories, and instructional materials) used in the co-operative education programmes to teach occupational skills and knowledge.

Evaluation of co-operative education plans should take place in terms of **both process** and **product**. If the primary purpose of the evaluation is to look at specific aspects of the instruction that need to be improved, then process-oriented evaluation is what is needed. If, on the other hand, the evaluation's main goal is to determine the general efficiency and effectiveness of all the vocational instruction included in a particular programme, then product-oriented evaluation should be used. In practice, however, it is imperative that both process-oriented and product-oriented evaluations be employed.

In the final analysis, how well co-operative education works is judged on the basis of how well the product — the learner — does. Many evaluation schemes measure the degree of plan effectiveness based only on placements. If "output" is defined broadly to include more than acquiring occupational skills and knowledge, to also include a wider range of knowledge, attitudes and behaviour, then one will have a "product-oriented" approach that will be sensitive to all the outcomes of education — attitudes, values and behaviour.

18.5 Main questions regarding evaluation

The following questions are designed to evaluate both process and product:

- What evidence do you have that experiential learning graduates have advantages in the market place over non-experiential learning graduates? Placement rates, salary levels, the amount of time graduates spend unemployed, and statistics regarding the promotion of graduates provide the best responses to this question.
- Does the course content of co-operative education actually reflect changes in the demand for workers and in the needs of the workplace? Good responses to this question are provided by the following: the proportion of learners placed in the field for which they were trained, occupational survey data that shows a demand for graduates that is greater than the

number completing programmes, a survey of learners' attitudes concerning the relevance of the training they received, descriptions of curriculum revision activities designed to keep content up-to-date and reports on courses that have been discontinued in favour of more appropriate ones.

- What evidence do you have that co-operative education is effective in assisting existing staff in upgrading their competencies, and increasing their productivity and chances of being promoted? The best responses to this question are provided by figures on the number of adults who have been promoted after participating in an experiential learning programme, personal testimonies from participants, and surveys of companies.

- What evidence do you have that co-operative education is working effectively with learners who are physically disabled? Enrollment data for learners who are physically disabled and placement data today compared with that of a number of years ago provide good responses to this question. The lecturer/co-ordinator may wish to write a case example to illustrate efforts in this area.

18.6 Evaluation schemes and strategies

Many evaluation schemes and strategies are available to those who are responsible for evaluating co-operative occupational education plans. Selection of the proper evaluation tools should be based on questions such as the following:

- What is being evaluated (e.g. process and/or product components)?
- What resources are available (e.g. monies, facilities and personnel)?
- Who will be conducting the evaluation (e.g. trained evaluators, lecturers, members of the local advisory committee)?
- Why is the evaluation being done (e.g. for accreditation purposes, for the state department)?
- How will the data be analysed (e.g. computer assistance, statistical models, the evaluation design)?
- What are the intended uses for the data collected (e.g. curriculum revision, programme expansion)?

18.7 Programme reviews

The programme review has been the major evaluation technique in co-operative vocational education. Through it, components such as staff qualifications and development, availability of instructional materials, appropriateness of space and facilities, and recruitment and placement practices are reviewed and judged. Evaluating these programme components is important, for without needed staff, materials and media, instruction is likely to be adversely affected. However, the programme review that concentrates on quantity factors, such as square metres of space available and number of learners enrolled in the programme, is not truly evaluating the co-operative plan. Any review should be equally concerned with quality measurement. For example, how well are learners achieving? Are they learning the skills needed for entry-level employment? Are they developing positive work attitudes?

How to conduct the review

The purposes of a programme review are to involve the local staff in looking at themselves and their programme, to pinpoint the strengths and weaknesses of various programme components, and to provide administrative support for the correction of shortcomings. Only the local institution can improve a programme, when and if it wishes to do so. A "heavy-hammer" approach from an agency such as a state department can cause resentment and can create little desire to improve the quality of the programme, which is what evaluation is all about.

The review should involve the following:

- Visits to the lecture rooms
- Interviews with learners and graduates
- Discussions with placement companies and advisory committee members
- Meetings with counsellors and lecturers who relate to the placement learners
- Examination of training memoranda and agreements, step-by-step training plans, instructional materials, and learner organisation records

The following are among the criteria for a programme review:

- Time requirements of the appropriate occupational area, especially those requiring licensing examinations, must be met.
- Each learner's career goal, application and personal interview must be on file as a matter of written record.
- Textbooks and instructional materials, including written and multimedia programmes such as tapes and tape-slides, must be up-to-date and readily accessible. Self-study and reference material should be available and used in conjunction with specific instruction based on each learner's career objectives.

- Minimum and maximum class enrolment must be met.
- Business, industry and labour leaders in the community must be used as resource persons in the instructional programme.
- The selection of learners for the placements must be done by the lecturer/co-ordinator and guidance personnel working together to determine the learners' interests, needs and career objectives.
- The professional growth of the co-ordinator must be evidenced by his/her attaining updated occupational experience, becoming a member of professional education associations, and attending workshops, special training sessions, and regional and/or national/international conferences.
- Data from the follow-up of graduates must be used in programme planning.
- An adequate budget to purchase equipment, consumable supplies and instructional materials must be maintained. Adequate monies to cover travel costs of co-ordination visits must be allocated.
- A training agreement for each learner must be on file. Company placement stations must comply with current legislation pertaining to learner placement.
- A schedule of experiential learning (training plan) for each learner must be drawn up with each company and must be on file in the lecturer/co-ordinator's office.
- Safety procedures must be taught in the related class and at the company.
- The lecturer/co-ordinator must be allocated sufficient time per week for the necessary co-operative education activities (half an hour is suggested per experiential learning learner per week).
- Credit towards graduation must be given to learners for their related class instruction and experiential learning.
- An adequate number of professional leave days and amount of travel monies should be available for the lecturer/co-ordinator to engage in professional development activities.
- Placement learners must be visited regularly by the lecturer/co-ordinator, according to the learners' needs and the companies' time preferences.
- The lecturer/co-ordinator must have adequate office space and access to a telephone, fax machine, computer and e-mail facilities.
- A programme of public relations must be carried out consistently.

The primary purpose of a programme review is to determine whether the ends (goals) have been accomplished. Each element of a co-operative plan is only the means to an end — one part of the entire set of operational functions that make for quality programmes. Judgements about a programme's strengths and weaknesses should be formed, based on all the data collected in the whole review. To determine a programme's success or failure based only on the results of a few isolated elements is to have violated sound evaluation principles.

18.8 Quality improvement

While learners, companies and the institution obtain many benefits from the current operation, improvements to co-operative education must always be sought. Indeed, the standard, ISO 9001:1994, does not preclude this and the partners continually seek it.

18.9 Conclusion

A quality partnership does not just happen: it is due to specific effort according to a policy which seeks high-quality experiences and continual improvement. Realistic and clear objectives from the start, with all partners entering the arrangements with "eyes open", provide a good basis for success. Interpretation and application of the ideas in many of the requirements of ISO 9001:1994 are essential to ensure conformity. Yet, to maintain progress, quality improvement is necessary to ensure a quality partnership for tomorrow, when each partner will have even higher expectations.

19. LEARNERSHIPS

In addition to outlining guidelines for stakeholders in the existing co-operative education ambit, it is important to note that legislation (viz. the Skills Development Act of 1998 and the Skills Development Levies Act of 1999) provides opportunities for technikons to consider the challenges that lie ahead in the provision of skills programmes and learnerships under the new dispensation. Although experiential learning and learnerships appear to be demonstrating synergy in many aspects, there are also subtle differences between the two approaches that need to be taken into account in deciding whether or not technikons need/want to align learnerships with experiential learning.

19.1 Learnerships and experiential learning

In 1995 the South African Qualifications Authority Act [28] outlined a new National Qualifications Framework (NQF) for South Africa. Technikons and other providers are presently rewriting curriculums in terms of outcomes-based education to comply with the requirements of the NQF. The NQF consists of three bands of education and training, with technikon education fitting into the higher education and training band. Simultaneously, the outcomes-based education system, Curriculum 2005, replaced Christian National Education. Each learning outcome defines a purpose, which is intended to provide learners with a basis for further learning — otherwise known as “lifelong learning”. By implication, each learner will accumulate a record of learning, i.e. he/she will gather credits which are assigned to qualifications as he/she moves from one learning situation to another. For example, a certificate at level 5 on the NQF (first-year technikon) is worth a minimum of 120 credits. If the learner carries on to complete the next phase of learning he/she may accumulate a further 120 credits to give him/her a total of 240, which is then the equivalent of a “diploma” — previously known as the “higher certificate”.

However, formal study is not the only way that a learner can accumulate these credits. In the future, he/she will also have the option of being assessed on-the-job and gaining recognition for his/her prior learning/experience (recognition of prior learning, RPL).

In 1998, a Green Paper on skills development was formulated in order to address South Africa’s skills backlog. The Skills Development Act of 1998 and the Skills Development Levies Act of 1999 outline a method of control of education and training for all sectors by SETAs (Sector Educational and Training Authorities). The introduction of a compulsory training levy and grant system for all businesses is coupled with a stringent presentation structure and quality assurance infrastructure which is being overseen by National Standards Bodies (NSBs), Standards Generating Bodies (SGBs) and Education and Training Quality Assures (ETQAs).

19.2 Curriculation of technikon programmes to comply with the new legislation

As technikons rewrite programmes in the new outcomes-based format and submit them for registration with the NQF by SAQA, it is important to consider the integration of the Acts in higher education as well as the impact that the new legislation will have on technikons' core business. Apart from ensuring the relevance of programmes, the legislation has an incentive for training built into it. Employers will receive some of their levy back in the form of a grant, provided they submit a skills plan for their companies (taking employment equity, etc., into account) and train their employees accordingly.

19.3 Skills programmes and learnerships

It is expected that the majority of on-the-job training will occur through the implementation of two types of education and training: skills programmes and learnerships. Skills programmes are short modules of learning offered by providers in order to accomplish a specific skill as part of a larger qualification. Learnerships on the other hand are primarily workplace learning programmes supported by structured learning which results in a qualification.

They are the means whereby all professional and vocational education and training programmes can be accommodated — by integrating education and training purposefully and meaningfully.

On account of the fact that learnerships are workplace-based, it is necessary to consider the relationship between learnerships and the technikon's practice of experiential learning.

19.4 Integration of learnerships and experiential learning

The following synergies and differences will need to be considered if the technikons wish to have their experiential learning recognised as part of learnerships:

Structure

Experiential learning will need to be written and presented as learning outcomes (possibly as a module consisting of several unit standards) and will need to have formal credits assigned to each module.

Recognition/accreditation of prior learning

The principles of recognition of prior learning will play a far greater role in future assessments of performance.

Formal contracts

Technikons will have to take more responsibility for negotiating placement contracts for candidates' experiential learning.

Assessment

Lecturers will need to be trained and licensed as assessors. This implies that they will also need to be technically competent.

Student body

The student body, at resident technikons, may change from a predominantly full-time "on-campus" student body to include many learners already in employment, and the unemployed.

Lecture sites

Technikons may experience an increase in the incidence of "off campus" lecturing as industries request the delivery of the structured institutional learning at their workplaces as opposed to employees attending lectures away from the workplace.

19.5 Conclusion

There is enormous potential for technikons to take advantage of the opportunities suggested by the Skills Development Act. Technikon education and training is generally recognised as being relevant and of sustainable quality. However, as each of the future 27 SETAs become involved in education and training, the critical "watchdog" function will also increase and the provider environment will become very transparent. Technikons may find themselves in the position of being accountable to more than one accreditation and certification body and must therefore "get it right" from the beginning if they are going to get involved in any form of skills development for commerce and industry.

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