

Students' Perceptions and Experiences  
of  
Co-operative Education Work Programmes

by

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## **ABSTRACT**

This study is intended as a contribution to the debate and quality assurance activity which in South Africa is following the South African Qualifications Authority's recommendations that better quality co-operative education work experience be provided for higher education students.

This study focuses on the perceptions and experiences of a cohort of Durban Institute of Technology students involved in co-operative education work programmes. Through a process of random sampling twenty students each were selected from the faculties of Arts, Commerce, Engineering Science & Built Environment and Health Sciences. The students comprised both male and female students in various years of study. Questionnaires articulating the research enquiry as well as the purpose of the study and questions to be answered for the study were mailed individually to each selected student.

Forty six of the total selected sample of students returned completed questionnaires. The instrument comprised open and closed ended questions. With the aid of a statistical database programme the data was analysed.

Findings of the study indicated that students' perceptions and experiences vary from positive to negative. Issues of racial discrimination, inadequate or no salaries and lack of support from mentors and lecturers emerged as concerns articulated by many students. On the contrary students perceived themselves as the greatest beneficiaries of the work programmes. Students also noted the relevance and value of the work programmes in developing the students' and preparing them for the workplace.

The recommendations for co-operative education practitioners, in terms of listening to the voices of the students' in this study, is invaluable.

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## DECLARATION

I, Vasantha Pillay, declare that this dissertation is my own work and has not been submitted previously for any degree in any University.

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V. Pillay

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Dr. P. Ramrathan (Supervisor)

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## GLOSSARY OF TERMS

- CTP** Committee of Technikon Principals. The organising and coordinating body for the technikon sector which is the association of Vice-Chancellors of Technikons in South Africa. Amongst its many tasks the CTP promotes the internationalisation of technikon programmes and research by cultivating linkages between the CTP and its member technikons, and institutions and organisations of higher education abroad. It also assists with course selection, counselling and advice.
- SAQA** South African Qualifications Authority. An official body appointed by the Ministers of Education and Labour to oversee the development of the NQF by formulating and publishing policies and criteria for registration of bodies responsible for establishing education and training standards or qualifications and for the accreditation of bodies responsible for monitoring and auditing achievements in terms of such standards and qualifications that are internationally comparable.
- NQF** The National Qualifications Framework. The objectives of the NQF are to create an integrated national framework for learning achievements, facilitate access, mobility and progression within education, training and career paths, enhance the quality of education and training, accelerate redress and contribute to the full personal development of every learner and by extension, the social and economic development of the country.
- OBE** Outcomes-Based Education. OBE aims at activating the mind of students so that they are better able to take part in economic and social life. South Africa's OBE system is intended to ensure that all South Africans are able to achieve to their maximum ability and are equipped for life-long learning. In OBE, understanding and flexibility are as important as content. Outcomes do not depend on content but are the result of learning and can be measured and assessed. OBE is learner-

centred, activity based and emphasises high expectations of what the learner can achieve.

**SASCE** The South African Society for Co-operative Education. The SASCE is a national, non-profit organisation dedicated to helping interested individuals and institutions integrate academic studies with quality experiential or work-based learning (work experience) in the real world of work. It actively advocates co-operative education throughout South Africa.

**CHE** The South African Council for Higher Education. The CHE was established as an independent statutory body in May 1998 in terms of the Higher Education Act, No 101 of 1997. The Chairperson and members are appointed by the Minister of Education following a public nomination process. The CHE is to contribute to the development of a higher education system characterised by quality and excellence, equity, responsiveness to social and economic development needs, effective and efficient provision and governance and management of institutions of higher education. It will contribute to providing informed, considered, independent and strategic advice to the Minister of Education on higher education issues, including Quality Assurance.

**HEQC** Higher education Quality Council. Is a sub-committee of the CHE, is responsible to promote quality assurance, audit the quality assurance mechanisms of higher education institutions and accredit programmes of higher education.

## **CHAPTER 1**

### **1. AN OVERVIEW OF THE RESEARCH**

#### **1.1. INTRODUCTION**

Of particular interest to researchers (Singh, 2001 and Mahomed, 2002) has been the kind of preparation that students receive for co-operative education before their work placements and the support and supervision that are afforded to students by the educational institution and the organization, during the work placement. Both international and national studies (Breen, 2000 and Groenewald, 2000) analyse co-operative education work experience, in terms of a number of characteristics by means of which valuable work-based learning arrangements can be defined. Other studies (Purcell & Quinn 1996, and Waryszak, 1997) outline the ways in which co-operative education work – based supervision and support of learners is carried out and have illustrated the importance of finding ways to research students' perceptions and experiences of co-operative education.

Following the election of the Government of National Unity in 1994, there has been a national consciousness emerging that South Africa has serious deficiencies in the system by which students obtain needed skills that are necessary for the workplace (Mdladlana, 1999). Much of the recent impetus for improving the skills that students require, have come from outside of education. Changes in the workplace have demanded a variety of skills from workers e.g. workers have had to learn how to use new technology, produce better quality products, etc. There is a growing concern within business and industry involved in competition on a global level, about the increasing gap between the capabilities of graduates and the skills, knowledge, habits, values and attitudes that employers seek (Mdladlana, 2000). Articles such as the 'Globalisation, institutions and work' (Solomon and Mc Intyre, 1999) and 'Carrying the Hopes of the Nation' (Mdladlana, 2000) are just two of the publications that document skills shortages and deficits in graduates of higher education.

The emergence of new knowledge-based post industrial forms of work as a result of globalising tendencies of capitalism and the impact of new technological innovations in business and industry, has been central to international development (Castells, 1993; Thurlow, 1996; Wilson and Ewer, 1999). Governments have responded to this phenomenon in serious ways. The most common being education and training reforms, with the former having been reformed to cater and contribute to the formation of workers with the appropriate knowledge, skills and competencies required in these new economic times (Marginson, 2000).

South Africa has not only to contend with the demands of globalisation but also with the ills of apartheid. Government has played a vital role in helping South Africans becoming internationally competitive and prosperous as a society. In this regard, education and indeed higher education has undergone many changes. It was realized that better education, better learning, better products and a better economy are the prerequisites for a better life for all its people (Mbeki, 1999).

These concerns have generated initiatives from both outside and inside of education, geared towards producing a well-rounded student, a potential employee and a productive employee, respectively. Since education and indeed, higher education is about educating and socializing students, in preparing them for the world of work and training students to become responsive professionals, mechanisms have been put in place to achieve these. Technikons, like universities fall into the higher education sector of education. In technikon education, strong emphasis is placed on career-focused, hands-on approach to education and training. This involves placing students in work situations to enable them to acquire practical experience in their area of specialization. This work experience or co-operative education, continues to be one of the distinguishing features of Technikon education. Thus, Co-operative Education (CE) is considered to be one of the mechanisms that provides skilled graduates to the economy (New Academic Policy for Programmes and Qualifications, 2002).

## **1.2. CO-OPERATIVE EDUCATION**

Co-operative Education is defined as a structured educational strategy that progressively integrates academic study with learning through a structured productive work experience in a field related to a students' academic or career goals. This structured work experience is integrated into the curriculum to complement academic learning and vice versa (Cates and Jones, 1999).

Within a South African context, co-operative education is described, in the New Academic Policy for Programmes and Qualifications in Higher Education (NAP), (CHE, 2002), as the integration of "productive work" into a career focused curriculum that is implicit in the Technikon curriculum. The document further states that co-operative education aims to prepare a Technikon graduate for a particular vocation or profession, based on a partnership between the institution (the Technikon), an employer (the workplace) and a student. The student experiences the world of work through the co-operative education programme placement under the supervision of a mentor. The concept of co-operative education is based on the application of the theory and knowledge learnt in the technikon and the development of practical skills using recent technology and techniques in a real workplace, and to inculcate positive attitudes to work, responsible citizenship and professional ethics. Technikon education should provide a learning experience adequate to meeting the demands specified in the learning outcomes of the Technikon programme and qualification with an interdependent academic and workplace component (CHE, 2002).

## **1.3. THE STAKEHOLDERS OF CO-OPERATIVE EDUCATION**

According to the CHE (2002), integral to co-operative education is approved and accredited partnerships for the implementation of a quality co-operative education programme, which must be specific to a particular programme,

qualification and vocation. The Technikon, employer and students are considered the main or “primary” stakeholders of co-operative education (Groenewald, 2002). The role of each of the stakeholders, namely, the institution (Technikon), the employer and the student in the co-operative education programme is vital for quality experience and learning in the workplace (Breen, 2002). Breen (2002) also claims that in an ideal situation between institution, industry and student, with proper and explicit procedures, policies and guidelines for co-operative education, the benefits and value for stakeholders are:-

### **1.3.1. The Institution**

Co-operative education is said to reduce the dwindling student enrolment and increase the retention rates among students. Technikons, by the very nature of the curriculum that they offer, contribute to the country’s skills development programme and by extension, to nation building. It also allows Technikons to foster good relationships with business, industry, government and community, thereby fostering professional development of its students.

### **1.3.2. The Employer**

Employers are able to recognize and identify potential long-term employees early and reduce recruiting costs and reduce new-hire turnover. Employers are also able to build bench strength, i.e. training students to ‘fit into’ their particular organizations. By contributing to the Technikon curriculum, the employer is enabling the Technikon and the student to engage in productive and relevant learning, using the latest technology that the student may not otherwise have access to, at Technikons. This could save the organization time and money on training the graduate on employing them. Since organizations contribute to the skills development of students, they are compensated by the Department of Labour via the Skills Development Act of 1995.

### **1.3.3. The Student**

The student obtains valuable career experience that enables him/her to make suitable and informed career choices on completion of the qualification. The integration of classroom theories with workplace experiences often afford

students the opportunity to utilize state-of-the-art equipment and technology, which increases confidence levels, especially when work assignments become progressively challenging. Co-operative education is said to avert classroom boredom and conversely improves classroom performance and grades. Students 'earn while they learn', enabling them to partially cover tuition and living expenses. According to Cates-McIver (1998) graduates who have had workplace experience through co-operative education tend to be hired more quickly, receive higher starting salaries and are promoted more quickly, compared to a graduate who has not had co-operative education work experience.

#### **1.4. A CASE FOR QUALITY ASSURANCE IN CO-OPERATIVE EDUCATION IN HIGHER EDUCATION**

Baird and Groenewald (2002), argue that co-operative education programmes are extremely important particularly because of new curricula initiatives such as Outcomes Based Education (OBE). The National Qualifications Framework (NQF) and the South African Quality Assurance Act (SAQA) also present new challenges for co-operative education. These new educational initiatives e.g. SAQA and the underpinning philosophy and theories of the quality of learning that takes place and the relevance of the learning in the workplace, has resulted in a paradigm shift which has left students unaware and unprepared for such changes. This shift also fuelled fears, anxieties and concerns which consequently necessitated co-operative education programmes that run parallel to the present process of student skills development and professional development. Such programmes should comply with SAQA and meet the needs of all its stakeholders (Implications of the Skills Development Legislation and Policies for Technikons with Special reference to Learnerships, 2002).

These higher educational changes have had effects in all sectors of the education and training in South Africa and increasingly so for Technikons.

Efforts have been made to improve the quality, flexibility and relevance of educational outcomes, with industry and business being asked to play an increasingly important role in the development and implementation of the Technikon curricula. Traditional Technikon curricula have also been subject to critique, with commentators arguing that it is inadequate in terms of preparing graduates for the world of work in the new economy (Smout, 2001).

As students are important stakeholders of co-operative education, it is important that they benefit from the experience and that the workplace experience in industry is meaningful and relevant to their needs as suggested in the New Academic Policy Programmes and Qualifications in Higher Education (CHE, 2002). The White Paper (DOE, 2000) built on the national Commission on Higher Education recommends and stresses the need for Higher Education to become more responsive to the nation's social and economic needs. Proponents of co-operative education believe that it is capable of achieving the said goal (Wessels, 2002).

#### **1.4.AIMS OF THE STUDY**

This study will focus on the perceptions and experiences of students of co-operative education placements. The placement of students in various organizations as trainees is an academic requirement to foster the work experience for students to attain the necessary skills to supplement their theoretical training (King, 1994). Educators need to know what these perceptions are, in order to ascertain how these perceptions impact on the need for institutions and industry to address the preparation of students for work and to inform curriculum reforms. Knowledge of the work experiences of students through co-operative education placements can help in improving the quality of such programmes where necessary, thus fostering improved skills development. It is important, therefore, to both educational institutions and industry, that students have realistic perceptions of the industry and have productive and meaningful experiences of co-operative education to attain the necessary skills. If educators and industry know how students experience their



work placements, they can better organize these programmes to meet the South African Qualifications Authority's (SAQA) requirements.

### **1.6. PURPOSE OF THE STUDY**

Given the context, the purpose of this study is to explore students' perceptions and experiences of co-operative education.

### **1.7. OBJECTIVES**

This study will investigate:

- a) A selected group of Durban Institute of Technology students' perceptions of co-operative education in the Faculties of Arts, Commerce, Health Sciences and Engineering, Science and Built Environment.
- b) A selected group of Durban Institute of Technology students' experience of co-operative education in the Faculties of Arts, Commerce, Health Sciences and Engineering, Science and Built Environment.

### **1.8. CRITICAL QUESTIONS**

The following critical questions will be answered in this study.

1. What are the Durban Institute of Technology students' perception of Co-operative Education?
2. What are the Durban Institute of Technology students' experiences of Co-operative Education?

### **1.9. RATIONALE FOR THE STUDY**

Internet searches and literature review, while comprehensively, have documented an abundance of information ( Baird and Groenewald, 2002) on

skills development, evaluation of skills development programmes offered to Technikon students and partnerships fostered between technikons and industry is highly lacking. Additionally, there seems to be silences around students' experiences of co-operative education, since much of the debate has focussed on issues of an academic nature.

Co-operative education seldom featured in the debate about Human resource development (Baird and Groenewald, 2002), and when it did, it was associated with the career-focused education offered by Technikons. This may have been, because those involved with co-operative education are concerned predominantly with placement coordination. A study of available literature in South Africa, clearly reveals that limited research (Singh, 2001 and Mahomed, 2002) has been undertaken on co-operative education in general and on students perceptions and experiences in particular.

My interest in this research enquiry is firstly personal, which stemmed from my engagement with students involved in co-operative education at the then M L Sultan Technikon and currently the Durban Institute of Technology, during my one year secondment to the Department of Co-operative Education. Secondly, my engagement with co-operative education students generated a myriad of questions, e.g. 'What do students feel about cooperative education? Does gender impact on their experiences? Are they satisfied with the structure of the present curriculum? Do they perceive co-operative education as valuable to their career prospects? What new skills have they learned? Have these new skills contributed to their self esteem?' These questions although somewhat intimidating, influenced me tremendously in the choice of my research inquiry. Given the scope of my study, only two critical questions will be examined (see 1.6). I will attempt to answer these questions by privileging students' voices, which will be a valuable way of accessing and presenting data consequently informing a new curriculum with regards to co-operative education. These results will also be beneficial to curriculum reforms in evaluating existing protocols with a view to reforming it. This study will also

assist in developing the talents and skills of South African students in preparing them for global competitiveness.

Furthermore, it will inform on the strengths, weaknesses, opportunities and threats in the current, co-operative education practices and policies as highlighted by the experiences of these students.

### **1.10. OUTLINE OF CHAPTERS**

Each chapter in this study will provide a dimension that enhances this under-researched area. The first chapter has orientated the reader to co-operative education generally. Chapter two outlines best practices in co-operative education

both nationally and internationally, as well as other researchers' perspectives on co-operative education. The methodology used in this study is described in chapter three, which presents the way in which sampling took place as well as the instruments used to access the data for the study. The analysis of the research data are dealt with in chapter four. Chapter five makes recommendations for consideration by the Department of Co-operative Education at the Durban Institute of Technology.

### **1.11. METHODOLOGY**

The methodology used in this study is both quantitative and qualitative. The questionnaire was administered to ascertain Durban Institute of Technology students' perceptions and experiences of co-operative education work programmes. A major limitation of the study was the sample was confined to just one technikon, namely the Durban Institute of Technology.

### **1.12. CONCLUSION**

In the next chapter aims to outline best practices in co-operative education both

nationally, internationally and as well as other researchers' perspectives on co-operative education work programmes. It will serve to provide an understanding of how co-operative education is perceived by a cohort of Durban Institute of Technology students, which will act as a framework against which the actual implementation of co-operative education is to be tested and interrogated.

## **CHAPTER 2**

### **2. CONCEPTUAL FRAMEWORK, THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

#### **2.1. INTRODUCTION**

Chapter 1 having orientated the reader to the study, created an opportunity for Chapter 2. As mentioned earlier the aim of this study is to develop an understanding of how co-operative education work programmes are perceived by a cohort of Durban Institute of Technology students. This then acted as a framework against which the actual implementation of co-operative education was tested and interrogated (chapters four and five).

#### **2.2. HISTORICAL BACKGROUND**

In the latter part of the 19<sup>th</sup> Century, technical education became important with the development of mines and railways. During the early years of the 20<sup>th</sup> century it led to the establishment of training centres, which later became known as technical colleges. In 1910 a reasonable framework of technical education was established and in due course the character, extent and variety of the courses offered by technical colleges changed in that it offered education at an advanced level. A shortage of skilled, high-level personnel to meet the rapidly growing needs of commerce and industry led to the adoption of the Advanced Technical Education Act (Act No. 40 of 1967). With the adoption of the Advanced Technical Education Act (Act No. 43 of 1979), the name was changed to Technikon (Cloete, 2002).

The name 'Technikon' was derived from the Greek root word "techne" which refers to ingenuity, dexterity or skill and the suffix "kon" was added to create a unique South African term for this type of institution. This name encapsulated the technical orientation of the programmes offered.

A further milestone was reached with the promulgation of the Technikon Act, 1993 (Act No. 125 of 1993) which made it possible for Technikons to become degree-awarding institutions. In terms of the Higher Education Act, 1997 (Act No. 101 of 1997) Technikons, like universities are registered and accredited Public Higher Education Institutions. They are distinguished from the university not by the quality of their educational product, but by their focus. Technikons in South Africa are the equivalent of universities of technology, technological universities, technical universities or institutes of technology as found in countries such as the USA, Britain, Australia, New Zealand and Hungary, respectively (Evans, 2000).

### **2.3. CURRENT CONTEXT**

The purpose of policy and legislative development in Higher Education since 1994 has been driven by the greater goals of reconstruction and development, a central pillar of which is the development of human resources (African National Congress 1994). To meet this challenge, the African National Congress government has chosen a course of transformation including the development of the National Qualifications Framework (NQF), which constitutes the most comprehensive and complex component of curriculum transformation in the educational system since 1948. The origins of the NQF can be traced to two high-profile projects, namely, the National Education Policy Initiative (NEPI), and the National Commission for Higher Education, which were launched by the South African National Party Government in 1992 and 1994 respectively, and which

have substantially shaped numerous policy and legislative developments, including the White Papers of 1995 and 1997, the Skills Development Bill of 1997, the Higher Education Act of 1997, and the South African Qualifications Authority (SAQA) Act of 1995 (Cloete, 2002).

The South African Qualifications Authority (SAQA) is the statutory body that is responsible to the Minister of Education for overseeing the development and implementation of the National Qualifications Framework (NQF). In 1995, the South African Qualifications Authority (SAQA) Act outlined a new National Qualifications Framework (NQF) for South Africa (Cloete, 2002).

The goals of the NQF are to integrate the separate systems of education into one system; to promote outcomes-based education, quality, transparency and accountability, and to address imbalances in education, training and development, inter alia. Outcomes Based education implies that 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 student will accumulate a record of learning i.e. they will gather credits which are assigned to qualifications as they move from one learning situation to another. Formal study is not the only way that the student can accumulate these credits. The student will also be assessed for work experience and can also be recognized for his/her prior learning experience in the workplace or otherwise. According to Jansen (1998), validation for the NQF comes from the Human Capital Theory, post-Fordism and Outcomes Based Education. Human Capital Theory states that investment in education yields pay-offs for both the individual and the economy as a whole. Technikons are administered along with universities, by the Higher Education Branch of the National Department of Education.

All qualifications are at the Higher Education (tertiary) level, for universities and

technikons alike, extend from the basic qualification of the three-year National Diploma, followed by a degree, Bachelor of Technology , Master of Technology to the Doctor of Technology programmes. As universities, all Technikon programmes are registered with SAQA (South African Qualifications Authority) and comply with the requirements of SAQA and the NQF. The difference between universities and technikons is that universities are concerned with knowledge production, whilst technikons are concerned with offering vocational training programmes (Cloete, 2002).

The Committee of Technikon Principals (CTP) and SAQA (2002), suggest that the key elements of Technikon education are:-

- The application of technology knowledge
- The training of technicians and technologists
- Focus on applied research
- Direct interaction with employment providers
- Cost-effective, quality, career-orientated education
- Multidisciplinary subject packages
- Outcomes-based, demand-driven curricula
- Emphasis on immediate and productive employability

Since the inception of the technical colleges and then Technikons, strong emphasis is placed on career-focused, hands-on approach to education and training. This involves placing students in work situations to enable them to acquire practical experiences in their area of expertise. This work experience continues to be one of the distinguishing features of the Technikon. Strong partnerships are set up with industry to ensure that the curriculum is responsive to the needs of the community. Advisory Committees consisting of representatives of industry and the public sector were set up to advise the Technikon about the curriculum and labour market needs.



Technikons are involved in collaborative industry-directed programmes and this involvement is in turn reflected in curriculum design. One such collaborative programme is co-operative education. Co-operative education is a powerful element in the Technikon education paradigm, allowing students to benefit from both formal education and training at Technikon along with first-hand work experience in the marketplace.

Commerce and Industry are vital partners with Technikons in providing top-level person power for South Africa and making direct inputs into the planning of programmes. This ensures that education is constantly relevant and keeps abreast of contemporary movements in all fields of study offered. All students are required to undergo a period of work experience or a work programme as part of their degree/diploma studies. This period of work placement varies from programme to programme and is usually incremental in nature with the longest period being undertaken in the final year of diploma study (Groenewald, 2002). All programmes offered by Technikons are subject to quality assurance mechanisms to emphasise accountability.

#### **2.4. QUALITY ASSURANCE OF CO-OPERATIVE EDUCATION**

The NQF has 12 fields of knowledge and eight levels, ranging from trade certificates to doctoral degrees. Within each field and level, records of student achievement are registered as unit standards. Varying assemblies of unit standards constitute qualifications offered by educational institutions. SAQA has two arms, one concerned with setting standards, and the other with quality assurance. The bodies tasked with quality assurance are known as Education and Training Quality Assurers (ETQA's), who assure the delivery of programmes by institutions are in line with standards that comply with the Higher Education Quality Council (HEQC). Technikon standards and qualifications are registered

on the NQF, via SAQA and learning programmes are presented to the HEQC, as the relevant ETQA for evaluation (Cloete, 2002).

Like any other programme offered by technikons, work experience/work programmes are subject to the same evaluation procedure. To ensure that the quality objectives have been met and the programmes are relevant to industry requirements and not only the academic programme but also the work component is subjected to quality assurance. According to SAQA (2002), and SASCE (2002), students, graduates, employers and academics should be involved in the work programme evaluation.

However, according to Raubenheimer (2002), students are in the best position to judge the quality of the work experience that they receive. He believes that feedback from students on the quality of work experience could be achieved by interviews and questionnaires. Other indications would be student progress and completion rates.

Graduates are also valuable in the evaluation of work experience programmes as they would have obtained experience in the workplace and will be in a good position to determine the relevance of course content. Employers will be able to evaluate the competence of the students as they benefit from high quality training. Raubenheimer (2002) also believes that self and peer evaluation for academics is important for the quality assurance of work programmes.

According to SAQA (2002) and SASCE (2002), all components of the work programme, e.g. administration, contents, evaluation, learning outcomes, etc. must be evaluated in the same way as the academic component submitted to regular self evaluation (by institution, academics and students) and external (by graduates and employers) quality assurance.

## **2.5. EXISTING LITERATURE**

### **2.5.1. Introduction**

The requirement that education contributes to the development of national economies (Ball 1994) is not new. Co-operative Education has always played its part in the construction of Education and Training institutions, such as Technikons. However, co-operative education in the current economic landscape goes further in terms of its institutional goals and also in the goals that it sets for itself. These goals move beyond the development of specific knowledge and technical skills required to competently perform the tasks that characterize particular occupations. Today, additional co-operative education outcomes such as organizational modes of conduct are seen as essential in the new high performance workplaces are demanded of students (Overtoom, 2000).

In South Africa, preparation for work has been marked by the establishment of a co-operative education market with technical colleges, technikons, adult and community colleges, and more recently, universities, industry and private providers all competing with each other to supply cooperative education and training services. This in turn has created a new education landscape with all educational institutions and its students, working in a new context that often not only involve performing different forms of co-operative education but also operation with different organizational norms, values and modes of conduct (Chappell, 2001).

Within the Technikon sector of higher education, co-operative education combines academic learning offered by the Technikons with associated workplace experience achieved via the relationship between the Technikon, its students, industry or the community (South African Society for Co-operative Education (SASCE), 2000). In this regard, industry includes all sectors of commerce and industry as well as small business, the informal sector and regional, provincial and

state departments. The workplace experience component consists of reflective structured learning and vocational experience that is monitored and supervised at regular intervals by the Technikon and on a continuous basis by industry and the community (Baird and Groenewald, 2002a).

Co-operative education is an integrated approach which comprises a partnership between employer, institution and student, whereby the student learns under actual work conditions.

SASCE (1998) states: 'Co-operative Education is one answer to the pressing human resource needs in our broader communities,' and dictates that institutions be fully conversant with the demands of the workplace, while the workplace has in-put into the curriculum. This partnership between the institution, industry and the student, according to Breen (2002), is like a "marriage", and is dependent on all partners contribution to the relationship. Breen (2002) also argues that if one of the partners is not sure about what his contribution should be the relationship does not work.

Urquiola et al (1997) note that the curricula for co-operative education reflects the process of contextualisation by bringing authentic work elements to abstract academic subjects. The focus of the co-operative education curriculum, according to Beane (1998), is on empowering students to "construct new knowledge" by providing opportunities for them to test academic theories through real-world applications of knowledge in settings that are socially relevant to their lives. Brown (1998) argues that co-operative education reflects the philosophy of student-centred teaching, problem-based learning and contextual teaching and learning.

In its most basic form, curriculum integration involves the infusion of academic

content into co-operative education programmes to enhance academic programmes. According to Pisapia and Riggins (1997) and Riggins and Stasz (1997), it is also necessary for students to engage in learning experiences in the workplace that are relevant to academic content and that also afford in-depth understanding and the development of higher order thinking skills, to encourage and support the professional development of the student, for readiness for the world of work.

Brown et al (1998), argues that co-operative education not only helps students to see the connections between subject areas but it also enables them to recognize the interrelated aspects of all learning and life experiences. Co-operative education programmes which have a strong academic focus and a highly relevant core curriculum offer students the opportunity to connect classrooms to workplaces by increasing students exposure to authentic work practices, thereby providing them the opportunities to apply concepts or knowledge to real problems and industry recognized skills. Stasz (1997), and Stasz and Kaganoff (1997) view co-operative education as affording students opportunities in the workplace.

These opportunities may include:-

1. training on the job.
2. supervision by workplace mentors.
3. instruction in general workplace competencies and all aspects of industry.

### **2.5.2. Theoretical Framework for the Study**

On an international level, The National Center for Career and Technical Education (NCCTE) (2003), of the United States of America, claimed that the co-operative education curriculum in an effort to make lifelong career development for students easier and more natural by linking the school site with the worksite. This link between the school site and the worksite is believed is one element of

the larger category of co-operative education, all of which combine to create a lifelong process of skills development stretching from first year of studies to graduation. The NCCTE (2003) proposes four broad overlapping curriculum stages that most students should experience as they develop their skills. These stages are described as:

1. Career awareness activities which help students develop a general awareness of themselves, the world of work and its connections to education. Activities in this stage may include, field trips, career days, industry guest speakers and informational interviews.
2. Career exploration activities that help students research and learn about the demands of the workplace. Activities may include, industry related projects, job shadowing and laboratory work on campus.
3. Career preparation activities which integrate academic knowledge and skills in the classroom with work-based skills learned on the job. Here emphasis is on skills building, understanding concepts, learning to work as a team, establishing relationships, ethics and honesty, and relating personal interests and abilities to real world career opportunities. Activities in this stage may include co-operative education experience such as observation in the worksite of specific skills, mentorships, and non-paid work experience.
4. Application is the beginning of the students' last stage of transition to work. During this transition the institutions' facilities, services and resources will help prepare the student for the next step in his/her career development. This stage should include the actual work experience that is relevant to the academic curriculum and the qualification for which the student has registered.

This can be described as a theoretical framework for this study.

### **2.5.3. National & International Review on Co-operative Education Activities**

Co-operative education curriculum activities are designed to help students move through the career awareness, career exploration, career preparation and career application stages and learn about the world of work and their place in it. These curriculum stages provide a framework for understanding the sequence and scope of co-operative educational activities.

The National Center for Career and Technical Education (2003), and Fardouly (1998), agree that co-operative education, should offer learners a range of practical experiences, and encourage students to move through to greater heights of learning. Fardouly (1998) also claims that learning through experience will ensure that learners observe, analyse, synthesize, evaluate and apply what they have learnt to their lives in general and to their work in particular. Steinberg and Cauffman (1995) caution that menial co-operative experiences have very little development benefits.

Stone and Josiam (2000) argue that co-operative education of a higher quality uses the students' skills, provides training, affords the students the opportunity to learn new skills, provides task variety and opportunities to work with others. High quality co-operative education programmes also pay higher wages and supervisors provide feedback and encourage good work habits. They also note that it is an established fact that higher paid co-operative education programmes are associated with higher levels of education and training.

A study conducted by Stone, Stern, Hopkins and McMillion (1999) noted that students in supervised co-operative education programmes reported that they

used basic academic skills, had challenging experiences and had more support in the workplace than students who worked in jobs unrelated to their academic programme.

Purdue University in conjunction with the University of Illinois (Houze and Simon, 2002) have devised a curriculum for co-operative education that considers good practice. Houze and Simon (2002), believe that only when each of the stakeholders, namely the university, the students and the industry, meet its obligations can the program truly be termed “Co-operative Education”. They also state that although many of the activities of the stakeholders overlap and intersect and should be supportive of the other two stakeholders, no one party has more responsibility than the other two. They characterize a good co-operative education curriculum as having the characteristics of stakeholders being supportive of each other and suggest the following strategies be adopted to make the co-operative education experience as effective as possible :

#### **2.5.3.1. The Employers Role**

Industry should believe in the co-operative concept and communicate this conviction to workers in the organization. The employer should not attempt to fill a full-time job with a student and the students responsibilities should be varied and should also require technical involvement. Specific and appropriate work assignments should be designed for particular students. The particular Industry’s co-operative education policy should reflect the employer’s perception and indeed, the quality and effectiveness of the supervision and guidance that the students receives. The professional development of students, as the objective for the employer will have increased level of work assignment and responsibility to the level of professional competence of the individual student. The employer should also present tasks and job



assignments that are technically challenging and that push the student beyond his/her current state of knowledge and experience. The assignment should be of real importance to the employer and should relate to the students' career goals without necessarily relating to his/her academic discipline. Assignments, incorporating a broad range of experiences and activities should be planned in advance of the students' arrival for the co-operative education work experience. (Houze and Simon, 2002)

#### **2.5.3.1.1. Employer as: Co-ordinator**

The employer co-ordinator is responsible for the management of the programme: recruiting, deciding job assignments, completing administrative matters, conducting entrance and exit interviews. However, for the employer coordinator to enhance the students professional and personal development, he/she will have to help the students acclimatize to the world of work, be interested in students on a personal level and help the student find a place to live during his work period. The co-ordinator will also have to introduce the student to colleagues and other employees, find a young professional who would be interested in being a 'big brother' for the student and set up regular meetings with the student during the work period to find out how he/she is adjusting to the worksite. The co-ordinator will also be allowed to visit the student at his/her worksite, ask his/her evaluation of his/her experience with the company and then act on negative experiences, have group discussions about their activities and take students on a tour of other facilities and departments of the organization. It will be imperative for the co-ordinator to try to understand the details of the students' work, discuss with care and frankness the evaluation of the students' progress, counsel the student with firmness about his/her weaknesses, help the student understand that he/she must not be afraid to extend him/herself and organize a social occasion. It will sometimes be necessary for the co-ordinator to become a friend to the student

with the understanding that there are responsibilities and fun that go with work ethics (Houze and Simon, 2002).

#### **2.5.3.1.2. Employer as: Mentor/ Immediate Supervisor**

The mentor needs to make the time and expend the effort to be an effective mentor and realize that the novice student needs more attention than the older, more experienced person as the novice student is assumed to have less life experiences. The mentor should let his/her concern for his/her employees be his/her guide and should consider the following:- find out about the students' background, personal, academic and work experiences before the student arrives, carefully select assignments that will challenge but not overwhelm the student, provide varied projects, long and short term for variety and opportunity and for success and also elimination of frustration. It is important that the mentor, select and brief the workers with whom the students will work and meet the student when he/she arrives at work, help him/her settle his personal affairs before discussing work assignments and orient him/her to the organization/company with particular emphasis on how and where he/she fits into the 'whole scheme of things.' The mentor should also introduce him/her to fellow workers as a colleague, to help the student relax. It is important that the mentor involve the student in selecting his/her assignments from a list of "possible" and "urgent" tasks. The student should be encouraged to ask questions about the assignments, and similarly the mentor should find about the students' tasks, particularly in the first few days of the co-operative education work site. The student should be expected to attend regular meetings to review, discuss work, productivity and his/her contribution to the organization. An atmosphere where the student can evaluate him/herself, talk to other workers, be aware of functions and processes, present results of his/her work to fellow employees, should be created. The mentor should also create the opportunity for the student to report in writing the results of his/her

work. This report should be read by the mentor and feedback, suggestions and an evaluation of reports, must be given to the student, thereby assisting him/her to take advantage of opportunities to learn, grow and expand his/her horizons (Houze and Simon, 2002).

#### **2.5.3.2. The Technikon's Role**

Houze and Simon (2002), believe that just as industry philosophy of coordination, mentorship and supervision of students, sets the tone for the implementation of the work experience in the co-operative education curriculum, so too must the academic philosophy. The academic co-ordinator needs the support of the academic community to provide students with quality co-operative education experiences. Houze and Simon (2002) view the following as major responsibilities of the co-operative education co-ordinator:- to provide information about the co-operative programme to all students. Handouts and other literature can provide factual information about co-operative education. The coordinator must enjoy working with students and must be reliable and trusted. The co-ordinator must try to understand the individual characteristics and needs of each student, try to ascertain what programmes are best suited to the student. This can be done by way of questionnaires and on a personal level. The co-ordinator must not assume that only he/she knows what is best for the student. Communicating with the student will give the co-ordinator a good idea of what the students' needs and expectations of the programme are. A good understanding of different employer organizations and each location, group, department and supervisor, will indicate the needs and expectations of each employer. It is important to learn as much as possible about the programme that is being offered. Employer/industry visits are important to understand the employers' perceptions. An understanding of the company's philosophy is important for a good 'match' of student to employer to be made. A few students need to be selected for an interview for the employer to select the student for the co-

operative education programme. The main focus of the co-ordinator's task is to enhance the quality of each student's experience. To help the student recognize his/her responsibilities in attaining a quality co-operative education experience and facilitate a healthy interaction and relationship with the employer. To help the student understand the available learning opportunities, explore ways in which he/she can take advantage of the various learning opportunities for the purpose of getting a quality experience.

The ways in which the co-ordinator can enhance the quality of the co-operative education experience are to prepare students for the job situation by demonstrating a real interest in what students have done by reviewing the actual work experiences when they return to college and encouraging them to take advantage of the learning opportunities presented during the work programme. Helping the students' find their way through the complex co-operative education curriculum and counseling the student on job related problems can often become routine for the co-ordinator. The co-ordinator also needs to be familiar with placement details and students to be able to make the 'right match' of student to industry or organization.

#### **2.5.4. The Students' Role**

Researchers such as Boud (1998) and Brown and Knight (1994) state that students must be committed to the co-operative education work place learning experience by following all workplace rules and regulations, completing the assigned tasks and technical reports to the best of his/her ability. The student needs to keep in touch with the co-operative education office and the faculty advisor of the Technikon during the co-operative education work placement to keep abreast of developments of the co-operative education programme.

Houze and Simon (2002) argue that the commitment of each of the three stake holders, namely, the industry, the academic institution and the student are major ingredients in the success and quality of a co-operative education curriculum (Groenewald, 2002). On a national level, the SASCE and CTP (2000) have provided guidelines for the curriculum of co-operative education in South Africa in the hope that all Technikons will adopt it, thereby providing a uniform curriculum and quality. Over the past fifteen years efforts have been made to improve the quality, flexibility and relevance of co-operative education, with industry and business playing an increasingly important role in the development and implementation of co-operative education curricula (Wessels, 2001). Traditional curricula in Technikons have been subject to critique, with commentators arguing that they are inadequate in terms of preparing students for either work in the new economy or for the emerging social and cultural changes involved by new economic times (Cope and Kalantzis, 1995).

## **2.6. CONCLUSION**

Firstly, it is argued that co-operative education integrates theory with practice, stimulates learning and provides students with the knowledge, skills and attitudes necessary to make an 'instant' contribution to the workplace and by extension the economy. Thus, Fullan (1993) argues that the workplace itself can be "learningful." According to this view, how students perceive cooperative education, what happens to students in the workplace and their perceptions of the way they are treated there is educationally important.

Secondly, higher education staff whose students undertake co-operative education workplace placements (whether for academic credits or not) should

be interested in understanding how their students perceive co-operative education.

Finally, as the Dearing Report of the United Kingdom (Cameron-Jones and O'Hara, 1999) and the Council for Higher Education (CHE) in the New Academic Policy for Higher Education (NAP) Document (2002) in South Africa make assumptions about the educational value of co-operative education work experience and recommends that more students reap it's benefits.

The New Academic Policy Document (NAP) for Higher Education recommends that: all institutions identify opportunities to increase the extent to which programmes help students to become familiar with work and help them to reflect on such experiences so that institutions work with employers, professional organizations and the community to foster more work opportunities and experiences and for students.

Research on co-operative education work experience has investigated many different aspects of it. Stern, Hopkins, Stone and McMillian (1999), argue that co-operative education students usually express more satisfaction with school, and a more positive attitude with work, but they do not necessarily have more occupational knowledge or any 'effective competence'. There is no consistent evidence that co-operative education students show less delinquency or higher pass rates according to Berryman, et al. (1993). Nevertheless, relative to students in regular classrooms, students in co-operative education programmes make gains on moral reasoning, self esteem, social and personal responsibility, attitudes towards employers and others, career exploitation, and empathy or complexity of thought (Armstrong, 1988).

There is currently no clear agreement on the type of competencies/ capabilities required of students in the workplace. They are variously described in the literature as key competencies (Down, 2000), soft skills (Crowley and Garrick, 2000), employability skills (Overtoom, 2000), generic skills (Wilson and Ewer, 1999) and more recently 'working knowledge' (Symes and McIntyre, 2000). These new capabilities and competencies appear to demand that students bring more of themselves and invest more of themselves in co-operative education. This 'new worker' is constructed as a particular kind, one that is flexible, autonomous, motivated; self-regulating and orientated to life-long learning (Gee, Hull and Lankshear, 1996).

Another feature of these discourses is that they question the idea that the acquisition of these capabilities is a developmental process based on the gradual sophistication of co-operative education performance. They regard these capabilities as being needed at all levels of the career ladder and at all levels of study. Indeed, the contextual integration of these capabilities into all co-operative education curricula is seen as crucial to the success of contemporary co-operative education in meeting the needs of the workplace. Therefore all students, irrespective of their location, institution or level of study are expected to benefit from workplace experience and contribute to the workplace.

The evaluation of students' experiences in higher education has usually focused on what happens to students on campus, for example, studies have been conducted in curriculum, teaching and learning methods, assessment and workload ( Husbands, 1996; Wilson et al.,1997) and how course- related feedback from students should be interpreted (Kerridge & Mathews, 1998). In the light of the concerns for skills shortages and deficits of graduates, the focus of evaluation is broadening and academics are becoming more

concerned about students' off-campus experience in the workplace (Ryan et al., 1996).

In conclusion, co-operative education workplace experience will only be successful if it draws on students' perceptions and experiences. The literature review is neither exhaustive nor complete. There is an abundance of information available but, I am denied by the constraints of time. This chapter has clarified the historical background of Technikons generally, as well as the current and contemporary legislation and debates characterizing technikons currently. The extent to which these legislations and policies are in operation was tested using the methodologies described in the following chapter namely, chapter three.

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## **CHAPTER 3**

### **3. METHODOLOGY**

#### **3.1. INTRODUCTION**

As was indicated earlier, the structure of this research involved examining the perceptions and experiences of students in co-operative education. The methodology used to understand the perceptions and experiences of students in co-operative education work place experience and students' experiences of co-operative education in the work place are dealt with in 3.2 and 3.3 respectively.

#### **3.2. THE NATURE OF THE RESEARCH**

##### **3.2.1. Methodology**

The ultimate value of research is dependent on the methods, procedures and techniques utilized. This chapter will elaborate on the steps undertaken to answer the critical questions (see 1.8). Consideration will therefore be on the broader framework of the research method, data collection, sampling procedure and ethical considerations which have guided the research.

##### **3.2.2. Research Method**

The methodology used in this research consists of an analysis of selected literature relating to co-operative education and what this literature says about the best practices in co-operative education. It also draws on a small body of literature relating to the value of co-operative education, in an ideal situation and its implications for human resource training and development. This initial analysis provides the context for subsequent empirical data analysis.

Both the quantitative and qualitative methods were used to achieve the purpose of the study, which are acceptable to the social sciences. Haralambos and Holborn (1990) believe that practical difficulties have at least as much influence on the choice of research methods as theoretical considerations.

### **3.3. DATA COLLECTION**

Through random sampling techniques, I chose 20 students each from the Faculty of Arts, Commerce, Engineering Science and Built Environment and Health Sciences who were involved in co-operative education from the Durban Institute of Technology. Twenty seemed a manageable number since this is a small scale research and does not intend making generalizations. The demographics of the institution are represented in this study in terms of age, gender and race. All the participants are between the ages of 18 to 30 from all undergraduate levels of study. These participants are resident students of the city of Durban.

After having selected the participants, I personally telephoned each student and described the study and selection process to him/her. I also gave them a choice to participate in the study. Thereafter I made arrangements to post a questionnaire to each student to an address provided by them. The questionnaires were mailed to 80 students from the faculties mentioned in 3.4, to produce data on their perceptions and experiences of co-operative education work experiences.

The questions were designed in a manner that allowed students to write without inhibitions, of their experiences and perceptions of co-operative education. The primary reason for choosing questionnaires as the data producing instrument, is that a questionnaire which is self administered has the advantage to reach out to a large number of people and is cost effective (Fraenkel and Wallen, 1993) and (Rudestan and Newton, 1992). Questionnaires have added advantages of being relatively economical. Having questions that are standardized, ensuring anonymity and having questions that are specifically focused. Macmillan and

Schumaker (1993) concur that questionnaires enable researchers to get valid and reliable information. The questions asked are always linked to the objectives which the researcher has determined. Fraenkel and Wallen (1993) enumerate some of the advantages as follows:

- It is less time consuming than the interview method.
- It is more economical than the interview method.
- It reduces trauma leading to information bias in the heart of the respondents.
- The questionnaire method looks more confidential than the interview method.
- The administration of the questionnaire is not a difficult task.
- It lends itself to coverage of the complete spectrum of the views of the entire student population despite limited opportunity for discussion between the researcher and the respondents owing to academic obligations of the respondents.
- It is also of an impersonal nature which elicits more candid and objective replies.

One must also take cognizance of the demerits of the questionnaire which Fraenkel and Wallen (1993) point out as:

- If the questionnaire is too long the participants get bored and not all aspects can be covered
- Analyzing data will also be time consuming
- Returns are sometimes incompletely done
- Open – ended questions are not completely done.

Nevertheless the combined use of qualitative and quantitative methods is encouraged (Schurik, 1993).

### **3.4. ETHICAL CONSIDERATION**

The researcher sought permission from the Head of Research at the Durban Institute of Technology to conduct the study. The purpose of the study was explained and a copy of the questionnaire to students accompanied the request for permission (see Appendix B). A covering letter explaining the purpose of the study and requesting cooperation from students, to be attached to each questionnaire was also presented. Questions were objective and clearly stated. Care was taken not to coerce respondents, or include questions which may be construed as insensitive, embarrassing or judgemental. The anonymity of respondents was assured at all times.

### **3.5. LIMITATIONS**

The study was confined to the Durban Institute of Technology students, where the researcher was employed as a Co-operative Education Co-ordinator for the Faculty of Arts for a period of one year, between 2002 and 2003. It may be argued that the particular subject for study, the tool chosen and the expectations of the researcher may presuppose a certain bias although every effort was made to guard against bias by maintaining a high level of professionalism when in contact with students and industry personnel. One can never be sure that elements of bias were completely absent. The small sample size does not allow me to make generalizations about this particular study.

This chapter has succinctly discussed the methodology of the study. The following chapter namely, chapter 4 will deal with the analysis of the data.

## **CHAPTER 4**

### **4. ANALYSIS OF DATA**

#### **4.1. AN ORIENTATION TO THIS CHAPTER**

The aim of this chapter is to contextualise the methodology described in Chapter Three, and to show the analysis of the data. As indicated in Chapter Three, the research process involved sampling the perceptions and experiences of a cohort of co-operative education students and using these to create an image of the way in which co-operative education students perceive and experience co-operative education work placements. In this analysis I have dealt with biographical details of students, their perceptions of co-operative education and their actual experiences of co-operative education in the workplace. (see appendix 1)

To facilitate the analysis of the closed-ended responses, a coding system using a numerical scale was assigned to the responses. The codes were transferred from the questionnaire into a computer package called Statistical Packages for Social Sciences for the data analysis. This is a methodical approach so that data entry errors were minimized. Once all the data was entered, frequency tables and cross tabulations were compiled using the various variables. Tables were converted into the responses given in the questionnaires and were used to enrich the data. The open-ended questions are categorized and organized in broad themes, namely, perceptions and experiences.

#### **4.2. PRESENTATION OF DATA**

The basic aim of the research report is to communicate the findings as simply and directly as possible. Above all else, the writing should be marked by clarity and accuracy (Warwick and Lininger, 1975). A method of communication is needed by the researcher when he/she wishes to describe the

sample or present evidence of an association or difference between variables. Tables, graphs and figures must be used to make concise presentations of the statistical decision-making information. To make concise presentations I have chosen to represent the data graphically as well.

### **4.3. TABLES, FIGURES AND GRAPHS**

According to Adams and Schavaneveldt (1985), tables are the most frequently used medium of communication in the presentation of data. Any form of description or inferential statistic can be presented in a tabular form. Tables consist of an interrelation between rows (running horizontally) and columns (which run vertically). Tables are a simple, concise medium for the presentation of data. In certain forms of data it is useful to highlight information through the use of pictorial presentation—called a figure (Adams and Schavaneveldt, 1985). The figure offers simplicity and a dramatic effect on the comparison between factors. A frequently used figure is the pie chart. The pie chart is a circle divided up according to the proportion of each item's weight. A pictorial representation of figures and graphs, which are derived by combining the row and column dimension of the table. The common types of graphs used in social sciences are the line graph and bar graph. All of these representations are included in this chapter.

### **4.4. ANALYSIS OF QUESTIONNAIRES**

As indicated in chapter one the purpose of this study is to examine the perceptions and experiences of a cohort of co-operative education students at the Durban Institute of Technology. The analysis of the perceptions of the students will attempt to answer critical question one which is “What are the Durban Institute of Technology students' perceptions of Co-operative Education?”

The biographical data of the respondents will be discussed first followed by

the perceptions and lastly experiences of the students. The analysis of the students' experiences will attempt to answer critical question two, namely, "What are the Durban Institute of Technology students' experiences of Co-operative Education?"

#### **4.4.1. STUDENTS' PROFILE**

The purpose of the following analysis is to give the reader a profile of the respondents so that analysis of the data may be contextualised. This section will deal with faculty registration at the Durban Institute of Technology, the home language of students, gender of students, age of students and previous work experience of students.

##### **4.4.1.1. Faculty Registration at the Durban Institute of Technology**

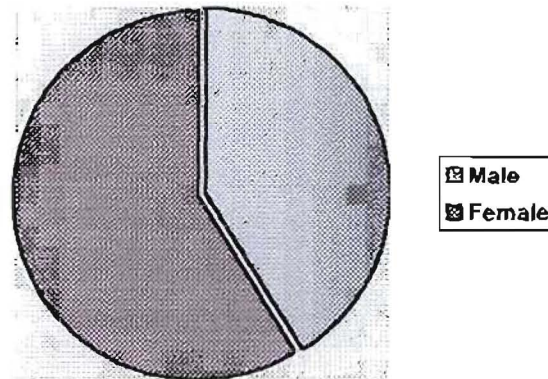
A total of eighty questionnaires were posted to the randomly selected students. Of the questionnaires returned, eleven students responded from the Faculty of Arts, twelve students responded from the Faculty of Commerce, eleven students responded from the Faculty of Engineering, Science and Built Environment and twelve students responded from the Faculty of Health Sciences. The response rate was 57.5%.

##### **4.4.1.2. Home Language of respondents**

Home Languages	Percentages
English	25%
Zulu	50%
Xhosa	5%
Afrikaans	5%
Other	5%

Analysis of the data revealed that 25 % of the students spoke English as their home language, 50 % Zulu, 5 % Xhosa, 5 %, Afrikaans and 5 % spoke other indigenous languages.

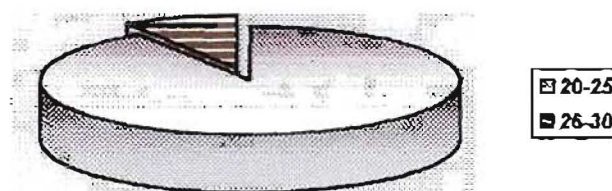
**FIGURE 4.1: STUDENT REPRESENTATION BY GENDER**



#### 4.4.1.3. Gender of respondents

Figure 4.1 represents the students by gender. The respondents consisted of 46 students, 27 females and 19 males. The number of males and females were not decided in advance. The process of random sampling and returned questionnaires impacted on the gender of the respondents.

**FIGURE 4.2: AGE OF RESPONDENTS**



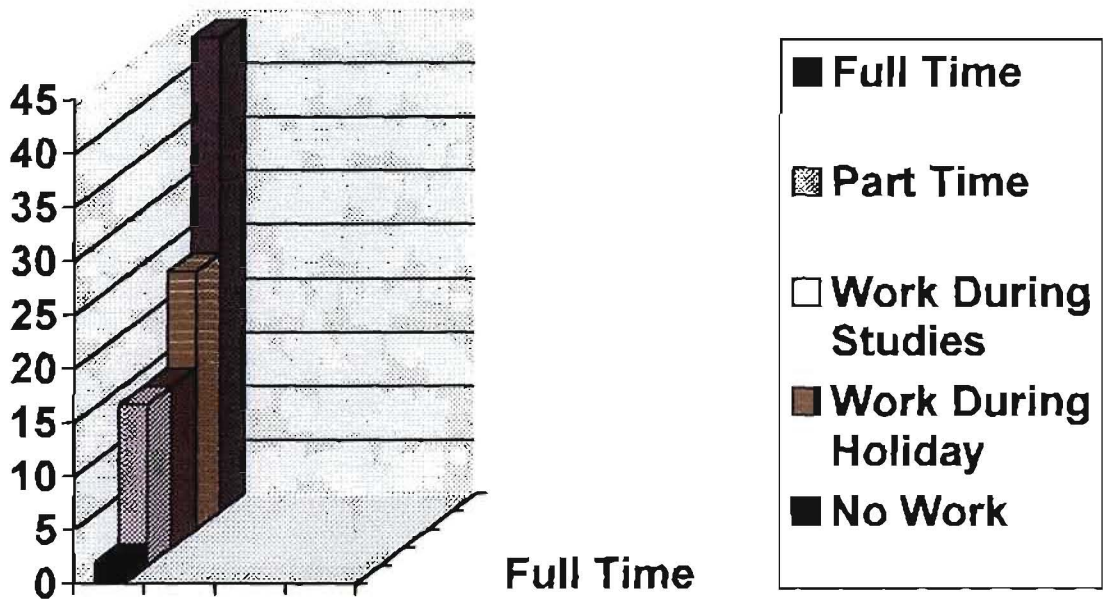
#### 4.4.1.4. Age of Respondents

Figure 4.2 represents the respondents by age. According to the sample 91 % of



the students were between 20 and 25 years of age and 9 % were between 26 and 30 years old.

**FIGURE 4.3: WORK EXPERIENCE OF RESPONDENTS**

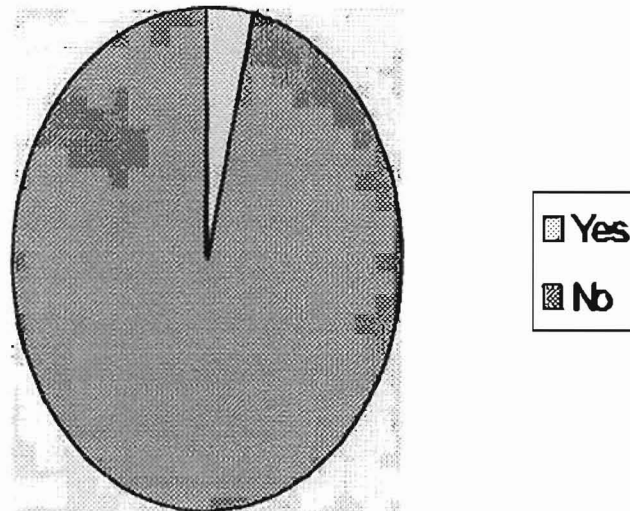


#### 4.4.1.5. Previous Work Experience

Figure 4.3 represents the previous work experience of students. With regard to

previous work experience (apart from co-operative education work experience) 44 % of students had no previous work experience, 24 % had worked during holidays, 15 % has worked while studying, 15 % had part-time employment and 2 % had been employed on a full-time basis.

**FIGURE 4.4: STUDENTS' PREVIOUS EXPERIENCE RELATED TO STUDY**



#### **4.4.1.6. Previous work experience related to study.**

Figure 4.4 represents the respondents who have had work experience that was related to their field of study. In terms of the respondents who had worked prior to the co-operative education work programme, only 2 % of the respondents had previously been involved in employment that was related to the qualification for which they are registered.

Students are largely between the ages of 20 to 25, with varying degrees of work experience, ranging from no work opportunity to some with full-time work opportunity.

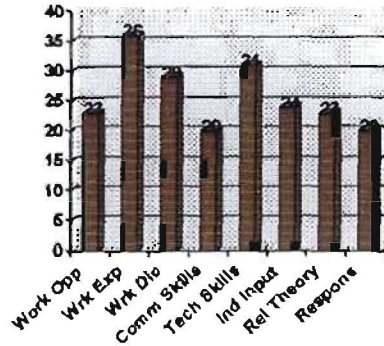
#### **4.4.2. SECTION B: STUDENT PERCEPTIONS OF CO-OPERATIVE EDUCATION WORK PROGRAMMES**

As indicated in chapter one the purpose of this study is to examine the perceptions and experiences of a cohort of co-operative education at the Durban Institute of Technology. The analysis of the perceptions of the students will attempt to answer critical question one which is “What are the Durban Institute of Technology students’ perceptions of Co-operative Education?”

The analysis revealed that with regards to their perceptions, in respect of the benefits that can be derived from co-operative education work experience, students listed work opportunity, which included gaining work experience, work discipline skills, communication skills, technology skills and knowledge and understanding of theory, educational input from industry and the opportunity to relate theory to practice, as the main benefits. This section will focus on students’ perceived benefits of work programmes, students’ opinions of work programmes being a part of their training, the kind of exposure that students’ have had to the workplace prior to the work programme, students’ perceived beneficiaries of work programmes, students’ perceived support of work programmes, students’ perceived preparedness for work programmes and students’ anticipation of work programmes.

Section B of the questionnaire serves to ascertain the kind of career awareness, career exploration and career preparation that the students’ participated in prior to the work placement.

**FIGURE 4.5: STUDENTS' PERCEIVED BENEFITS OF WORK PROGRAMMES**

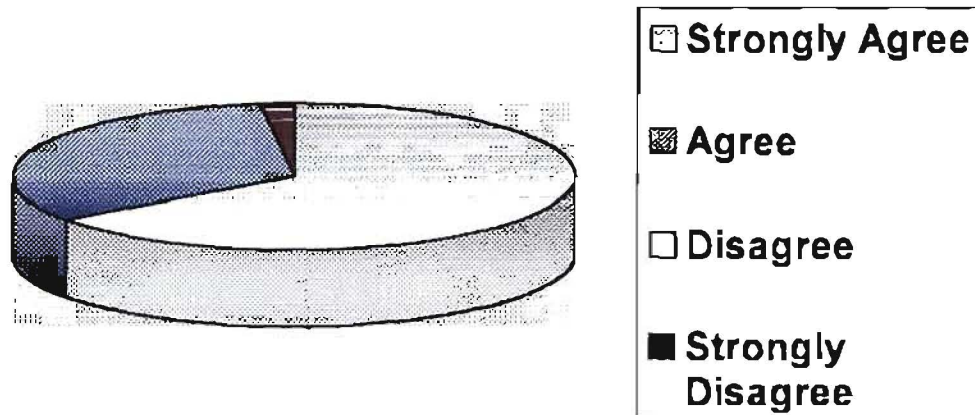


**4.4.2.1. Student Perceived Benefits of Work Programmes**

The majority of the respondents (58%) declared that work experience will be their principal benefit. This is not surprising given the understanding that the work placement is meant to equip students with marketable job related skills. 15% of the respondents believed that their benefit was located in the fact that they were provided an opportunity to relate their theory to practical situations, which is an inherent characteristic of co-operative education. 24% believed that this experience either created greater job opportunities or assisted in making career decisions while a meager 3% of the respondents saw their benefits as a financial one.

A large majority (58%) of the students indicated that students' gained by being empowered in respect of work experience. Other benefits for students according to the respondents include work opportunity, work experience, communication, technology skills, industry input and relating theory to practice.

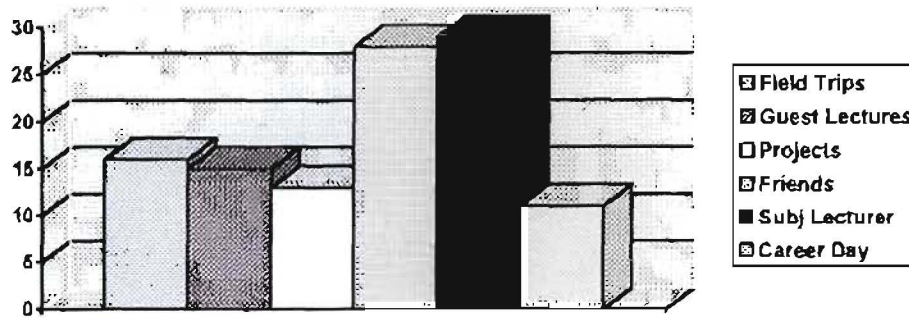
**FIGURE 4.6: STUDENTS' OPINIONS OF WORK PROGRAMMES BEING A PART OF THEIR TRAINING**



#### **4.4.2.2. Students' Opinions of Work Programmes being a part of their training**

Figure 4.6. represents students' opinions of work programmes being a part of their training. A significant percentage (65%) of the respondents strongly agreed that work placement was an important component of co-operative education, 33% agreed to this while none of the respondents disagree and a small minority (2%) strongly disagreed. By virtue of the nature of the co-operative education work programme is a pre-requisite of the course. These statistics seem to suggest that students perceive either the value or the importance of the work programme.

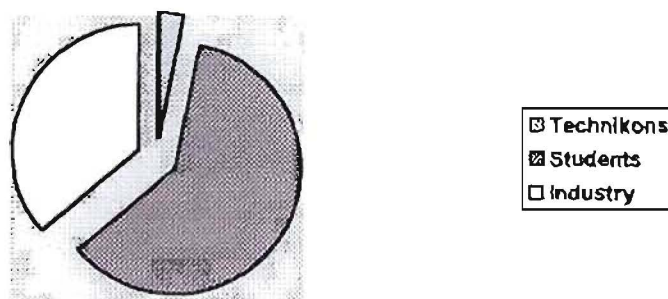
**FIGURE 4.7: STUDENTS' EXPOSURE TO THE WORKPLACE**



**4.4.2.3. Students' Exposure to the Workplace**

Figure 4.7 represents students' exposure to the workplace prior to work programmes. In response to question 3 (refer to appendix 1) 27% and 29% of the respondents confirmed that talking to friends and subject lecturers, respectively about workplace dynamics were the ways in which they had exposure to the workplace. Other responses included field trips (15%) and career days (12%), guest lecturers (15%), guest lecturers (15%) and 13% gain exposure to the work via projects set by industry.

**FIGURE 4.8: STUDENTS' PERCEIVED BENEFICIARIES OF WORK PROGRAMMES**



**4.4.2.4. Students' perceived Beneficiaries of Work Programmes**

Figure 4.8 represents students' perceived beneficiaries of work programmes. An overwhelming 61% of responses indicated that students were the greatest beneficiaries of co-operative education while 36% perceived the industry as



benefiting most and 3% believed that the technikon benefited most. In terms of the reasons for these perceptions, the students believed that students benefit through better job prospects, by relating theory to practice, empowering themselves with workplace skills and remuneration. What becomes interesting is that one would have believed that since this is a partnership, all stakeholders should benefit equally. Industry benefits in that they will receive trained, skilled personnel. Industry also benefits financially because students are paid a nominal salary and have more trained students to choose from for employment. The technikon benefits by sustaining a working relationship with industry and the experiences of the students impact on a transforming curriculum. Fifty seven percent of the responses indicated that empowering students in respect of work experience is their most significant benefit. Other benefits for students according to the respondents included better job prospects, related theory to practice, empowerment, working relationship between the technikon and industry, the ability to earn a wage while studying and industry's contribution to the curriculum.

**TABLE 4.1: STUDENTS' PERCEIVED SUPPORT FOR WORK PROGRAMMES**

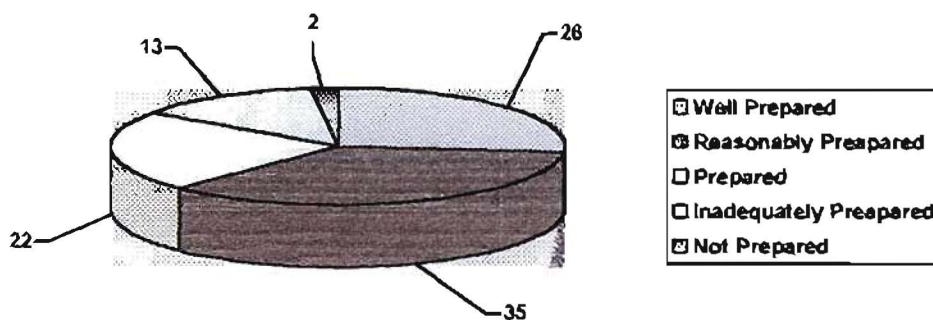
	Lots of Support	Very Little Support	A fair Amount of Support	No Support
Technikon Co-operative education Unit	39%	11%	41%	2%
Industry	65%	9%	15%	1%
Technikon Departmental Staff	33%	4%	11%	2%

#### 4.4.2.5. Students' perceived support for work programmes

Table 4.1 represents students' perceived support for work programmes. The majority of the respondents expected either lots of support or a fair amount of support from the technikon while 13% of the students had expected little or no

support. This is indeed surprising given the fact that co-operative education is a partnership between the student, the employer and the institution. The students expected lots of support from the departmental staff more than from anyone else. 65% of the respondents expected lots of support from the industry, 39 % the same amount of support from the technikon co-operative education unit and 33 % expected similar support from the technikon departmental staff. Of the total sample 41 %, 15 % and 11 % expected a fair amount of support from the technikon co-operative education unit, industry and technikon departmental staff, respectively. Only 5 % of the respondents expected no support from the three stakeholders discussed. 11% of the respondents chose not to respond which makes one to speculate the reasons for this choice. Was their choice informed by ignorance, apathy or just an omission?

**FIGURE 4.9: STUDENTS' PERCEIVED PREPAREDNESS FOR WORK PROGRAMMES**

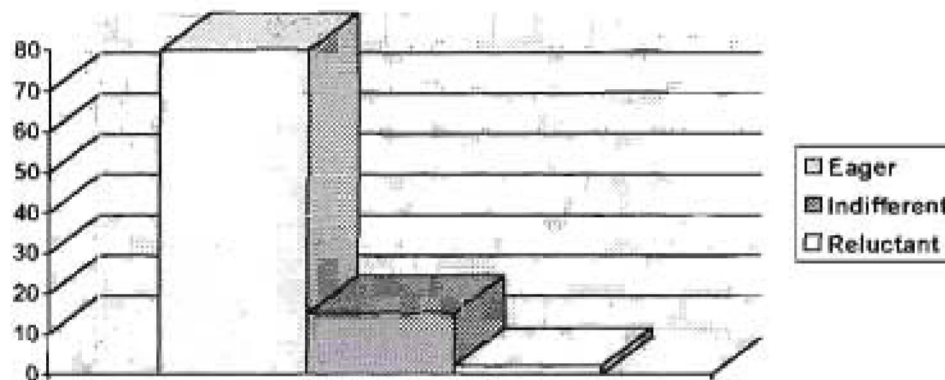


#### 4.4.2.6. Students' Perceived Preparedness for Work Programmes

Figure 4.8 represents students' perceived preparedness for the work programmes. The majority of the respondents (83%) believed that they were either prepared, reasonably prepared or well prepared prior to the work programme while 15% of the respondents believed that they were either inadequately or not prepared prior to their work programme. This latter response raises critical questions in terms of the preparedness of the students prior to their work programme.



**FIGURE 4.10: STUDENT ANTICIPATION OF WORK PROGRAMMES**



#### **4.4.2.7. Students' Anticipation of the Work programme**

Figure 4.10 represents students' anticipation of work programmes. A heartening 80% of the respondents declared that they were eager in anticipation of their work programme, 17% indicated their indifference while 1% felt reluctant. It is indeed encouraging that students show eagerness since their work programme is just as significant to their course of study as is the theoretical components completed at the Technikon. Only 2% of the respondents did not declare how they felt prior to being placed in industry/work programme.

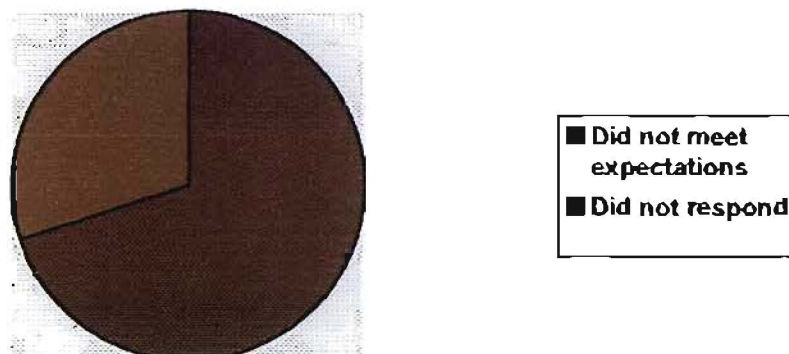
Section B of the questionnaire was to focus on ascertaining students' perceptions of work programmes. This study concludes that students perceived that they were the primary beneficiaries of work programmes, empowered as a consequence of their participation in the programmes. They perceived it as a necessary part of their learning. They also perceived their exposure to the workplace to be inadequate in terms of field trips, guest lecturers, industry related projects, talking to friends, subject lecturers and career days. Other perceptions included expecting a fair amount of support from technikon departmental staff as well as the belief that they were either well or reasonably prepared for the work programme. Students were also eager about participating in work programmes.

#### 4.4.3. SECTION C: STUDENTS' EXPERIENCES OF CO-OPERATIVE EDUCATION WORK PROGRAMMES

The way in which students experience co-operative education work placements is an integral component of the study and attempts to answer critical question two namely, "What are the Durban Institute of Technology students' experiences of Co-operative Education?"

The following discussion will focus on the experiences of the students as communicated by them. This section will focus on whether the programme met the students' expectations and the possible reasons for the 'good' or 'bad' experiences, the number and nature of visits from technikon staff, the kind of and nature of and quality of mentorship and supervision that the students' had during the work programme, and the quality of the work programme. Lastly the students' were allowed to suggest ways in which the work programme could be improved upon.

**FIGURE 4.11: STUDENTS' EXPERIENCES OF WORK PROGRAMMES**



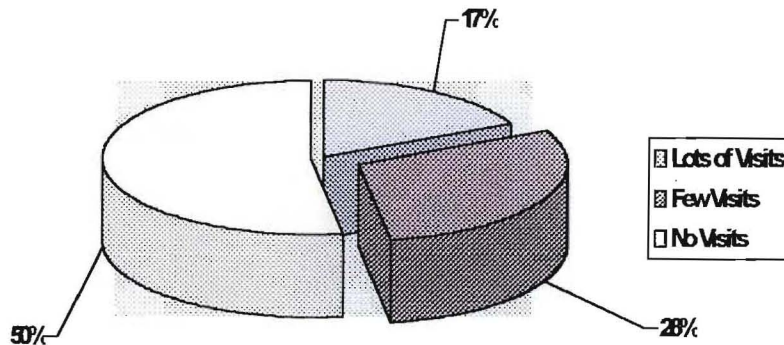
##### 4.4.3.1. Students' Experiences of Work Programmes

Figure 4.11 refers to students' experiences of the work programmes. An overwhelming 70% of those who responded to the question supported the notion that the co-operative education work programmes did not meet their expectations and 30% chose not to respond to the question. In light of one of the preceding notions that 80% of the respondents were eager in anticipation of the work programme, it is disappointing to note that the work programme did not meet the

expectations of 70% of the respondents. A critical concern however is why is the work programme not meeting the expectations of the students, which perhaps may be important in transforming students' experiences of work programmes.

The reasons given by the respondents range from the programme not meeting the students expectations as a consequence of their perceptions, doing work not related to their field of study and the gap between theory and practice. Also cited as reasons are the lack of opportunity to test their knowledge, discriminatory workloads and or no relevant place found for students and that the tasks allocated were not challenging enough, as they were cited as being menial. There were no responses in the affirmative, which can lead one to assume that the work programme neither related to their course of study, that they did not enjoy it, nor had they gained any skills from the experience.

**FIGURE 4.12: VISITS BY TECHNIKON STAFF**



#### **4.4.3.2. Visits by Technikon Staff to the Workplace**

Figure 4.12 represents the percentage of visits to the workplace by Technikon staff. The response of the respondents seem to suggest a tension between the number of visits by the technikon staff is evident by the 50% of the students who were not visited by technikon staff. While 17% had many visits 28% had a few visits. Houze and Simon (2002) suggest a visit during the programme and a visit towards the later part of the programme, in an attempt to provide support, verbal feedback from students, verbal and written feedback from the technikon staff,

evaluation of the student by the staff member. These visits will also serve to create a stronger partnership with industry for further and better quality placements (Houze and Simon, 2002).

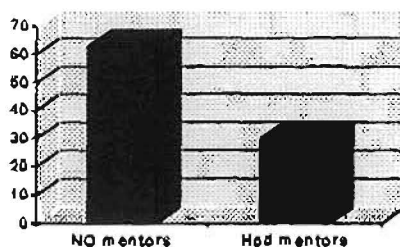
**TABLE 4.2: THE NATURE OF VISITS BY TECHNIKON STAFF**

<b>Observation</b>	<b>9%</b>
<b>Written suggestions</b>	<b>2%</b>
<b>Verbal suggestions</b>	<b>2%</b>
<b>Written feedback on completion of programme</b>	<b>2%</b>
<b>A combination of all of the above</b>	<b>22%</b>

**4.4.3.4. The Nature of the Visits by the Technikon Staff**

Table 4.2 represents the nature of visits by Technikon staff. Of the students who were visited by their departmental lecturers 22 % of them indicated that the nature of the visits included observation, suggestions and written feedback. 9 % of the students were observed only, 2 % suggestions for improvement and only 2 % written feedback only. Of concern however is the overwhelming 63 % of students who chose not to respond to this question.

**FIGURE 4.13: STUDENTS' WHO HAD MENTORS IN THE WORKPLACE**



**4.4.3.5. Students who had Mentors in the Workplace**

Figure 4.13 represents students who had mentors in the workplace. A mentor is a

person who is assigned to oversee and supervise the learning programme of a student in the workplace. An alarming 63% of respondents had no mentors at the workplace which is not in keeping with the principals of co-operative education. 30% of the students however claimed to have had mentor. The fact that such a large percentage of the students had no mentors raises some critical concerns about workplace norms e.g. who will guide and supervise the student, etc.

The role of the mentor, Section C, question 5, 6, and 7 featured strongly in the analysis where a large percentage (63%) of students claimed that they had no mentors yet the role and significance of the mentor is clearly defined in policy documents (SASCE, 2000). It is important that the mentor meet the student when he/she arrives at work, help him/her settle his/her personal affairs before discussing work assignments and orientate to the organization/company with particular emphasis on how and where he/she fits into the 'whole scheme of things.' The mentor should also introduce him/her to fellow workers as colleagues, to help the student relax, because, according to Houze and Simon (2001) the students regardless of the work programme that they are beginning is likely to be nervous about handling the first assignment with what seems to him/her to be an inadequate background. It is important that the mentor involve the student in selecting his/her assignments from a list of 'possible' and 'urgent' tasks. In essence the mentor helps shape the experience of the student through his/her engagement with the student. One needs to reflect that in the absence of a mentor who will provide the necessary support and growth to the students in terms of providing challenging tasks, feedback, supervision and opportunities to learn, grow and expand hi/her horizons. This significant role impacts on the quality of the students' experience.



**TABLE 4.3: STUDENTS' RELATIONSHIP WITH THEIR MENTORS**

	Yes	No
a) feel comfortable asking questions	50%	17%
b) presented with tasks that were appropriate to your academic programme	46%	15%
c) Supervised/Monitored	52%	13%
d) Given theoretical explanations	30%	28%

#### 4.4.3.5. Students' Relationship with their Mentors

Fifty percent of the respondents were comfortable with asking their mentors questions while 17 % were not comfortable. Of concern however are the 33 % of the respondents who failed to respond. In response to the question "were you presented with tasks appropriate to your academic programme?" 46% of the respondents answered in the affirmative while 15% of the responses were negative. Once again 39% of the respondents failed to answer the question and one begins to ask why. Could it be as a consequence of the apathy, disillusionment or lack of confidence in the system. This is fertile grounds for future research. Although 35% of the students chose not to respond, of those that responded 52% asserted that they did receive supervision and monitoring whilst in practice. 13% on the other hand claimed not to have had any supervision or monitoring. Only 30% of the students were given theoretical explanations by their mentors whilst 28% were not given theoretical explanations. It can be assumed that the remaining 42% failed to respond because they did not have mentors.

**TABLE 4.4: MENTOR SUPPORT TO STUDENTS**

	Yes	No
Suggested specific ways to improve	28%	39%
Pointed out where I did well	41%	33%
Kept me informed of my progress	35%	39%
Gave me feedback after the completed programme	39%	37%

It was disheartening to note that 28% of the students had mentors who suggested specific ways to improve, 39% of the mentors did not provide any specific ways

given challenging tasks. Just half (50%) of the participants noted that they were paid a salary. The same percentage (46%) noted that they were not paid a salary. In finding out whether students were given a reasonable workload 59 % answered in the affirmative whilst 30 % responded in the negative. Different interpretations of what “reasonable” is probably contributed to student variations in responses.

**TABLE 4.6: STUDENTS’ ACADEMIC EXPERIENCES OF WORK PROGRAMMES**

	Yes	No
a. Valuable part of the course	85%	4%
b. Carefully chosen to suite my abilities	35%	46%
c. Interesting and stimulating	74%	9%
d. Work assignment was clear and specific	52%	36%
e. The time was reasonable	18%	4%
f. Relevant to what was presented in class	32%	11%

**4.4.3.8. Students’ Academic Experiences of Work Programmes.**

The response to this question suggests that the students were operating in a reflective mode since 85 % indicated that the practical experience was a valuable part of their course. Only 4 % did not view the experience as valuable and 11 % did not respond to the question.

In line with what one would expect the majority of the students, (85%) found the programme valuable whilst 4% believed it to have no value. The responses from the table above indicate that a minority (35%) perceived that the co-operative education work programme was carefully chosen to suit their abilities. Of significance however is the 46% of the students’ who noted that the programme was not carefully chosen to suit their abilities. Seventy four percent (74%) indicated that the programme was interesting and stimulating, 52% claimed that the programme was clear, specific and precise on work assignments, 18% noted that the time allocation was reasonable and 32% noted that the practical

for the student to improve. A stark 33% of the respondents chose not to respond to this question.

Forty one percent of the mentors pointed out where the respondents had done especially well as opposed to 33% who did not. The remaining percentage of the respondents chose not to comment. 35 % of the students were kept informed of their progress whilst 39 % were not.

Thirty nine percent (39%) of the total sample of respondents received feedback from their mentors once the programme was completed, 37% did not receive feedback. 24% of the respondents chose not to respond to this particular question.

**TABLE 4.5: INDUSTRY PREPARATION FOR WORK PROGRAMMES**

	Yes	No
a. Given a written job description	22%	61%
b. Knew your status in the workplace	54%	33%
c. Told about the health, safety, dress, and working hours	54%	37%
d. Introduced to fellow workers	67%	22%
e. Taken on a tour of the workplace	41%	41%
f. Paid a salary	46%	46%
g. Given a reasonable workload	59%	36%
h. Given challenging tasks	35%	46%

#### **4.4.3.7. Industry Preparation for Work Programmes**

The questionnaire in attempting to find out whether students were given a written job description ascertained that only 22 % of the students did receive this while a staggering 61 % did not. Fifty four percent (54%) of the students knew about their status in the workplace and/ or were informed about the health, safety dress and working conditions and hours. A surprising 67 % of the students were introduced to their fellow workers while 41 % were taken on a tour of the workplace. This is disconcerting given the importance that the students need to “see how and where they fit into the whole scheme of things” (NCCTE, 2003). 59 % thought that they were given a fair and reasonable workload. Only 35 % believed that they were



experience was related to their theoretical knowledge. This finding suggests a positive experience for the students.

**TABLE 4.7: STUDENTS' EVALUATION OF WORK PROGRAMMES**

	Strongly Agree	Agree	Disagree	Strongly Disagree
<b>Overall an excellent programme</b>	26	31	22	4
<b>I learned a great deal in this programme</b>	37	39	9	4
<b>I have a strong desire to complete my academic programme</b>	33	41	7	4
<b>The credits allocated for the programme was reasonable</b>	13	24	4	4

#### **4.4.3.9. Students' evaluation of work programme**

Table 4.7 represents the evaluation of the work programmes in percentages. When asked to rate the co-operative education work programme 31 % of the students agreed that the programme was excellent, 26 % strongly agreed, 22 % disagreed and 4 % strongly disagreed that the programme was overall excellent. A further probing may have resulted in reasons for these responses. This will probably make interesting future research.

In response to "I learned a great deal in this programme" 39 % agreed, 37 % strongly agreed and 9 % disagreed. With regards to having a strong desire to complete their academic programme, 41 % agreed, 33 % strongly agreed, 7 % disagreed and 4 % strongly disagreed. When responding to "The credits allocated for the programme was reasonable," 55 % of the students chose not to respond, 37 % fell between strongly agree and agree and 8 % chose between disagree and strongly disagree.

Section C, Question 11 of the questionnaire, provided an opportunity for respondents to note aspects of the programme that they would like to change. These included extra time for work programmes, discrimination in terms of race and working conditions, greater interaction with trainers and mentors, greater awareness of technikon work programme, evaluation done by more qualified mentors and technikon staff, better salaries, free transport, curriculum change, and better resources.

The experiences of the students straddled across many issues like the programme not meeting their expectation to not being visited by technikon staff, not receiving feedback from either industry nor the technikon staff. Many students also noted not having mentors and those with mentors did not experience a good working relationship. Of concern also was students experiences of not being given a job description, not knowing their status, not being informed of the health, safety, dress and working hours. Also of concern is that the students were not introduced to colleagues, taken on a tour of the organization, paid a salary nor were they presented with a reasonable workload and given challenging tasks whilst in a work programme.

Students however, experienced their work programme as a valuable part of their course but overall did not find their work programme as excellent.

This suggests that there is a gap between technikon and industry in terms of preparing and managing students during the work programmes.

#### **4.5. SUMMARISING THE FINDINGS**

In this study I reported on the biographical data, perceptions and experiences of the students. This has been discussed adequately to provide a clear understanding of the experiences of a group of co-operative education students at the Durban Institute of Technology.

This largely descriptive analysis is based on students' responses about their perception and experiences of the co-operative education workplace programmes. The students' responses spanned the various principles, guideline and recommendations of the new Co-operative Education curriculum as defined by SASCE (2000).

There were 19 males and 27 females who responded to the questionnaire. All respondents were between 20 and 30 years old and all responded in English although for some English was a second language. The students spanned the faculties of Arts, Commerce, Engineering, Science and Built Environment and Health Sciences.

The students' responses clearly showed that many are aware of the new curriculum reforms and have also begun to adopt the discourse related to it, e.g. relevance of the work assignments, support from industry and technikon staff, the role of the mentor, etc.

The analysis was organized according to the perceptions and experiences of the students which also happens to be reflected in the new curriculum policy framework e.g. SASCE (2000), SAQA (2000) and SDA (2001).

Breen (2001) argues that the relationship between all three stakeholders is equal and should benefit all equally. However the results of this study suggests a disparity in terms of the benefits for the various stakeholders. (Section B, question 4). Houze and Simon (2002) claim that the industry, co-operative education unit and technikon staff, have specific and important roles to play in supporting students during their co-operative education work programme so that the quality and relevance of the programme is optimized and sustained. Mahomed (2002) found that support from Technikon staff was highly lacking in terms of the number and nature of visits to students. This study resonates the findings of Mahomed, that it too revealed that greater emphasis was placed on the placement of students in industry, often compromising the quality of the programmes. This study has revealed the various degrees of challenges that students' experience and perceive. Section B Question 5 shows that generally, students had perceived the

performance of the various stakeholders as featuring some roles very strongly (e.g. lots of support) and others much less strongly (e.g. no support). It is indeed surprising to have these findings in spite of efforts that have been made to improve the quality, relevance and flexibility of the educational outcomes with industry and business being asked to play an increasingly important role in the implementation of the Technikon curricula (Smout, 2001).

It was also interesting to note that workplace training and learning was experienced both positively and negatively by the different students. Question 9 and 10 of Section C shows this.

The conviction and commitment of Technikon staff towards students cannot be over-emphasised. Students noted both with or without concern the degree of (non) engagement with technikon staff (Question 3 and 4, Section B). Students responses varied from lots of support to no visits. It is the 'no visits' that is of particular concern. Not being visited by Technikon staff also impacted on the responses of Question 4 in which students had to comment on the nature of the visits. The technikon staff is, according to Houze and Simon (2002) vital to co-operative education as he/she must try to understand the individual characteristics and needs of each student, try to ascertain what programmes are suitable to the student and what is the best learning experience for the student. Communicating with the student will give the technikon staff a good idea of what the students' needs and expectations of the programme are, for work programmes. Technikon staff need to also have to have a good understanding of different employer organizations and each location, group, department and mentor, to determine the needs of that specific industry. In essence the main focus of technikon staff is to enhance the quality of each students' experience in the workplace.

#### **4.6. CONCLUSION**

The findings of this study is a useful measure of the degree to which students felt supported and challenged by their work place experience. This chapter concluded with a summary of the findings and announces the next chapter which will highlight the recommendations of this study and its conclusion.

## CHAPTER 5

### **5. SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION**

#### **5.1. ORIENTATION TO THIS CHAPTER**

Any recommendations for action have to be set within a particular context and for this reason I will comment on key issues that relate to work placements within the current co-operative education debate. This is followed by comment on macro issues which emerged as significant during the study, communication and the importance of seeing workplace learning as an integral part of the co-operative education curriculum.

The chapter focuses on recommendations for co-operative education work programmes, as well as the conclusion to the dissertation.

#### **5.2. SUMMARY OF FINDINGS AND RECOMMENDATIONS**

The genesis of this study arose out of my interaction with students who had completed workplace training and who spoke both positively and negatively about it. These findings clearly indicate how students perceive and experience co-operative education. Issues during work placements that emerged allowed me to summarise and make recommendations are as follows:-

- The findings revealed that there was little evidence of career awareness activities that help students develop a general awareness of themselves, the world of work and its connections to education. Activities such as field trips, career days, industry guest speakers and informational interviews were not included in the curriculum prior to the work programme. According to the NCCTE (2003) co-operative education work programmes contribute to a

lifeprocess of learning, a general awareness of themselves, the world of work and its connections to education.

It is therefore recommended on the basis of these findings that more field trips, career days, industry guest speakers and informational interview be included in the curriculum.

- Career exploration activities such as industry related projects and laboratory work were adequately included in the co-operative education curriculum. Job shadowing was inadequately represented, according to the findings.

The students should be involved in more job shadowing activities to increase and help students' research and learn about the demands of the workplace.

- Career preparation activities such as non-paid work experience have been adequately included in co-operative education. Activities such as the observation of specific skills by students and mentorships have not been taken place. These activities are important to the integration of academic knowledge and skills of the classroom with work-based skills learned on the job. Observation and mentorships emphasise skills building, understanding concepts, learning to work as a team, establishing relationships, ethics and honesty, and relating personal interests and abilities to real world career opportunities.

Mentors should be appointed to all students in the workplace to create an atmosphere and opportunity for the students to evaluate and take advantage of opportunities to learn grow and expand his/her horizons.

- The findings revealed the quality of the actual work programmes are compromised as the students were not always engaged in work programmes

that were relevant to the academic curriculum and the qualification for which they were registered.

There is a need for strengthening dialogue between industry and the Durban Institute of Technology in terms of both industry and the Technikons' expectations of the students and this should be communicated to the students.

The quality and relevance of the work programmes need to be enhanced by the employer coordinator, mentor, the Technikon and the students. Students' work experience should allow for theory to be used maximally. There is a need for greater involvement of lecturers and mentors with students while in a work placement. Lecturing staff and mentors need to provide greater support in terms of orientation, supervision, feedback and observation to help develop students.

The Technikon should ensure that students receive tasks appropriate to their academic programme in order for the students to be able to experience something of the 'real life of work'.

Work programmes must be coordinated with academic progress by the Technikon as to content, direction and quality. This involves periodic visits to employers by Technikon staff to provide the students with guidance and support.

Coordinators of the technikon should keep the students informed (in writing) of the evaluation of their work work experience and performance in order to enhance the quality of their learning.

There should be evidence of a marked commitment on the part of the Technikon to an on-going relationship within the co-operative education framework. The co-operative education work programme should be much more than incidental

employment and should be part of an industry training activity, recognised as an acceptable part of a professional employee development programme, as recommended by SAQA and SASCE, in terms of best practice.

### **5.3. CONCLUSION**

Co-operative Education in Higher Education is not new and has a long history in most courses in Technikons throughout South Africa. In recent years it has come into more general prominence because the South African Qualifications Authority, supported by numerous policy and legislative developments, including the White Paper of 1995 and 1997, the Skills Development Bill of 1997, the Higher Education Act of 1997 and the New Academic Policy document of 2002, has encouraged institutions, and particularly Technikons, more widely to increase the extent to which programmes help students become familiar with work. Since the publication of all of these policy and legislation, the informal literature of higher education began to discuss the implications for higher education of this development. For example, The Daily News (March 1999) devoted in its four page Editorial and Advertising section, two pages to student work experience.

More research needs to be done on co-operative education work programmes. Kerka (1999) points out that although work experience is proliferating, much of the literature about it concerns its programmatic feature such as how co-operative education is set up and organized. Much less has been written about what the co-operative education work experience component of courses gives or does not give to the students for whom it is arranged. The survey reported in this study has focused on the students, but still more remains to be done. For example, my research has not, obviously demonstrated causal connections between the students' perceptions and experiences of their supervision and other aspects of their educational experience. I have not for example, shown that theoretical undesirable co-operative education work experience is associated empirically at



course level with student drop-out rate, but my study by its nature cannot show that one thing caused the other. Nor has my research ranged across the country and across the disciplines at technikons.

In South Africa as a whole we need to know much more about the characteristics and quality of co-operative education workplace perceptions and experiences in various disciplines and geographical areas. For this it will probably be necessary to use some specific instruments as well as some general ones such as the one I have described. At present, well-validated instruments to ascertain students' perceptions and experiences are hard to find. It does seem that that they are much less frequent to be found in the literature at present than those for evaluating students' experience on the technikon campus, they are likely to become more common in the future. To me, they are likely to be a consequence of the larger trend, which the South African Qualifications Authority's recommendations for technikon education exemplify in providing relevant learning in both the technikon and in co-operative education work programmes, thus blurring the boundaries between 'work' and 'education' and to strengthen the links between the two.

Since work programmes compliments the academic curriculum offered on-campus, it should be stimulating, interesting and inviting of students so that they emerge empowered, liberated and satisfied.

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## **APPENDIX 1**

### **CO-OPERATIVE EDUCATION QUESTIONNAIRE**

This is a questionnaire about your co-operative education during your technikon years. By completing this questionnaire, you are giving consent for the data on this sheet to be used for research purposes. The data will be reported in aggregate form only and you will not be personally identified. The completion of this questionnaire is voluntary and you are under no obligation to participate in this research.

#### **A. BIOGRAPHICAL DATA**

1. Qualifications registered for:

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2. Your language:

	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
a. English			
b. Afrikaans			
c. Zulu			
d. Xhosa			
e. Other			

3. Your gender:

Male	
Female	

4. Your age :

20 to 25	
26 to 30	
31 and above	

5. Work Experience (apart from cooperative education experience)

Full time	
Part time	
Work during studies	
Work during holidays	
No work	

6. Is this work experience related to the qualification for which you have registered?

YES	NO

**SECTION B. PERCEPTIONS ABOUT CO-OPERATIVE EDUCATION**

1.

1.1.

The list below indicates some of the benefits that can be derived from co-operative education. Indicate the ones that you perceive to be of benefit to you.

Work opportunity		
Work experience		For industry to make an input into what you should learn
Work discipline skills		For you to be able to relate theory to practice
Communication skills		Responsibility
Technology skills		

(categories adapted from The Centre for Research)

1.2

Select one of the above responses and indicate why you thought that you would benefit from a Co-operative education experience.

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2. What are your opinions of co-operative education as a part of your training?

Strongly agree	
Agree	
Disagree	
Strongly disagree	

3. What kind of exposure have you had to the workplace of your current field of study prior to your co-operative education placement?

Field trips	
Guest lectures by industry personnel	
Projects set by industry	
Talking to friends about the work	
From your subject lecturers	
Career days	

4.1 Who do you think benefits most from Co-operative education?

The technikon	
The students	
industry	

4.2 Why? Explain your answer.

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5. What support did you expect for co-operative education from:

	Lots of support	A fair amount of support	Very little support	No support
The technikon Co-operative education unit				
The industry				
The technikon departmental staff				

6. Rate your preparation prior to the co-operative education programme

Well prepared	
Reasonably prepared	
Prepared	
Inadequately prepared	
Not prepared	

7. In anticipation of your co-operative education programme, were you:

Eager	
Indifferent	
Reluctant	

### SECTION C. EXPERIENCES OF CO-OPERATIVE EDUCATION SERVICES

1. Did the co-operative education programme meet your expectations?

YES	
NO	

2. Explain your responses to the above question

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3. How many visits did you have from the technikon staff?

Lots of visits	
A few visits	
No visits	

4. If there were visits to the workplace by the technikon staff, describe the nature of the visits

Observation	
Written suggestions	
Verbal suggestions	
Written feedback	
A combination of all of the above	



5. Did you have a mentor?

Yes	No

6. If yes,

	YES	NO
a. did you feel comfortable asking questions		
b. were you presented with tasks that were appropriate to your academic programme		
c. were you supervised/monitored		
d. were you given theoretical explanations		

7. Did the mentor :-

	YES	NO
1. suggested specific ways to improve		
2. pointed out where I had especially done well		
3. kept me informed of my progress		
4. gave me feedback after the programme was complete		

8. Please give a YES or NO answer to all of the following.

	YES/NO
a. were you given a written job description	
b. did you know your status in the workplace	
c. were you told about the health, safety, dress, and working hours	
d. were you introduced to fellow workers	
e. were you taken on a tour of the workplace	
f. were you paid a salary	
g. were you given a reasonable workload	
h. were you given challenging tasks	

9. Overall, the co-operative education work programme was

	YES	NO
a Valuable part of the course		
b Carefully chosen to suit my abilities		
c Interesting and stimulating		
d Work assignment were clear and specific		
e Time allocation reasonable		
f Relevant to what was presented in class		

10. How would you evaluate the co-operative education programme

strongly agree/ agree/ disagree/ strongly disagree

a. Overall an excellent programme	
b. I learned a great deal in this programme	
c. I have a strong desire to complete my academic programme	
d. The credits allocated for the programme was reasonable	

11. What are the 3 things that you would like to change about the programme?

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THANK YOU FOR YOUR COOPERATION