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Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market

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DECLARATION

I declare that the dissertation, which I hereby submit for the degree MOccTher at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at another university.

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Signature Date

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SUMMARY

Opportunities for South African occupational therapists to deliver appropriate work practice services to workers with disabilities in the open labour market, has increased within the context of current Disability Equity Legislation which promotes the rights, and therefore the employment of people with disabilities in the work place. The training of students at university plays a significant role in equipping them to competently deliver work practice services to workers with disabilities in the open labour market.

The University of Pretoria's Occupational Therapy Department has responded to the growing need for the training of occupational therapists in the area of work practice services, and for this reason implemented the Post-Graduate Diploma in Vocational Rehabilitation in 1997, the only post-graduate training course in this field in South Africa. However despite a long history of both under- and post-graduate training in the area of work practice, research into the identification of professional competencies required for this type of work has not been previously undertaken. The need for research to determine these professional competencies thus emerged.

A Delphi Survey Technique was selected as research methodology with both qualitative and quantitative aspects. A panel of 35 occupational therapists representing various practice settings and meeting pre-determined criteria as being experts in this field, was selected to participate in this research. Three consecutive questionnaires were sent to the research participants requesting them to identify knowledge, skills and values considered to reflect professional competencies.

Following a process of data analysis, 16 professional competencies were identified as being necessary to deliver work practice services to workers with disabilities in the open labour market.

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ABREVIATIONS USED

BCOE	Basic Conditions of Employment
CCMA	Commission for Conciliation, Mediation and Arbitration
CGP:D	Code of Good Practice: Dismissal
COIDA	Compensation for Occupational Injuries and Diseases Act
DM	Disability management
DOL	Department of Labour
DOT	Dictionary of Occupational Titles
EAP	Employee Assistance Programme
EE	Employment Equity
EEA	Employment Equity Act
FCE	Functional Capacity Evaluation
HPCSA	Health Professions Council of South Africa
HRM	Human Resource Manager
INDS	Integrated National Disability Strategy
INSTOPP	Institute for Occupational Therapists in Private Practice
JA	Job Analysis
LRA	Labour Relations Act
MODAPTS	Modular Arrangement of Predetermined Time Standards
NQF	National Qualifications Framework
OLM	Open Labour Market
OT	Occupational Therapist
OTASA	Occupational Therapy Association of South Africa
OTLA	Occupational Therapists in Life Assurance
PICOT	Pretoria Integrated Curriculum for Occupational Therapy
POTS	Psychiatric Occupational Therapist Interest Group
PWD	People with Disabilities
RTW	Return to work
SAQA	South African Qualifications Authority
SETA	Sector Education and Training Authority
UIF	Unemployment Fund
WFOT	World Federation of Occupational Therapists
W/S	Workshop

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CHAPTER 1

RESEARCH ORIENTATION

1.1 INTRODUCTION

The delivery of work practice services, an umbrella term used to describe work related assessments and programmes[1-3] has been an integral part of occupational therapy services since its inception in the early 1900s[1,4]. Work, both as a part of the treatment process as well as an outcome of rehabilitation has been used by many countries world-wide over the last twenty years[1]. South African occupational therapists have also been involved in the delivery of work practice services, with the first unit to deliver these services probably established approximately 40 years ago[5].

One of the outcomes of occupational therapy work practice services, that of achieving employment for people with disabilities[1], appeared difficult to obtain in South Africa when reviewing employment statistics. Approximately 0,258% of employees were identified as those with disabilities, according to Uys in 1988[6], and estimates in 1997 indicated that 99% of people with disabilities were being excluded from employment in the open labour market, according to the Integrated National Disability Strategy[7]. One of the reasons, given by the South African Government in the Integrated National Disability Strategy[7], for excluding people with disabilities from the mainstream of society, including that of employment, was a weak and discriminatory legislative framework which both supported and reinforced exclusionary barriers.

This was to change with the rights of people with disabilities being constitutionally entrenched in South Africa's first democratic Constitution in 1996[8]. In particular the rights of people with disabilities in the work place have been upheld through various acts of legislation including the Labour Relations Act (1995) and the Employment Equity Act (2000).

South African occupational therapists responded to the changing South African health care system and legislative context by presenting numerous workshops relating to the delivery of work practice services to people with disabilities in the late 1990s[9]. Although limited, a number of journal articles were published relating to the changing role and work practice services offered by occupational therapists[5,9-13]. It was clear that occupational therapists were reacting to the changing environment and responding to the new practice demands. It became apparent that Disability Equity Legislation was making a significant impact on service delivery and work practice services.

The challenge for occupational therapy educators is to prepare students to meet the demands of the practice environment in which they will be functioning and to competently deliver services. Training institutions should be a significant source in providing knowledge, skills and values for the development of professional competencies[14]. However, development of theory as opposed to changes in practice is seen to be slow, thereby leading to a disparity between educational preparation of occupational therapists and practice expectations[15]. Educational preparation and practice expectations should be brought closer together, thereby preparing students for the real world[15]. One way of doing this is to seek the opinion of clinicians in identifying professional competencies[15-16]. This is supported by Ellis[14] who states that the profession itself should be involved in the review and generation of professional competencies, and that this process should be research based.

Identifying professional competencies necessary for effective delivery of work practice services in South Africa, using occupational therapists experienced in the field, is thus essential for the further growth of the profession. It can also form a valuable part of the Clinical Governance Programme implemented by the Occupational Therapy Board of the Health Professions Council of South Africa, whereby identified professional competencies could be used as a yardstick against which services may be measured to determine best practices for service delivery.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

The Occupational Therapy Department of the University of Pretoria has been associated with the area of work practice since its inception, initially as the School of Occupational Therapy, which was established in 1955. One of the driving and inspirational forces in this field was Vona du Toit, an occupational therapist, who became principal of the School in 1963[18]. It was in her position as both clinical head and principle of the School that she, through her research, teaching and leadership confirmed the role of South African occupational therapists in the field of what is known today as work practice[5]. Occupational therapy training was incorporated into the University of Pretoria in 1982, and in 1997 the Post-Graduate Diploma in Vocational Rehabilitation was implemented. This is the only post-graduate course in South Africa with special focus on work practice services for workers with disabilities. Occupational therapy training at this Pretoria based institution has therefore had a 50 year of history, with training and education in the area of work practice always being part of the academic programme.

All training and education programmes in South Africa are regulated by the South African Qualifications Authority (SAQA) which was established through the SAQA Act of 1995 in order to oversee the implementation of the National Qualifications Framework (NQF). One of the objectives of the NQF is to create an integrated national framework for learning achievements. As part of this framework, learning is required to be defined according to unit standards and learning outcomes. In addition, training of medical professionals including, those of occupational therapists, is further regulated by the Health Professions Council of South Africa (HPCSA). The HPCSA comprises various professional boards. The Professional Board for Occupational Therapy, Medical Orthotics/Prostetics and Arts Therapy sets the training standards for all eight South African training institutions.

However, despite a long history of occupational therapy teaching, regulatory mechanisms and curricula frequently being reviewed, professional competencies of practitioners required to work in the area of work practice

has not been researched nationally or internationally, according to literature reviews undertaken by the researcher. Submissions for curricula have been based on the educational staff's experience in the field.

Research was therefore undertaken to determine professional competencies required by occupational therapists in the area of work practice, with a view to implementing research outcomes in ongoing curriculum development as well as guidelines for practice.

1.3 RESEARCH QUESTION

Opportunities to deliver appropriate work practice services to workers with disabilities in the open labour market has increased within the context of current Disability Equity Legislation which promotes the rights, and therefore the employment of people with disability in the workplace. Preparation of students through university programmes must equip students to competently deliver these work practice services to workers with disabilities.

This leads to the research question: What professional competencies are required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market?

1.4 PROBLEM STATEMENT

Within the context of a demographic South Africa and the promotion of human rights and equality for all its citizens, employment equity for people with disabilities, in the open labour market, has become more of a reality. Occupational therapists are delivering work practice services to these clients, but professional competencies required to deliver these services do not appear to have been researched, defined or published at the time of undertaking the research.

1.5 RESEARCH AIM AND RESEARCH OBJECTIVES

The aim of the research was to identify professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market.

The research objectives which were amended as a result of the research process and as discussed in section 4.10.1 were to:

i) Identify knowledge, skills and values required by occupational therapists to deliver work practice services;
ii) Identify the methods which occupational therapists in work practice use to improve their professional competencies;
iii) Compile a profile of the work practice services currently delivered by occupational therapists in South Africa;
iv) Determine possible reasons for the non-delivery of work practice services in South Africa;
v) Recommend on which level (under- or post-graduate) the identified professional competencies should be developed.

1.6 DEFINITION AND CLARIFICATION OF CONCEPTS

In this research the following definitions and concepts were applied and used by the researcher and research participants:

i) *South African Open Labour Market*

Competitive work-settings in the formal and informal sector of business, government and other organizations that are not considered as protective or sheltered employment environments. Workers in the open labour market perform productive activities which could provide a service or commodity needed by others[19-20]. Workers in the open labour market are paid for their

productive activities and produce work according to the standards set by the employer.

ii) *Workers with Disabilities*

Workers with disabilities may either be *potential workers*, or *workers who are currently working.*

Potential workers are those workers with disabilities who:

- Do not currently work, but who are likely to be able to work,
- Could either once have worked, but have lost their work due to injury or illness,
- Could never have worked although they are of working age,
- Are still in the process of preparing for work as they are not of working age,
- Could be job seekers.

Potential workers could possibly be considered as employment equity candidates according to the Employment Equity Act of 1998[21] due to the nature of their disability.

Current workers are those workers who are working. Their work performance could be affected by an injury or illness, and could be considered as "incapacitated" according to the Labour Relations Act of 1995[22]. The incapacity could be of a temporary or permanent nature.

iii) *Work Practice Services*

Work practice services refer to those therapeutic interventions and programmes in occupational therapy which enable clients to undertake and maintain participation in productive activities or work[1]. Work practice services could be preventive, evaluative, remediative, restorative or compensatory. Settings for the provision of these services could include, but are not limited to, acute care and rehabilitation facilities, industrial and office environments,

education and training programmes, private practices, insurance settings, non-governmental facilities, sheltered and protective workshops, and home environments.

These services have been traditionally referred to as work preparation and/or vocational rehabilitation services in South Africa. For the purpose of this research, the researcher used all 3 terms on documents and other research documentation.

iv) *Professional Competencies*

The concept of professional competency is multi-faceted and dynamic[23] and defining professional competencies remains a difficult task as indicated in the literature[14,23-25]. Using the combined work of these authors, the following definition of professional competencies was relevant to this research:

Professional competencies refer to the sum total of capacities that a qualified occupational therapist possesses and which are believed to be relevant to practice. Professional competency is further described in Table I.

Table I : Professional Competency

Knowledge	Skills	Professional values
Cognitive domain	*Psychomotor domain*	*Affective domain*
Specific to the field of vocational rehabilitation/ work practice and/or work preparation	Technical and other OT related skills required by an OT working in the field of vocational rehabilitation /work practice and/or work preparation. These skills are considered essential.	These refer to the principles, beliefs, ethics and moral standards by which an OT should practice in the field of vocational rehabilitation/ work practice and/or work preparation.
Refers to the theoretical aspect of the field	Refers to the application of knowledge – the doing of tasks and activities required by the field.	These qualities are considered desirable and will contribute towards the standard and professionalism in the field.
Objective aspects	Objective aspects	Subjective aspects

1.7 ETHICAL CONSIDERATIONS

Care was taken during this research process to implement ethical principles in order to meet professional, legal and social obligations[26] to both the research participants as well as the University of Pretoria. The following ethical principles were considered during this research:

- Ensuring that the researcher was competent and skilled to undertake the research[27];
- Presentation of the research protocol for institutional review[26]. This facilitates the following:
    - Minimization of the risks to research participants;
    - Equitable selection of research participants;
    - Seeking of, and adequately documenting informed consent;

- Protection of confidentiality[26-27]. Although research participants were known to the researcher, all efforts were made to keep their identity confidential from each one another. Quasi anonymity was therefore implemented;
- Facts were presented accurately to research participants to avoid deceiving the particiapnts[27]. Participants had the right to full disclosure in terms of the nature of the study, risks and benefits of the research as well as the researcher's responsibilities[26];
- Participants had the right to self-determination by deciding either to participate in the research or be able to withdraw from the research at any time[26];
- Informed consent[26-27];
- Beneficence. Research participants were not exploited in terms of their time and contribution to the study[26];
- Publication of the research findings[27];

These principles were applied in the following manner during the research:

- The researcher was supervised by competent occupational therapy lecturers;
- The selected research methodology was researched and documented in this research dissertation;
- The research protocol was presented for review by lecturers and post-graduate students of the Department of Occupational Therapy for critique, guidance and support;
- Once the protocol had been reviewed, the protocol was presented to the Ethics Committee, Faculty of Medicine, University of Pretoria and Pretoria Academic Hospital, for input and approval;
- Following approval from this Ethics Committee (certificate number S136/99), research participants were telephonically invited to participate in the research. The research methodology was telephonically explained, and possible participants were asked to finally consider their participation once they had read the letter addressed to them, formally inviting them to participate in the research, as well as the Informed Consent Form

(Annexure A). These documents explained the research process more comprehensively;

- The original signed Informed Consent Form was sent back to each research participant for record purposes. A copy of the Informed Consent Form was kept securely by the researcher;
- Throughout the research, the researcher undertook to be telephonically and electronically available to support and answer questions from the research participants;
- Each questionnaire was accompanied by a letter of explanation concerning the research;
- On completion of the research, the results of the research would be:
    - Submitted for possible publication to the South African Journal of Occupational Therapy;
    - Discussed at the University of Pretoria's Department of Occupational Therapy's Curriculum Planning Committee (PICOT) for implementation consideration.

1.8 SIGNIFICANCE AND CONTRIBUTION OF THIS RESEARCH

This research will contribute significantly towards the existing body of knowledge for South African occupational therapists, in the area of work practice service delivery, as the research will identify the professional competencies required to deliver services.

Results of the study will be used to review and further develop the current work practice curriculum for both under- and post-graduate students at the University of Pretoria's Occupational Therapy Department. This will be done by submitting research results to the Pretoria Integrated Curriculum for Occupational Therapy (PICOT) Committee which was implemented in 2000. It could also be used to develop courses and workshops presented by the Department which would contribute towards the Continuing Professional Development Programme, endorsed by Section 26 of the Health Professions

Act, (Act 56 of 1974) with which all South African occupational therapists must comply in order to maintain and update their professional competence[28].

Results of this research study would be forwarded to the Professional Board for Occupational Therapy, Medical Orthotics and Arts Therapy for consideration and inclusion in the Clinical Governance Programme. Through this programme the Board aims to develop standards of practice which will be used to guide occupational therapy practitioners in service delivery to their clients. No minimum standards have been developed for work practice.

Information would also be sent to the President of the Occupational Therapy Association of South Africa (OTASA) for possible consideration in their position paper in work practice. Although professional competencies were not addressed in the position paper regarding work practice services which was drawn up in 1992, they could possibly be incorporated into a comprehensive document regarding South African occupational therapy work practice services.

1.9 SCOPE AND LIMITATIONS OF THIS RESEARCH

This research is only applicable to South African occupational therapists who work in the field of work practice and deliver services to workers, both potential and current, in the open labour market. It thus cannot be generalized to other areas of occupational therapy, as it is context bound.

1.10 LAYOUT OF THIS RESEARCH

The research contains the following chapters and annexures:

Chapter 1 : Presents an introduction and background to the research project.

Chapter 2 : Gives a literature overview of the following topics as related to this research:

- The use of work as part of occupational therapy;
- A historical overview of work practice services in the United States of America, Britain, Australia, Canada and South Africa;
- International and South African legislative influences on work practice services;
- Professional competencies.

Chapter 3 : Gives an overview of the Delphi Technique in order to introduce the research methodology to the reader. This is one of the essential aspects of the Ethical Considerations as discussed in Section 1.7.

Chapter 4 : Describes the research design and method explaining the manner in which the research was conducted.

Chapter 5 : Contains the research results and analysis thereof in relation to the first two questionnaires as well as to the first four research objectives.

Chapter 6 : Gives the conclusion of the research in relation to the research aim as well as recommendations.

The following annexures are included:

A : Informed Consent Form
B : Informed Consent Form (Pilot Study)
C : Pilot Study Feedback Form
D : Report-back from Pilot Study Members
E : Round One Covering Letter
F : Identification and Contact Information Form

G : Biographical Form
H : Definition of Terms
I : Round One Questionnaire
J : Round Two Covering Letter
K : Round Two Questionnaire
L : Research Update
M : Round Three Covering Letter
N : Round Three Questionnaire
O : Work Practice Survey

1.11 CONCLUSION

Identifying professional competencies required by occupational therapists to deliver work practice services to workers with disabilities in the South African open labour market will contribute significantly to the South African Occupational Therapy Profession. Results will be used for curriculum development and could be implemented by both the Professional Board and the Professional Association which represent Occupational Therapy in South Africa.

1.12 SUMMARY

In this chapter, a description of the background leading to the research was given. The research aim and objectives were listed and the concepts used in this research were clarified. An indication of how the research results would be implemented is given together with the limitations of this study. Chapter 2 deals with a literature review relating to both work practice services as well as professional competencies.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

The focus of this chapter is on literature relevant to the field of work practice and professional competencies. Four topics are addressed by the researcher:

Firstly: the use of work as part of occupational therapy is briefly addressed. Various terms used in the literature by occupational therapists to refer to work practice services are covered. This will facilitate an understanding of the use of the term “work practice” and “work practice services” for the purpose of this study. One of the outcomes of work practice services that of placement/employment in the open labour market, will be dealt with. Placement of people with disabilities in the South African labour market will not be addressed due to the lack of research. Some available statistics have been discussed in Section 1.1. The range of work practice services will also be covered as this will provide an understanding of occupational therapy work practice services.

Secondly: a historical overview of work practice services will be given to illustrate that South African occupational therapists have followed similar paths to those of their international colleagues in terms of delivering work practice services. The historical review focuses on developments in America, as these appear to be the more available in occupational therapy literature. A brief overview will be given of British, Australian and Canadian developments. Developments in South African occupational therapy work practice services will be covered. This is however, probably not a true reflection of developments, due to a paucity of relevant publications.

Thirdly: legislation affecting the delivery of work practice services is addressed as this is seen to have an impact on service delivery. A brief overview of some of the important Acts will be given, with focus on

employment. A lengthy discussion of educational, and health and safety legislation is not included as they are not directly applicable to the study.

Fourthly: a discussion of professional competencies will be given. The difficulty and complexity of defining professional competency will be discussed. Issues relating to the identification and development of professional competencies will be given as well as how professional competencies are developed and maintained. Barriers to professional competency development will be addressed. The contribution of professional competency to quality assurance programmes and curriculum development will be highlighted. Although literature relating to professional competencies required for work practice could not be identified by the researcher, this section will guide the reader to an understanding of the importance of, as well as difficulty in researching professional competencies.

2.2 WORK PRACTICE AND OCCUPATIONAL THERAPY

2.2.1 The Importance of Work

Work includes all types of productive activity whether paid or not paid[3,19]. It represents an important human performance area and includes life roles such as homemaker, employee, care giving, educational and vocational activities, and retirement planning[3]. Through work humans fulfill their needs, and establish a sense of identity and status. It provides a basis for self-respect and meaning in life[1]. Participation in work related activities is thus a very valuable part of human life and occupational therapists are able to make a unique contribution in providing services required for the prevention and management of work related disabilities - those of providing work practice services[3,29].

2.2.2 Work and Occupational Therapy

The concept of work has always been fundamental to the Occupational Therapy Profession and has distinguished occupational therapy from other health care professions. Although the meaning of work has undergone changes, it has remained a central tenet of the profession[30]. The history of the profession reflects that occupational therapists have used work, especially remunerative employment both as an integral part of the treatment process as well as an outcome of rehabilitation[1,19].

The South African Definition of Occupational Therapy published in 2003[31] (anonymous) acknowledges the importance of work as being part of the profession. Included in the aim, is that occupational therapy empowers occupationally dysfunctional clients to carry out their work/productive activities to their highest level of independence. The provision of work practice services remains central to South African occupational therapy service provision.

2.2.3 Terminology

The use of the term work practice which is used to describe the services of the occupational therapist facilitating the transition of workers and potential workers from their current environment to the work place, appears to have been comprehensively described by the American Occupational Therapy Association in 1992[3]. Provision of these services has been described internationally as vocational rehabilitation[32], work hardening[33-35] and work rehabilitation[36-37].

In South Africa the term appears to have undergone name changes with work re-orientation programmes[38], industrial therapy[39-40], and work therapy[41] used in the 1960s. Work preparation[42-45] and work rehabilitation[46-47] appears to be a term used during the 1980s, and after the establishment of the then Transvaal Provincial Administration Vocational Rehabilitation Work group in 1989,

vocational rehabilitation appears to be a preferred term used in occupational therapy literature to describe a variety of work practice services[5,9,12,48-51].

Although the term work practice is thus not a common term used by South African occupational therapists, it is the term used by the researcher as an umbrella term to cover vocational rehabilitation and work preparation programmes. This was selected because it was a term used by Pratt and Jacobs in a publication relating to international occupational therapy practices in the area of work[1].

2.2.4 Outcomes of Work Practice Services

The outcome or aim of work practice services is not always directly described in occupational therapy literature. Although the focus appears to be the placement of the person with a disability in a work related activity, the type of labour market appears to have changed with time. The outcome of vocational rehabilitation as stated by the International Labour Office in 1983 is "resettlement" in suitable work, achieved either in open or sheltered employment[52]. The position paper on vocational rehabilitation published by the American Occupational Therapy Association in 1980, states that occupational therapy practice prepares the individual for employment[32].

Publications from the 1990s indicate that placement in the open labour market appears to be the objective of occupational therapy work practice services. Although services differ in name, the outcome thereof appear to be the provision of services to assist the injured worker to return to gainful employment or employment in the open labour market[2,29,53-54].

It is the opinion of the researcher that one of the outcomes of occupational therapy work practice services, that of facilitating employment in the open labour market for people with disabilities, is upheld by the implementation of Disability Equity Legislation as discussed in Section 2.4.

2.2.5 Work Practice Services

Various publications relate to various work practice services, but a comprehensive description of these services is not available. Services include mainly that of prevention/education, assessment, intervention/rehabilitation and placement[2-3,53]. Although these groupings are not mutually exclusive, examples of these services include:

- Prevention/education services: back education, ergonomics, stress management, energy conservation;
- Assessment services: work place assessment, functional capacity evaluation, medico-legal assessments, pre-placement screening, disability determination;
- Intervention/rehabilitation services: job modification, case management, pain management, work hardening;
- Placement services: job analysis, skill training, vocational counselling, job acquisition, adaptation and redesign of architectural barriers.

The provision of these services in facilitating work/employment for people with disabilities is important. The identification of professional competencies required to deliver these services to workers in the open labour market should be researched as this appears to not yet have been conducted.

2.3 A HISTORICAL OVERVIEW OF WORK PRACTICE SERVICES

2.3.1 United States of America

The use of work as a therapeutic medium was first introduced as an aspect of moral-treatment for the “insane” in the late eighteenth and early nineteenth centuries, a move which has been associated with the development of occupational therapy[1]. The names most associated with moral-treatment, and those who were specifically interested in the role of work were: Phillipe Pinel (1745 – 1826), William Tuke (1732 – 1822) and Sir William Ellis (1780 –

1839). Both Pinel and Tuke introduced the use of work related activities for psychiatric patients. They were however more concerned about changing the manner in which psychiatric patients were treated in asylums, as opposed to facilitating return to work for those who were discharged from these institutions[1]. Work activities including that of working in and around the asylums were seen as a means of improving morale and discipline, and was not defined in terms of eventual employment[30]. Ellis however, was concerned about the relationship between insanity, poverty and unemployment[1]. He believed that poverty and unemployment led to insanity, and that insanity increased the levels of poverty. Patients in his care were encouraged to either return to their trade or learn a new trade while institutionalized[1]. This use of occupation in the treatment of mentally ill patients in the nineteenth century is said to have greatly influenced the development of the occupational therapy profession[1].

The use of work related activities was not only used in the treatment of psychiatric patients, it was also used in the treatment of patients with tuberculosis in England and Germany in the late 1800s. It did not appear to be an integral part of treatment in North America until 1914 when George E Barton opened a school, workshop and vocational bureau for convalescing patients. Work activities were seen as to be creating a sense of productivity, and were used to exercise some aspect of the body as well as to relieve the monotony of the illness[30]. Barton was one of the founder members of the National Society for the Promotion of Occupational Therapy in 1917 which was later renamed the American Association of Occupational Therapists in 1923[1].

World War One saw tremendous growth in occupational therapy with work related activities being used to improve performance components of especially those soldiers suffering from orthopaedic injuries. Curative workshops were established to deal with soldiers injured during the war[1]. Occupational therapists (then known as reconstruction therapists) used a variety of craft activities to assess and assist with an appropriate vocational training programme for the soldiers. This vocational training was not however

conducted by occupational therapists[30]. Development in occupational therapy work practice services was slow after the war until the enactment of the Vocational Rehabilitation Act of 1920. Vocational rehabilitation was defined in this act as the "return to remunerative employment". This act facilitated the growth of rehabilitation for the physically disabled although most occupational therapists were working in the psychiatric field at this stage[1].

During the 1930s occupational therapists were established hospital team members and industrial therapy or "employment therapy" was a recognized treatment medium for psychiatric patients. Patients were assessed, jobs were analyzed, and placement in supervised occupations within the hospital environment was the method of treament[33,55]. By the late 1930s, the term "prevocational training" emerged. Crafts were used to develop skills which could be transferred to industry[55]. Occupational therapists were communicating with employers and providing services outside of the hospital environment.

The Second World War again led to further development in occupational therapy with the establishment of emergency hospitals and rehabilitation services. It was also during this period that the first occupational therapy textbooks were published. *The Theory of Occupational Therapy* was published in 1940, and *The Rehabilitation of the Injured – Occupational Therapy,* in 1945. Both included sections on resettlement in industry[1] indicating the importance that occupational therapists were placing on the delivery of work practice services to workers with disabilities.

Following the war years, occupational therapy grew world wide. This led to the establishment of the World Federation of Occupational Therapists, an international network of occupational therapists first being launched at a conference in Edinburgh in 1954. There were five major themes at this conference, two of which were rehabilitation and resettlement[1]. Resettlement or return to work was seen to be an important outcome of occupational therapy services.

In the 1940s work evaluation and prevocational programmes were generally accepted as part of occupational therapy practice[55]. Holmes[56] reviewed American Occupational Therapy literature and reported that the role and skill of occupational therapists in work evaluation was extensively documented in this period.

During the 1950s work evaluation became part of vocational rehabilitation practices at centres outside of occupational therapy. Marshall[55] states that "we relinquished our birthright to work evaluation", and that this service was performed by the newly born profession of Vocational Rehabilitation. The role of the occupational therapist was seen as developing the patient's work habits, work tolerance and speed in order to prepare him/her for a vocational rehabilitation training programme which was conducted by other professionals. Occupational therapists developed prevocational programs to prepare patients for eventual employment[55]. It was important for occupational therapists at this stage to establish how they differed from these professionals in order to identify their role in the delivery of work practice services[56].

The 1950s and 1960s were characterized by the Occupational Therapy Profession seeking a more scientific rationale for its practice and embracing the use of the Medical Model, establishing itself strongly in physical rehabilitation centres[30,33]. This resulted in occupational therapists leaving vocational rehabilitation programmes. Those who remained worked in prevocational or work adjustment programmes for clients who were either severely disabled or who were mentally or emotionally handicapped[55]. Work practice services was not one of the key areas of occupational therapy and the profession moved towards establishing itself in physical rehabilitation centres.

Occupational therapists were less involved in the area of work practice services than ever before in its history during the period 1950 to the early 1970s[4].

The 1980s showed a renewed interest in the field of vocational rehabilitation and a return to the values and beliefs of its founders[55]. The American Association published an official Position Paper on the "Role of Occupational Therapy in the Vocational Rehabilitation Process"[32]. In this paper, the Association reaffirmed its role in vocational rehabilitation stating that this had been further expanded by the 1978 amendments to the Rehabilitation Act[32]. The market place appeared to support the re-establishment of the occupational therapist's role in vocational rehabilitation for those injured in industry. Fenton and Gagnon[57] state that the 1980s brought about much growth in the rehabilitation of the injured. Occupational therapists were considered valuable team members in the provision of work programmes which aimed to bridge the gap between acute rehabilitation and return to work. Terms such as "work hardening", "functional restoration", "industrial rehabilitation" and "return-to-work programmes" were seen as synonymous with work programmes. The role and skill of the occupational therapist in work hardening programmes was well established during these years[4,33-34]. The delivery of work practice services was clearly revived during this period.

The 1990s saw American occupational therapists delivering work practice services in the areas of occupational health, insurance and industry – new areas for service delivery. Occupational therapists continued to play an integral part in work hardening, worker education and injury prevention[29,57]. The introduction of an Industrial Model of Rehabilitation Management was developed and introduced as a means of expanding the role of occupational therapists in complying with disability legislation[58]. Developments in the field appeared to be facilitated by the introduction of the Americans with Disabilities Act in 1990 which promoted employment for people with disabilities[59-61].

American occupational therapy history clearly illustrates the importance of delivery of work practice services as an integral part of the profession. The delivery of these services has undergone changes in its 90 year history with a period in the 1950s where practitioners moved away from this area but returned during the 1980s. Comprehensive delivery of work practice services appears to be covered in two position papers[3,32].

Professional competencies for delivering these services do not appear to have been addressed in literature reviewed by the researcher.

2.3.2 Britain

The delivery of work practice services by British occupational therapists appears to be not as well documented as that of their American colleagues.

Provision of work practice services appears to have gained momentum after the acceptance of the Disability Discrimination Act in 1995. Prior to this occupational therapists experienced difficulties, aggravated by the lack of legislation, in getting employers to recognize people with disabilities as equal job applicants[62]. The role of the occupational therapist in terms of facilitating return-to-work, health and safety management as well as sickness and injury management appeared to gain momentum through the enactment of this legislation[35,37,63-64]. The move from a traditionally medically linked hospital environment to the industrial environment was strongly promoted[63], although not many occupational therapy publications were in evidence in this regard.

During 2004, the British Journal of Occupational Therapy undertook a series of publications into the area of vocational rehabilitation[36]. Perhaps this was undertaken because vocational rehabilitation appeared to have been neglected in Britain for many years[65]. After conducting a literature review in the area of return-to-work, Brewin and Hazell[37] concluded that there was a lack of British studies looking into return-to-work. The role of the occupational therapist in work rehabilitation was however described in "Vocational Rehabilitation: the way forward" by the British Society of Rehabilitation Medicine in 2002[37]. This paper was published 22 years after the American paper on the role of occupational therapists in vocational rehabilitation[32] and 10 years after the Americans used the term work practice[3].

British occupational therapists, judging by occupational therapy publications, do not appear to have played an active role in the delivery of work practice services to workers with disabilities. This could be because anti-discriminatory legislation was only enacted in 1995 – five years after that of the American law.

In 1997 Stuckey[63] briefly addressed the knowledge and skills of occupational therapists, which are aspects of professional competence required to deliver work practice services to workers in the open labour market. These were however not based on research, but on the training of occupational therapists.

2.3.3 Australia

Work practice services have been delivered in the industrial workshops of large psychiatric institutions since the 1950s, and in large vocational rehabilitation centres where service delivery was directed at adults with physical disabilities[1].

As a result of social and political influences in the 1970s, occupational therapists changed the nature of their services and began moving into industry and community based and outreach vocational rehabilitation. The Disability Discrimination Act of 1992 and the Occupational Health and Safety Act of 1991 initiated further development for occupational therapists with programmes including injury prevention and health promotion[1,66]. A survey conducted in 2002, indicated that many of the programmes were directed at prevention, assessment and rehabilitation[2].

The use of “work practice” as a term to cover all aspects of service delivery to workers with disabilities in the open labour market appears to be a common term used in Australia[2,67].

2.3.4 Canada

The Canadian Society of Occupational Therapists published its position paper in the field of vocational rehabilitation in 1993 and updated it in 1998[53]. The role of the occupational therapist as a team member in the vocational rehabilitation process is described and acknowledged by the occupational therapy profession.

Although not termed vocational rehabilitation or work practice, as has been done internationally, research was conducted into the essential knowledge, skills and professional behaviours required for "vocational practice" during 2003[17]. This was done in response to the demand for occupational therapists, as well as to changes in vocational practice and also to update occupational therapy educational programmes.

In comparison to other countries, Canadian occupational therapists therefore appear to have taken a research orientated approach to the provision of work practice services by undertaking research into professional competencies required to deliver work practice services.

2.3.5 South Africa

The history of occupational therapy work practice services in South Africa is also not as well documented as the American literature. There is a paucity of publications and publications appear sporadic and these then deal with similar topics.

Occupational therapy in South Africa appears to have been established in approximately 1942, when Professor Raymond Dart negotiated the implementation of the Diploma in Occupational Therapy at the University of the Witwatersrand. Training commenced in 1944. At this stage of training, occupational therapy focused on the use of crafts as a means of exercising

both physical and mental abilities, and of distracting the patient from the illness process[11].

The use of "work therapy" as a means of treating psychotic patients was explored by Borowitz and Kretzmer[41] in 1959. The authors concluded that this type of occupational therapy was effective and could be implemented in any psychiatric hospital.

Vona du Toit, an occupational therapist who left an undeniable legacy for South African occupational therapists, obtained her Diploma in Occupational Therapy from the University of the Witwatersrand. She later became Principle of the School of Occupational Therapy as well as Clinical Head of the HF Verwoerd Hospital, and it is in these capacities that she had considerable influence in the field of occupational therapy[18], and in particular, in confirming the role of South African occupational therapists in vocational rehabilitation[5].

Three of South Africa's first research studies into this area of work were inspired and guided by Vona du Toit[5]. Two dissertations were written in 1966. Fay Fordyce's was titled "The Role of the Occupational Therapist in Work Assessment" and Venona Gillard's "A Critical Investigation of the Techniques of Work Assessment as used in Occupational Therapy". The dissertation of Ruth Watson's (then Lowes) titled "The Work Related Programme" was completed in 1967, and was the only paper dealing with work related occupational therapy presented at the World Federation of Occupational Therapy's conference in 1970. According to Shipham[5] these studies contributed towards the body of knowledge in the field and formed the basis for teaching at many South African universities.

The 1960s were also characterized by the use of industrial therapy as part of occupational therapy. As part of the industrial therapy programme, patients were employed to perform contract work for an outside company within the therapeutic environment. This was used in occupational therapy departments in large psychiatric hospitals[38,40] as well as within the school environment[39].

Judith Farrell, an Australian occupational therapist was brought to South Africa by the National Council for the Physically Disabled, in order to further the work assessment programme at Medical Fitness for Work Unit based in the then HF Verwoerd Hospital. By the time she had presented her paper on work at the Vancouver WFOT conference, (one of five papers dealing with work, out of a total of 86 papers), she had already left a strong impact on the practical approach to vocational rehabilitation in South Africa. Judith Farrell introduced MODAPTS a predetermined time standard system, which enhanced the scientific approach to work assessment[5]. She published guidelines for South African occupational therapists to improve work habits and therefore enhance employability in 1974[68]. Much of Farrell's early work in the area of work practice is still implemented at occupational therapy training institutions.

Shipham[5] states that South Africa, as internationally, occupational therapy did not recognize vocational rehabilitation as an integral part of the profession, recognised by occupational therapists during the 1950s to the late 1970s. At this stage, with reference to work practice services, South African occupational therapists were, during the 1970s and early 1980s, uniquely concerned about the economic status of their clients after rehabilitation, as formal employment did not appear to be an option for people with disabilities. They were actively involved in the assessment of and preparation for home industries as an additional source of income for people with disabilities[69-73]. Randall[70] stated in 1988 that occupational therapists were uniquely equipped to work in this area because of their skills in work assessment, ergonomics and principles of activity adaptation. To further the employability of people with disabilities, Access College, a business college for people with disabilities was established in 1983 by an occupational therapist[74]. Another development in this unique field was the establishment of the MODE concept by an occupational therapist in the early 1990s[75]. Through this concept, people with disabilities and their unemployed family members, were trained in businesses skills and assisted in establishing small businesses in their communities. South African occupational therapists during this period were concerned about the outcomes of work practice services and were actively seeking

alternative options to employment in the open labour market for people with disabilities.

Literature in the 1980s appears to indicate that South African occupational therapists were involved in programmes which aimed at the assessment and preparation of clients for work placement. Work preparation programmes were hospital based[42-44,46]. Occupational therapists remained concerned about placement for their clients, and in efforts to enhance placement in the open labour market, the use of support groups[50], community resources[46] and group programmes[76], following vocational rehabilitation programmes, were explored as efforts to enhance the employability of clients. South African occupational therapists also appeared to be concerned about the attitudes of both employers[47] and the community[77] in employing people with disabilities, and so conducted research, although limited in this area.

As with international developments, renewed interest in the field of work practice appears to have been gradually reintroduced into South Africa occupational therapy literature during the late 1980s to the 1990s.

As early as 1988, Randall[70] had stated that occupational therapists should continue their efforts to promote employment opportunities and fair labour practices for people with disabilities. This was to become a reality when the first democratic Constitution of South Africa guaranteed and protected the rights of people with disabilities in all aspects of life, including that of employment. Almost as if aware of the eminent changing role of occupational therapists, a work group was established in Pretoria in 1989, with the brief to promote work practice services within the, then, Transvaal Provincial Administration. With the inception of this group, there appeared to be a burst of activity n vocational rehabilitation. Seven workshops were presented on related topics from February 1992 to November 1994. This group facilitated the establishment of the South African Society for Vocational Rehabilitation in 1993 which attempted to include occupational therapists and other professionals from a variety of settings including that of private practice in the area of work practice service delivery[9].

Twelve years after the publication of the American Position Paper on Vocational Rehabilitation, the work group wrote a position paper on the "Role of the Occupational Therapist in Vocational Rehabilitation". This was submitted to the South African Journal for Occupational Therapy in 1992, but was not published, as it was not sufficiently research orientated. Although still available through the Occupational Therapy Association of South Africa, it has not been updated.

South African occupational therapists appeared ready to meet the challenges imposed by the dawning of a democratic society in 1995. Occupational therapists were regarded as indispensable and crucial in implementing disability equity legislation[5,9,78]. The value of occupational therapists in the delivery of work practice services to workers with disabilities was being upheld and facilitated by the implementation of this legislation.

Despite affirming the role of the occupational therapist in the work place and as a role player in implementing legislation[9-10,12], little research into this field has been published since 2000. Byrne[13] conducted research into the role of the occupational therapist in the South African Life Insurance industry and identified skills and knowledge required by occupational therapists to function effectively in this field. Vinciguera[79] developed an evaluation tool to be used for disability grant purposes indicating that there was a definite need to develop a standardized test for those workers with disabilities who could not work in the open labour market.

A review of the literature has indicated that occupational therapists have played roles in facilitating the economic empowerment of people with disabilities through home industries, business training and through hospital-based work preparation programmes. It has been documented that occupational therapists have a role to play in implementing disability equity legislation, but little has been published in this area. Knowledge, skills and professional values do not appear to have been addressed in the area of work practice.

2.4 LEGISLATIVE INFLUENCES ON WORK PRACTICE SERVICES

2.4.1 International Law

A review of the history of occupational therapy services has indicated that service delivery in the area of work practice has been influenced, amongst other factors, by the enactment of legislation. Legislation is seen to have promoted the provision of occupational therapy services in the workplace as well as protected people with disabilities in employment settings[59-61]. Occupational therapists are well positioned to implement legislation especially those laws promoting equal opportunities for people with disabilities.

The American legislation in particular appears very comprehensive, extensive and has a long history of protecting the rights of people with disabilities. Their legislation appears to be initiated by providing services to injured soldiers through the Soldiers Rehabilitation Act of 1918. The World War II Disabled Veterans Rehabilitation Act of 1943 provided for vocational rehabilitation to disabled veterans. This was later amended and changed to the Vocational Rehabilitation Act of 1943 and included civilians as well. This Act has been continuously amended. Other significant legislation includes the 1968 Architectural Barriers Act, which promoted accessible environments for people with disabilities. The 1973 Rehabilitation Act provided for affirmative action for people with disabilities in employment[1].

The Americans with Disabilities Act of 1990 provided the first comprehensive legal protection of rights in the areas of employment, transportation, public accommodations, telecommunications and the activities of the state and local governments[1,61].

British legislation also appears to have first addressed the needs of ex-servicemen and was later amended to include civilians. The Disabled Persons (Employment) Act of 1944 introduced a quota system for employing people with disabilities. This was later replaced by the Disability (Discrimination) Act

of 1995 in which employers were prevented from discriminating against people with disabilities in the workplace[1].

As with both American and British legislation, Australian legislation has also protected the right of people with disabilities in the workplace. The Disability Discrimination Act of 1992 provided for non-discriminatory measures in work, education, access to public places, associations and accommodations. The Disability Services Act of 1986 facilitated the provision of services including training, employment, rehabilitation and independent living in order to facilitate greater participation in the community[1].

Internationally, Disability Equity Legislation appears to have promoted the provision of work practice services. Occupational therapists appeared to have seized the opportunities for service delivery but other than the Canadians, have not published research related to the knowledge, skills and values (professional competencies) required by occupational therapists delivering services to workers in the open labour market.

2.4.2 South African Law

Past South African legislation has contributed towards the exclusion of people with disabilities by failing firstly to protect their rights, and secondly by creating barriers, thereby preventing people with disabilities from accessing equal opportunities. Past discriminatory and ineffective labour legislation, amongst other aspects, has led to high levels of unemployment amongst people with disabilities, with an estimated 99% of people with disabilities being excluded from employment[7]. Through the equality clause of the South African Constitution[8], the rights of people with disabilities are protected but practical implementation through enactment of further laws is required[7,9]. The South African government, however, made a decision not to implement disability specific legislation but to manage disability in an integrated manner facilitating the integration of disability into government developmental strategies,

planning and programmes[7]. This is significantly different to international law which has addressed disability specific legislation.

The Labour Relations Act of 1995 through its Code of Good Practice: Dismissal prevents the unfair dismissal of employees "incapacitated" through illness and/or injury[22]. Disability is therefore not specifically mentioned although it is implied, and the regulations apply to all employees[80]. The Employment Equity Act of 1998[21] provides for affirmative action measures for people with disabilities as one of three designated groups[80,81]. The Promotion of Equality and Prevention of Unfair Discrimination Act of 2000[82] aims to progressively redress unfair discrimination and systematic inequalities found in areas such as labour, employment, education, health care services, benefits and insurance service[80]. Specific reference is made to people with disabilities in this Act.

These South African Disability Equity Laws are said to have an impact on occupational therapy service delivery in the area of employment for people with disabilities, as well as creating new opportunities for service delivery[9-10,12,81,83]. Canadian occupational therapists responded to this need by researching the essential knowledge, skills and values required for practice[17], as has the researcher.

2.5 PROFESSIONAL COMPETENCIES

2.5.1 Description of Professional Competencies

A profession must have a significant body of expertise which should contain knowledge, skills and practices which could both characterize the profession as well as separate it from others. This should be complex and require a lengthy period of education. This group of knowledge, skills and values might be labelled "competence" and is later described as professional competencies[14]. These two terms are used separately[23,84-92] and as a whole concept[24,93] in various publications.

Competence is described by Youngstrom[23] as a multifaceted and dynamic concept. She quotes Marshall who describes competence as existing in one of three domains: (1) cognitive domain which includes behaviour reflecting knowledge and judgment; (2) affective domain which includes attitudes and values and (3) psychomotor domain which includes manual and perceptual skills. Competence is, however, integrative in nature with the practitioner integrating internal qualities such as values with knowledge and skill in order to apply clinical judgment and clinical reasoning in practice[23].

Grossman[25] states that competence is based on a person's knowledge, skills and clinical judgment and the demands of the practice environment.

There is, however, no generally accepted definition of professional competence. Defining professional competence is not easy[14,23,25,88]. This has led to an absence of clarity for practitioners[93]. Duke[94] who conducted research in 2004 concluded that the definition of competence remains vague and that the concept requires continual examination.

It must also, however, be noted that professional competence is not the same as continuing professional development or professional excellence. Continuing professional development forms the mechanism with which to promote and maintain professional competencies[90]. Defining competence from an employer's perspective is viewed as "fitness for purpose"[88] whereas the professions view this as "fitness for practice" [95].

Professional excellence implies exceeding the acceptable standards of competence. It is associated with a leadership component as well as with the practitioner being a role model. Other aspects associated with professional excellence include being a resource and performing ground-breaking work[96].

Given the literature on professional competencies, it was important for the researcher to combine descriptions from various authors and to give a practical description of professional competencies to the research participants. The definition used in this study is given in Section 1.6

2.5.2 Identification of Professional Competencies

Ellis[14] states that the "caring professions" which includes occupational therapy, should themselves be involved in generating and reviewing professional competence, and that this should be established on a firm scientific basis. However, according to Ellis[14], many professions are ambivalent regarding the scientific approach with which to study competence. The author cites various methods with which to study competence including the initiative approach, empirical approach as well as approaches which tap into the intuitive knowledge which professional possess. This includes critical incident analysis techniques, expert systems approach, the Delphi Technique and constitutive enthography. These techniques would satisfy scientific rigor standards, analyze professional practice and involve the professionals themselves. According to Ellis[14] this is a requirement for quality assurance programmes.

Private practitioners are an important source in identifying professional competencies, with consumers and funders having limited knowledge of occupational therapy[93].

Given the above literature, the researcher made a decision to use the Delphi Technique as a research methodology. Reasons for this are discussed in Section 3.2. Private practitioners would form an essential component of the research participants.

2.5.3 Professional Competence and Context

Competence is demonstrated in a specific context. This context defines the nature of the competencies required by the practitioner in practice. Because practice is dynamic with changes and developments taking place, so too must competence change and grow[23]. Developments in South African laws appear to promote and create opportunities for work practice service delivery delivery[9-10,12,81,83] as discussed in Section 2.4.2. The context appears to be

that of the open labour market, and thus this study has focused on service delivery to workers in the open labour market.

2.5.4 Maintaining and Improving Professional Competence

Competencies are acquired and developed as a result of study, training and experience[86]. Formal learning opportunities such as continuing education experiences promote continuing competence and was found to generally be the most accepted mechanism for continued professional development[25,88] although this does not guarantee competence[25].

Hinojosa and Blount[24] using the work of Thomson et al, identified independent study, academic course work, continuing education, presentations, publications, research, advanced certification, peer review and work experience as being methods of ensuring continuing competence.

As these are mechanisms with which to maintain and improve professional competence, it would be important to identify what methods South African occupational therapists use to improve their professional competence in the area of work practice so that appropriate recommendations may be made at the conclusion of the research.

2.5.5 Factors Affecting Professional Competence

Initial education and training does not ensure continuing competence for new graduates[23]. Practitioners must continuously learn and update their knowledge in an environment of huge growth in readily available information. According to Youngstrom[23], a prerequisite for maintaining competence is constantly reading, listening and seeking new information.

As information changes, so does technology which affects the day to day manner in which practitioners practice, Keeping up to date with these changes also ensures that competence is maintained[23].

Work place factors also have an influence on the competencies required by practitioners. These include physical location of service delivery, types of persons being served as well as policies and procedures such as reimbursement requirements[23]. Legislative provisions are also identified as having an impact in competencies[24].

South Africa through its democratic changes also has experienced a rapid growth in technology, access to information, international cooperation as well as the development of equity guidelines and policies, Defining work competencies in this context has therefore become essential.

2.5.6 Professional Competence and the Curriculum

Training courses for all professionals should be a significant source in providing material for the development of professional competencies according to Ellis[14]. However Higgs and Edwards[97] suggest that although traditionally the purpose of training was focused on the acquisition of professional competencies, the purpose of most curricula currently is to train independent competent professionals. These authors found that professional competence has been expanded to include competencies which enable the professional to work in changing work and social environments.

Because of the researcher's involvement in education and training, the identification of these professional competencies has become more important.

2.6 CONCLUSION

A historical overview of work practice services has been given from an American, British, Australian, Canadian and South African perspective. This section illustrates the long association that the profession has with the delivery of various work practice services. It also indicates an absence of a comprehensive description of work practice services in the literature. It too illustrates that, other than a Canadian study published in 2003[17], professional competencies required in this field of occupational therapy do not appear to be documented.

The acceptance of international and national disability equity legislation appears to have promoted the delivery of work practice services. These laws have promoted the role of occupational therapists in returning the injured and worker who had been ill, back to work, thereby facilitating the employment of people with disabilities in the open labour market. These laws appear to create opportunities for service delivery, and therefore by implication, changes in the professional competencies required by occupational therapists in the field.

It is clear from the literature review that the description and identification of professional competencies is complex. Literature suggests that private practitioners should be involved in identifying professional competencies and that this process should be research-based. The use of the Delphi Technique is suggested. The context for this research is the open labour market, as placement of people with disabilities is one of the outcomes of work practice service delivery. Identifying current methods of maintaining and improving professional competence is an important part of this research and as such forms an important part of the research recommendations.

Having identified professional competencies in the area of work practice service delivery, recommendations could be made for under- and post-graduate student training, as competencies are an important part of curriculum development.

2.7 SUMMARY

In this chapter the history of Occupational Therapy Work Practice and its related legislation has been discussed from an American, British, Australian, Canadian and South African perspective. This includes a description, the importance of work, placement in the open labour market as outcomes of work practice, as well as various work practice services. This is done to gain an understanding of work practice as an integral part of occupational therapy.

The reader has been introduced to the concept of professional competencies and how these could be identified. Methods used to improve professional competencies have been described. The relationship between professional competencies and the curriculum have been discussed.

Chapter 3 will give a literature review of the Delphi Survey Technique as this was the selected research methodology.

CHAPTER 3

OVERVIEW OF THE RESEARCH METHOD

3.1 INTRODUCTION

This chapter discusses the Delphi Survey Technique as the selected research methodology. This is done for two reasons. Firstly, it meets the ethical principles which the researcher undertook to apply in this study. These are discussed in Section 1.7. Secondly, the selected research methodology at the time of undertaking the study was not a method frequently discussed in South African occupational therapy literature.

This chapter gives the reasons for the researcher selecting the Delphi Survey Technique as a research methodology; a description of the technique; different forms thereof, as well as a historical overview. Thereafter the implementation of the technique is discussed in the identification, selection and size of the expert panel members, questionnaire development, use of a pilot study, questionnaire response rates, data analysis as well as reliability and validity of the technique. Finally a critique of the technique is given. Literature is used as the basis of the discussion.

Where applicable, at the end of each section, a discussion is given of how the information is used and applied to this research. This discussion is given in italics.

3.2 INVOLVING OCCUPATIONAL THERAPISTS

As discussed in Section 2.5.2, the caring professions, of which occupational therapy is a part, should be involved in the generation of professional competencies. Seeking their opinion on what professional competencies would be required of occupational therapists was thus essential.

One way of seeking the opinion of occupational therapists would be to study and analyze appropriate literature and publications. However, the paucity of publications as discussed in section 2.3.5 made this not possible.

When there is a lack of relevant published information, consensus methods are suggested whereby the experience of experts is obtained[98-99]. Consensus methods include consensus development conferences, nominal group techniques, brainstorming and the Delphi Survey Technique[98-102].

Recent research publications in the area of professional competence[88-89,93,103], work practice[17] and curriculum development[16], used focus groups, structured interviews and modified nominal group techniques to obtain the opinion of people experienced in the field.

These techniques however, except for the Delphi Survey Technique, could not take into account the opinions of therapists over a wide geographical area without substantial financial resources. In the opinion and experience of the researcher, the meeting of experts face-to-face does not always optimize obtaining the opinion of all those involved as some personalities are more vocal than others, and quieter therapists tend to withdraw or allow themselves to be dominated by other experts, especially if the expert has more tangible recognition in the field. Facilitating anonymous participation is therefore crucial if the opinion of all those identified as experts is to be obtained.

The selected research methodology had to meet the criteria of cost containment due to limited financial resources of the researcher. At the same time, it would be preferable to obtain the views of occupational therapists over a wide geographical area. It also had to protect the anonymity of the research participants in order to allow equitable participation. The Delphi Survey Technique appeared to meet these criteria.

For ease, the researcher refers to the Delphi Survey Technique hereafter as the Delphi Technique.

3.3 SELECTING THE DELPHI TECHNIQUE

Selecting a research methodology is never an easy task as there are many research approaches used in social and physical sciences[14]. The main research approaches as described by Reid in Ellis[14] include scientific, medical, social science and qualitative research, and any one of these could be used to evaluate professional competencies. The challenge according to this author is to select a method which is both acceptable and credible to the profession, but at the same time has scientific grounding and will produce quantitative data. She suggests that the Delphi Technique goes "at least some way in combining the properties of acceptability and respectability".

The Delphi Technique has been used in curriculum development and the evaluation of professional practice in the health care professions for at least 26 years[14]. It appears to have been used extensively in nursing practice for many years. Amongst many studies it has been used in curriculum planning in 1983[104], to develop a professional definition of nursing in 1994[105] and to identify competencies of first line nurse managers in 1993[106].

A review of physiotherapy literature also indicates that the Delphi Technique has been used in research to identify ethical issues in 1996[107], to determine the essential functions of physiotherapy students in 1997[108], to evaluate competence in undergraduate students in 2001[87] and to produce guidelines for patients treated with a Ilizarov Fixator in 2001[98].

A review of related international occupational therapy literature, indicates that the Delphi Technique has been used to determine the role of the occupational therapist in enabling people to make vocational choices following illness or injury in 1997[109], to determine the roles and training needs of occupational therapists in hospice and palliative care[110], to develop guidelines for multi-professional discharge planning in 2003[111] and to determine the best practice for occupational therapy for Parkinson's disease in 2003[112]. It has also been used in occupational therapy education in 1996[113].

South African occupational therapists used the Delphi Technique in 1993 to determine the core characteristics of newly qualified occupational therapists[114] as well as to determine the role of occupational therapists in the insurance industy[13].

Advantages and the value of the Delphi Technique are cited as:

- It gives an opportunity to obtain the opinions of research participants over a wide geographical area without having to meet face-to-face[101,109,115];
- It is a relatively inexpensive research technique[14,111-112,115-117];
- It allows for the participation of more people than can effectively meet face-to-face[14];
- It allows for the participation of people from diverse backgrounds and removes the problems associated with direct communication[14,111];
- It is useful in handling problems which are difficult to study using precise analytical judgements but which benefit from subjective judgements obtained on a collective basis[14];
- It removes the influence of dominant personalities especially those opinions which have been expressed publicly; group pressure is usually not present[14,100,104,109,112,118]. This facilitates an honest opinion of the participants because of the anonymity of the responses;
- It allows research participants time to consider their opinion and not be pressurized in making decisions during a face-to-face meeting[14,115].

The Delphi Technique thus appeared to meet criteria set by the researcher, and a decision was made to use the technique in this research. Reviewing the literature, however did not give clear guidelines on the process to be followed. Hasson, Keeney and McKenna[99] completed an extensive review of Delphi literature and also concluded that, in comparison, to other research techniques, readily available guidelines were not available.

3.4 HISTORICAL DEVELOPMENT OF THE DELPHI TECHNIQUE

Everett discussing the work of Charles-Picard (1969) and Bulfinch (1939) states that the origins of the name Delphi can be traced back to Greek mythology[118]. Apollo, the God of Light, conquered the Python monster associated with its forces of darkness and obscurity, at the temple complex of Delphi. Apollo took over this sanctuary where the resident priestess, Pythia, later known as the Oracle of Delphi, was able to make predictions about the future[118].

The use of the word Delphi was first used in defense research conducted by the United States of America in the early 1950s[118]. Project Delphi was the name given to an American Air Force sponsored Rand Corporation Study where the purpose of the study was to use the opinion of experts to develop an optimal target system, and to predict the effects and policy implications of Atomic bombing[117-119].

Although originally developed as a forecasting research tool, the Delphi Technique has developed into a generally accepted consensus method of obtaining expert opinion[106]. Some of the earlier justifications for the use of the Delphi Technique such as the unavailability of accurate information and the expenses involved incurring or acquiring this information, are still currently valid[117]. Delphi applications therefore started in a non-profit organization, but were quickly used in government, industry, academics and in health care[117].

3.5 THE DELPHI TECHNIQUE AS RESEARCH DESIGN

Classifying the Delphi Technique as a particular research design is not easy. Few research authors refer to the Delphi Technique in research literature consulted by the researcher. In research publications reviewed by the researcher, few authors classify the Delphi Technique according to its research design.

Payton[120] classifies research designs into three main types with sub-classes in each. These research designs are descriptive, correlational and predictive research. Seaman[121] uses a similar classification with designs described as descriptive or exploratory, historical, experimental or correlational and survey designs. This author further describes research designs as either being qualitative or quantitative. Qualitative designs are used by researchers to observe, discover, describe, compare and analyze the attributes and themes. Quantitative research designs are concerned with measurement according to Seaman[121].

Polit and Hungler[26] describe research designs from a different perspective stating that designs are either quantitative and qualitative with an integration of both. Quantitative designs include that of experimental, quasi-experimental and non-experimental; time dimension studies, as well as surveys and meta-analysis. Qualitative research designs include those of ethnography, phenomenology and grounded theory[26].

Because the aim of this research is to identify professional competencies as given by occupational therapists in the field of work practice using the Delphi Technique, this research is of a descriptive nature. The Delphi Technique as used by the researcher has both qualitative and quantitative components as will be seen in Chapter 4. The first questionnaire and its data analysis is qualitative, with the second and third questionnaires and the analysis thereof being quantitative. This is consistent with the work of Reid in Ellis[14] and Everett[118].

3.6 DESCRIPTION AND CHARACTERISTICS OF THE DELPHI TECHNIQUE

The Delphi Technique is described by Linestone and Turoff[117] as a "method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem". It is a technique which makes use of group facilitation in order to obtain consensus on the opinions of experts through a series of structured questionnaires which are called rounds[99]. These experts are also referred to as panelists[98-99,101,104,108-111,115-116,119,122] or respondents[105,113-114,118,123].

Participant is the term used to refer to the experts in this research study who formed members of the panel. It is also the term used by Hasson, Keeney and McKenna[99] who wrote research guidelines for the Delphi Technique in 2000.

Reid[14] reports that Strauss and Zeigler identified 6 characteristics common to all Delphi Techniques and these include, as supported by other authors, the following:

- All Delphi Techniques make use of panels of experts or informed individuals[99,104,111,116,119];
- All Delphi Techniques are conducted in writing using sequential questionnaires and summarized information. These questionnaires are usually posted which facilitates participation over a wide geographical area[98,105];
- All Delphi Techniques attempt to obtain consensus of opinion and to identify divergence in opinion[99,116];
- All Delphi Techniques guarantee anonymity of the panel members and their statements[104,111,116,119,122];
- All Delphi Techniques use iteration and controlled feedback. All participants are kept informed of the collective response of the group, and have the opportunity to change their original view if they wish. In essence, this makes the Delphi Technique a democratic process[99,104,111,119,122];

- All Delphi Techniques are conducted in a number of rounds. Between each round, a summary of the results are provided to the panel members for their evaluation. The number of rounds differ vary from 2 to 5[122], with most Delphi Techniques consisting of 3 rounds[13,87,107-111,114]. The use of two rounds to obtain consensus was reported by Procter and Hunt[105].

Coodman[119] and Couper[122] add that the statistical group response is another characteristic of the Delphi Technique. This is part of the information which is fed back to the participants after each questionnaire. This is frequently achieved by ranking items (or opinions) according to their median and percentage scores as determined by the group response on a Likert type of scale.

The characteristics of the Delphi Technique as implemented in this research study would include the following:

- *The participants (experts/panel members) would be regarded as experienced and informed occupational therapists,*
- *Sequential written questionnaires would be used,*
- *Consensus of opinion would be obtained,*
- *Participants would complete questionnaires anonymously of each other, but would be known to the researcher only, for administrative purposes. Quasi- anonymity would be guaranteed in the research process,*
- *Iteration and controlled feedback would be done,*
- *Three rounds of questionnaires would be completed.*

3.7 DIFFERENT TYPES OF THE DELPHI TECHNIQUE

Various types of Delphi Techniques have been cited in the literature. Crisp, Pelletier, Duffield, Adams and Nagby[124] describe three different types. By using the *Classic Delphi Technique* a group of experts anonymously come to consensus on a topic using iteration with controlled feedback. The *Policy Delphi Technique* is a forum for ideas in order to obtain a clear understanding

- not consensus. The third type described by the authors[124] is the *Decision Delphi Technique* which is a forum for decisions. The panel is not anonymous to one other as they are made up of decision makers, but iteration and controlled feedback are used.

The Classic Delphi Technique would be used in this research study.

3.8 IDENTIFICATION AND SELECTION OF THE RESEARCH PARTICIPANTS FOR THE EXPERT PANEL

The use of experts as members of the panel (sample) is one of the key characteristics of the Delphi Technique. Authors however, do not frequently give information on which criteria were used to determine "experts". The limited suggestions given include involving individuals who: are informed in a specific field of application[116,119], have the knowledge[111,115], are experienced[98,111], are willing and who have the time to engage in the lengthy Delphi process[109,115,116], and who are motivated[111]. The use of both practitioners and educators when designing curriculum and practice guidelines[16,113] are recommended. Bijl's[125] selection criteria for the panel included: diversity of experience, diversity of expertise and diversity of interests.

Selection of experts should not be random[110]. Researchers suggest snow-ball techniques[13,107], purposive sampling[99]. In a study conducted by Stokes[109] where participants were selected by the researcher, researcher bias was limited by developing criteria for selection.

Having identified potential experts, it is important to approach them through personal contact in order to obtain their consent to participate in the study[99] Although this personal contact is time consuming, it is necessary as this type of research is very lengthy[99].

In order to identify and select participants, criteria for the expert panel selection were developed by the researcher. These criteria are discussed in section 4.5.2. The development of eligibility criteria for participant selection reduced the possibility of researcher bias in the identification of potential participants. The panel included occupational therapists from different practice settings and occupational therapy in an attempt to achieve a representative panel.

For the purpose of this research, and based on the literature review, it was decided by the researcher to use purposive sampling. This is further discussed in section 4.5.3.

3.9 SIZE OF PANEL (SAMPLE)

From the literature, there does not appear to be definitive guidelines on the optimal size of the Delphi panel. Linestone and Turoff[117] state, without giving any reason, that a panel can vary from 10 to 50 people. Reviewed research include the following panel sizes: 111-122[118], 45[114], 41[104], 35[109], 20[13], 10[111], 12[98] and 6[107]. The larger the sample, the greater the generation of data and therefore the greater the data which must be analyzed, therefore posing potential data-handling problems[99].

For the purpose of this research, the researcher selected a panel size of 35 participants. This was determined by time and financial constraints. It was also the same size as the panel selected by Stokes[109] who conducted research in the area of work practice as did the researcher. This was also the average between the two South African studies of 20[13] and 45[114].

3.10 DEVELOPMENT OF THE QUESTIONNAIRES

The Delphi Technique makes use of a successive number of questionnaires each building on the results of the previous one[98-99,104,115]. Traditionally, the first questionnaire consists of an open set of questions[99]. This can however lead to a large amount of data, making data management and handling difficult. Some researchers have therefore limited this by providing existing data developed from various sources such as opinions obtained during a workshop, literature reviews, using established guidelines and interviews[98,111-113]. This could however bias the responses or limit the options available to the participants[99].

Qualitative first round data are usually grouped by the researchers in order to provide universal descriptions in the subsequent questionnaires. These groupings should be verified to ensure correct representation[99]. It is recommended by these authors that when using the Classic Delphi Technique, no new items be added and that only minor editing of participants' responses be done when listing the items for the Round Two Questionnaire. Infrequently occurring items should not be left out as this goes against the tenets of the Delphi Technique[99].

Typically the second and third questionnaires require participants to rate the responses generated from the first questionnaire using a scale. Participants are usually given the opportunity to change their responses[98,107-108,110-112].

In this research, it was decided to follow the traditional approach in the development of the first round Delphi Technique questionnaire and use broad open-ended questions based on a theoretical framework. Reasons for this included a lack of appropriate literature as well as financial constraints in the use of a workshop or interviews with experts in the field of work practice. The researcher was also concerned about the introduction of researcher bias as well as limiting the responses of the participants.

3.11 PILOT STUDY

Questionnaires should be piloted[99,109-111,122]. It is not however clear from the research, whether all the questionnaires are piloted or only the first one. The size of these pilot groups are usually small, with participant numbers identified between 2 and 4[110-111].

The first questionnaire would be piloted during this research using a group of 5 participants. Subsequent questionnaires would be scrutinized using a colleague in the field of work practice who was also a member of the pilot group.

3.12 RESPONSE RATES OF THE QUESTIONNAIRES

Response rates varied in the different studies and are summarized in Table 2.

Table 2 : Response Rates of Delphi Questionnaires

Study	Panel size	ROUND 1		ROUND 2		ROUND 3	
		No of Q returned	% response	No of Q returned	% response	No of Q returned	% response
International research							
Ingram[108]	129	58	45%	58	100%	52	90%
Stokes[109]	35	14	40%	13	93%	13	100%
Dawson & Barker[110]	70	47	67%	41	87%	35	75%
Procter & Hunt[105]	196	113	57%	100	88%	Not necessary	
Deane, Ellis-Hill, Dekker, Davies, Clarke[112]	242	168	69%	153	87%	150	62%
Atwal & Caldwell[111]	10	10	100%	Not given	90%	Not given	90%

Study	Panel size	ROUND 1		ROUND 2		ROUND 3	
		No of Q returned	% response	No of Q returned	% response	No of Q returned	% response
South African research							
Shipham & van Velze[114]	45	Not given	Not given	Not given	87%	Not given	76%
Byrne[13]	20	Not given	Not given	Not given	Not given	13	65%

Sumsion[115] suggests that a response rate of 70% should be achieved in order to maintain the rigour of the technique and that non-respondents should be pursued. *This would be the response rate that the researcher would want to achieve in this research.*

3.13 DATA ANALYSIS

Analysis of data produced by the different questionnaires involves the management and analysis of both qualitative and quantitative data[99]. Qualitative data may be analyzed using content analysis techniques[99,110,121,123] . Rounds two and three typically use descriptive and inferential statistics[99,104,110,122].

During the analysis of data, the level of consensus should be taken into account although a universally accepted consensus level is not defined or accepted[99], nor is consensus of opinion defined[106]. Consensus can be identified using the panel mean and standard deviation[98,102]. Consensus should, however, be described as a numerical value[99]. Some consensus levels have been identified as high as 80%[98,112] and as low as 20% in a South African study[13].

In this research, use would be made of both qualitative and quantitative data analysis. These are described in chapter 5 as applicable to each questionnaire.

3.14 RELIABILITY AND VALIDITY ASPECTS

When conducting research, reliability and validity issues must be considered, yet these are issues not frequently addressed in the reviewed research. There is not much evidence of the reliability of the Delphi Technique, and so in order to overcome this, the use of Lincoln and Guba's Model of Trustworthiness of Qualitative Research (1981) should be applied [99]. This model can be applied successfully in both qualitative and quantitative research[26-27,126].

Four criteria of trustworthiness are identified in this model: (1) truth value, (2) applicability, (3) consistency and (4) neutrality[26-27,126]. These can be summarized in Table 3 as adapted from Krefting[126].

Table 3 : Lincoln and Guba's Model of Trustworthiness

Criterion	Description	Qualitative approach	Quantitative approach
Truth value	Establishes the researcher's confidence in the truth of the findings based on the research design, informants and context	Credibility	Internal validity
Applicability	The degree to which the findings can be applied to other contexts, settings and groups	Transferability	External validity
Consistency	Deals with the consistency of findings should the study be replicated with the same subjects or in a similar context and deals with reliability of data	Dependability	Reliability
Neutrality	Deals with the freedom of bias in the research process and results	Confirmability	Objectivity

In this research the researcher would attempt to use techniques representing all four of the criteria identified in Lincoln and Guba's Model of Trustworthiness in order to ensure that the data and findings were trustworthy. These are discussed in Section 4.7.

3.15 CRITIQUE OF THE DELPHI TECHNIQUE

There are difficulties and disadvantages associated with the use of of the Delphi Technique and these include the following:

- Large and difficult to manage data which may be generated[99,105];
- Consensus can be forced[98];
- Panel members cannot discuss their opinions[98,115];
- The researcher does not understand the rationale behind the responses of the experts as there is no opportunity to discuss their opinions[98,115];
- Anonymity of the panel members could lead to a lack of accountability[116,119];
- A poor response rate could lead to poor consensus[115-116];
- There is difficulty identifying experts[115-116,119];
- There is a potential for researcher bias[99,115,118];
- It is a lengthy and time consuming process[100,111,115].

The researcher would attempt to overcome these disadvantages by:

- *Limiting the size of the panel;*
- *Ensuring a high response rate by means of personal contact with research participanta;*
- *Identifying experts using predefined criteria;*
- *Limiting researcher bias by implementing Lincoln and Guba's Model of Trustworthiness.*

3.16 CONCLUSION

No longer can Occupational Therapy educators rely solely on their own experience and skills to determine professional competencies. The use of the Delphi Survey Technique would involve occupational therapists regarded as experts in work practice in generating these professional competencies.

In the researcher's opinion, the advantages of using the Delphi Technique outweigh its disadvantages. A clearly documented research method is essential in order to ensure that the research process could be replicated.

3.17 SUMMARY

In this chapter, a review of the literature relating to the use of the Delphi Survey Technique was given with an indication of how the researcher would apply this research method. This chapter was considered necessary by the researcher as it allowed for the justification of the research methodology which was followed, as well as meeting ethical considerations set in Section 1.7.

The following chapter gives a description of the research process followed by the researcher.

CHAPTER 4
RESEARCH DESIGN AND METHOD

4.1 INTRODUCTION

This chapter provides an in-depth discussion of the research process followed by the researcher. Although background for the research was discussed in Chapter 1, the research purpose and objectives will be included in this chapter for purposes of clarity. The rationale for the use of the Delphi Survey Technique and a description thereof has already been given in Chapter 3, and the reader is referred back to this.

4.2 RESEARCH AIM AND RESEARCH OBJECTIVES

The aim of the research was to identify professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market.

The research objectives were to:

vi) Identify professional competencies required by occupational therapists to deliver work practice services;
vii) Identify the methods occupational therapists in work practice use to improve their professional competencies;
viii) Compile a profile of the work practice services currently delivered by occupational therapists in South Africa;
ix) Determine possible reasons for the non-delivery of work practice services in South Africa;
x) Recommend on which level (under- or post-graduate) the identified professional competencies should be developed.

4.3 ETHICAL CLEARANCE AND IMPLEMENTATION

Ethical clearance to conduct the research was obtained from the Ethics Committee, Faculty if Medicine, University of Pretoria and Pretoria Academic Hospital, certificate number S136/99.

An informed Consent Form (Annexure A) was drawn up using the ethical considerations discussed in detail in Section 1.7. Copies of the signed forms were posted to the research participants for their record-keeping.

Quasi-anonymity was implemented[99]. Research participants and their responses remained anonymous to one another but were known to the researcher through the allocation of a tracking number. The researcher kept a record of the tracking numbers and participants' names in order to follow up non-respondents.

All questionnaires as well as other data capture documents were identified by a tracking number[108] ensuring that, during data analysis by both the researcher and the statistician, the participant's identity remained anonymous. Only the covering letter was personally addressed to the participant. This was done to maintain a meaningful working relationship with the participants in order to encourage continued participation, thereby achieving a high response rate and minimizing response bias. Atwal and Caldwell[111] advocated that the researcher maintain this type of relationship with the research participants as the success of the research relies on a group response.

The researcher kept all informed consent forms confidentially.

4.4 RESEARCH DESIGN

The design followed in this research is descriptive research with qualitative and quantitative aspects as discussed in Section 3.5. The Round One Questionnaire was predominantly qualitative in nature, with subsequent questionnaires being more quantitative in nature.

4.5 RESEARCH SAMPLE (EXPERT PANEL)

4.5.1 Identification of the Sample Population

The sample population, consisting of occupational therapists working in the field of work practice was difficult to identify as there is no comprehensive list of practitioners. The researcher had to rely on her knowledge of the field in order to identify the sample population.

The sample population was compiled by using names of occupational therapists obtained from a variety of mailing and workshop attendance lists. Professional competencies are seen to be developed through participation in Continuing Professional Development activities[25,93] and hence the choice of attendance lists of workshops presented in the area of work practice.

Names were obtained from the following lists:

- Private practitioner list from the Occupational Therapy Association of South Africa (OTASA). Practitioners had to be working with adults in the areas of vocational rehabilitation and medico legal practice;
- Mailing list from the Occupational Therapists in Life Assurance (OTLA). The assumption was that the practitioners were working with adults and therefore in work practice because of the nature of the insurance industry;
- Attendance list from a workshop presented by the Gauteng Vocational Rehabilitation Work Group in July 2003 titled “Current Trends in Vocational

Rehabilitation". This list contained the names of occupational therapists predominantly working for the Department of Health;

- Attendance list from a workshop presented by the Free State Branch of OTASA. This workshop was presented in August 2003 and covered work related aspects. The list contained the names of occupational therapists working in a diversity of settings;
- Attendance list from a workshop presented by the Occupational Therapy Department of the University of Pretoria in April 2002 and was one of the first workshops presented to accumulate Continuing Professional Development points. The workshop dealt with "Functional Capacity Evaluation: American and South African Perspectives" A physiotherapist from the United States of American was one of the various team member speakers. Because of this, the workshop was well attended by occupational therapists from many different practice settings;
- Attendance list of a workshop jointly presented by the Occupational Therapy Department of the University of Pretoria and the Institute for Occupational Therapists in Private Practice (INSTOPP). The focus of this workshop was on the functional evaluation of the neck and upper limb, and was presented in September 2003;
- Three workshops presented by OTLA:
    - Occupational therapists – a partnership with the insurance industry presented in May 2002;
    - Ethics in client assessment, presented in March 2003;
    - Chronic pain, presented in May 2003;
- Address lists of those students who had successfully completed the Post-Graduate Diploma in Vocational Rehabilitation in 1997, 1998, 2000 and 2002;
- Reviewing the Occupational Therapy Journal of South Africa to identify the names of occupational therapists who had published in the area of work practice after 1995, when the relevant South African Disability Equity legislation was enacted. OTLA publications were also reviewed with the same purpose;

- The Occupational Therapy Departments of South African universities were telephonically contacted to obtain the names of lecturers whose key responsibility was teaching in the area of work practice.

A list of 256 occupational therapists was obtained through the above process. Names of the occupational therapists were listed alphabetically by surname on a two dimensional table. The places of employment were also indicated on these lists for the majority of these occupational therapists. A panel of "expert" occupational therapists was selected from this list.

4.5.2 Eligibility Criteria for Panel Selection

With reference to the discussion in Section 3.8, the following considerations were taken into account in developing eligibility criteria for 35 panel member selection:

- The panel should be as diverse as possible[124];
- Different practice settings should be represented in order to obtain diversity of expertise and interests[109];
- Academic occupational therapists (lecturers) should be included together with clinical occupational therapists working in both private practices and in hospitals[16,113];
- The panel would only be made up of occupational therapists[93];
- Panel members should have knowledge and experience in work practice[98,111,115];
- Panel members should be motivated to participate in this lengthy research process[111].

4.5.3 Sampling Rationale

Non-probability sampling was implemented due to the qualitative aspects of this study[26]. Two different methods of non-probability sampling were used:

i) **Quota sampling** where the researcher used her knowledge on the population in order to build representativeness into the sample[26]. The different strata and the reasons for choice are listed in Table 4.

Table 4 : Quota Sampling Criteria

Strata	No of OTs	Reasons	%
Academic OTs i.e. those OTs whose key lecturing responsibilities included teaching in the area of work practice.	7	All the training universities were included except for the University of Pretoria as this was the key responsibility of the researcher and would therefore contribute towards researcher bias.	20%
Private practitioners i.e. those OTs working in private practice with the focus on work practice.	7	Practitioners are seen to be a key source of identifying professional competencies[16-17,93].	20%
OTs with a Post-Graduate Diploma in Vocational Rehabilitation.	7	One way of improving knowledge and skills is by obtaining further qualifications in the field of work practice. Formal learning is seen as promoting comptence[88]. This is the only South African post-graduate qualification with focus on the field of work practice.	20%
OTs working for insurance companies.	3	This area of work has increasingly become a work placement opportunity for OTs. Because of the nature of the insurance industry, OTs would be working with clients who have work related problems.	8,5%

Strata	No of OTs	Reasons	%
OTs working for the Department of Health in hospital environments.	3	This area of work practice remains an important opportunity for employment for new graduates. The patients that they manage differ from those on other settings.	8,5%
School OTs i.e. those OTs working full-time for a public or private school.	2	OTs in the school environment play an important role in preparing learners for the work environment. There are however a limited number of occupational therapists who actively work in this type of environment.	6%
OTs with a track record in the field of work practice.	2	These OTs must have a record of publications either in the South African Journal of Occupational Therapy or other publication the focus of which is either occupational therapy or work practice. This is one way in which OTs can be recognized as experts as their articles are subjected to peer review.	6%
OTs actively implementing legislation.	2	These OTs must be actively assisting with the implementation of South African Disability Equity legislation by means of presenting workshops, consulting, client contact and by other means. Their names were obtained from the workshop programmes.	6%
OTs involved in training of people with disabilities (PWDs) for the open labour market.	1	These OTs would be assisting PWDs to prepare for the open labour market and those working with potential workers. The OT should be working for a training institution. Very few OTs currently work in this area of work practice.	2,5%
OTs working in the supported model of employment.	1	These OTs would need to be able to distinguish between their clients being able to work in the open labour market or in supported employment and would thus have knowledge and skills of both markets. Very few OTs currently work in this area of work practice.	2,5%

The reasons for the weighting of the strata are as follows:

- The larger portion of the panel i.e. 60% should be made up of educators, private practitioners and occupational therapists who have a post-graduate qualification in work practice, as these, according to the literature are by implication, "expert" occupational therapists. These strata should be equally represented;
- The smaller portion of the sample i.e. 40%, should represent diversity in practice. The number of occupational therapists working in the insurance industry and the Department of Health is larger than the other strata. The number represented in the training and supported model strata are minimal, as very few occupational therapists work in this area.

ii) **Purposive sampling** as this is regarded as necessary when the researcher wishes to identify and select a sample of experts and is frequently used in qualitative research[26]. The researcher made use of maximum variation sampling as the purposive sampling strategy. This was done in order to obtain a wide range of variation in the sample[26,93]. The same sampling criteria were used as for the quota sampling with the additional criteria that the occupational therapists had to demonstrate a commitment to improving their knowledge and skill in the area of work practice. This was done by identifying occupational therapists who had attended workshops in the area of work practice.

The researcher added another criterion in which she identified occupational therapists in work practice, but who did not meet the criteria identified above. These criteria were seen to reflect characteristics of professional excellence[96]. Out of the list of 256 occupational therapists, this criterion was applied to 20 (8%) occupational therapists. Reasons were recorded in an effort to minimize researcher bias. This criterion did not imply automatic inclusion into the study. Reasons for applying this included the following:

- A master's qualification in occupational therapy with focus on an aspect of work practice;
- Legal qualifications as occupational therapists are seen to be essential in promoting the rights of people with disabilities within the new Disability Equity Framework[9];
- Developed unique occupational therapy programmes including HIV and AIDS, supported employment and absentee management;
- Developed unique assessment batteries for use in either the government sector or for commercial use;
- Leadership positions in OTLA, OTASA or INSTOPP. These occupational therapists are usually acknowledged as leaders by their peers;
- Worked in specialized work practice occupational therapy units. This implied that the focus of their service delivery was work practice.

The above information was put into a two dimensional table, an extract of which is given in Table 5.

Table 5 : Eligibility Criteria for Panel Members

Eligibility criteria																	
	Quota sampling									Purposive sampling							
Names of OTs	Track record	Supported employment	Training of PWDs	Implementing legislation	School environment	Private practice	Dept of Health	Educators	Post-graduate Dip VR	April 2002 w/s	September 2003 w/s	May 2002 w/s	May 2003 w/s	March 2003 w/s	August 2003 w//s	July 2003 w/s	Researcher identification
	●					●			●	●			●	●			●
				●		●			●								
					●					●	●				●		

Abbreviations used: PWDs = people with disabilities, Dip = diploma, VR = Vocational Rehabilitation, w/s = workshop

One point was allocated for each eligibility criterion which the occupational therapist met. None of the groupings were mutually exclusive and occupational therapists could theoretically meet all the criteria.

Quota sampling was first applied. Occupational therapists meeting the largest number of criteria were identified in each strata, starting with the strata with the least number of occupational therapists, as these strata had less occupational therapists from which to select. All the educators (occupational therapy lecturers) were selected (except for the researcher) in an effort to include all the training institutions. Thereafter purposive sampling was applied in each quota strata.

4.5.4 Contacting Potential Panel Members

The researcher made telephonic contact with all 35 identified potential panel members. The purpose and nature of the research process was explained to them, as well as the reasons for their selection into the study. The lengthy process was emphasized. Time was allowed for the potential panel member to ask questions. Except for two potential panel members, all agreed to participate and gave postal addresses to which Informed Consent Forms and the Round One Questionnaire could be posted. The two potential members could not participate as one was going overseas and would be working in another area of practice, and the other one would be on maternity leave and was concerned about her time constraints. Both participants were replaced by other occupational therapists from the list meeting the eligibility criteria. These occupational therapists, when telephonically contacted, agreed to participate in the research process.

4.6 PILOT STUDY

4.6.1 Purpose of the Pilot Study

A pilot study was conducted prior to the commencement of the Delphi Rounds. The purpose of the pilot study was to test the first round forms in order to determine any potential problem areas and implement changes where appropriate. In addition, the feasibility and practicality of qualitative data analysis was determined.

4.6.2. Selection of Pilot Study Participants

A sample of convenience was drawn of five occupational therapists who could give significant feedback to the researcher, both in a written and verbal format. They were drawn from the sample population list. Although the researcher did not plan to integrate the results of the pilot study into the results of the main study, the same eligibility criteria were considered as had been for the panel so as to reflect the diversity of the pilot study[27]. The occupational therapists selected for the pilot study included occupational therapists who:

- Had a Post-Graduate Diploma in Vocational Rehabilitation as well as a Master's degree in Occupational Therapy. She had extensive clinical hospital based work practice experience and also lectured;
- Worked in private practice and had extensive clinical work practice and institution-based experience;
- Worked in private practice and was a registered post-graduate student. Although she had limited clinical experience, she was an occupational therapist from a different university who had demonstrated an interest and commitment to work practice through her under-graduate studies;
- Worked in industry with patients who had work related problems;
- Did not work in work practice, but had extensive post-graduate research experience within the academic environment.

4.6.3 Procedure

All potential pilot study members were telephonically contacted to obtain their permission to participate in the study. The process to be followed, as well their valuable contribution was explained. All agreed to participate in the study.

The required documentation was hand delivered to the pilot study members at a time and place convenient to them. A date (within two weeks) was mutually agreed to for the collection of the documentation. They were required to sign an Informed Consent Form (Pilot Study) for participation in the study (Annexure B). A Pilot Study Feedback Form (Annexure C) was also explained to the pilot study members.

Pilot study members were requested to read, complete (where practical) as well as give written feedback on the following documents which would be sent to the research participants.

- Covering letter;
- Informed Consent Form. Although this was accepted by the Ethics Committee, the researcher wanted to ensure that it was clear and easy to understand;
- Round One Questionnaire;
- Identification and Contact Information Form;
- Biographical Information: Section 1 Form (later changed to Biographical Form);
- Biographical Information: Section 2 Form (later changed to Work Practice Survey);
- Definition of Terms;
- Round One Questionnaire.

The documents were personally collected by the researcher. A short interview with the pilot study members was held to confirm and explore their feedback. Feedback was analyzed by collating the comments from all the pilot study members. All feedback was considered by the researcher and changes were

made where appropriate. Please see Annexure D for this feedback and subsequent actions taken by the researcher.

4.7 TRUSTWORTHINES OF DATA

As discussed in Section 3.14, strategies were put in place by the researcher in order to ensure research rigour. This was particularly necessary because of the qualitative nature of the questionnaires. Lincoln and Guba's Model of Trustworthiness (1981) as described by Krefting[126] and Polit and Hungler[26] was used.

4.7.1 Credibility of Data

Confidence in the truth of the data was established by implementing the following strategies:

i) **Prolonged engagement**: the Delphi Technique itself requires prolonged engagement of the research participants with the opportunity for the participants to change their opinions in order to ensure the truth of data collected during the sequential questionnaires;

ii) **Triangulation**: data source triangulation was used where multiple sources were used to obtain data[26]. The establishment of an expert panel of occupational therapists representing diversity of practice ensured that various sources were used to obtain data;

iii) **Peer examination**: after the completion of each round, and before the questionnaire for the following round was finalized, an interview was held with the Head of the Post-Graduate and Research Committee of the Occupational Therapy at the University of Pretoria. This person also had post-graduate qualifications in work practice as well as appropriate clinical experience. This was done to explore and challenge different aspects of the research process[26];

iv) **Member checking**: this was achieved by providing feedback to the research participants regarding the research progress and research results in the covering letters. Participants also had opportunities to add comments and other feedback on the questionnaires;

v) **Searching for disconfirming evidence**: As described by Polit and Hungler[26], this is achieved by purposive sampling techniques and is facilitated by prolonged engagement as well as peer debriefing, both of which were implemented by the researcher. The research consultant reviewed all data processing and analysis before the commencement of the next step;

vi) **Credibility of the researcher**: Miles and Huberman in Krefting[126], identified four characteristics which are necessary to establish the credibility of the researcher:

a) The degree of familiarity with the phenomenon under study;
b) Strong interest in conceptual or theoretical knowledge and the ability to conceptualize qualitative data;
c) The ability to take a multi disciplinary approach;
d) Good investigative skills.

In order to establish the credibility of the researcher, her curriculum vitae was presented to the Post-Graduate and Research Committee of the Occupational Therapy Department of the University of Pretoria for consideration and approval. This was obtained.

4.7.2 Transferability of Data

Transferability or the ability to generalize data from this research was achieved by implementing the sampling strategy discussed in Section 4.5.3. This ensured that the panel was as representative as possible, therefore allowing for the generalization of results to occupational therapists in the field of work practice.

4.7.3 Dependability of Data

The extent to which the data could be tracked was achieved through the following strategies:

i) **Dependability audit**: after each process of data analysis, a dependability audit was conducted by a research consultant from the Occupational Therapy Department of the University of Pretoria, who was not directly involved in the research. The researcher kept a description of all processes which she followed, and the research consultant was then able to confirm the decisions made by the researcher through this audit. After each audit, a meeting was held to ensure that the research process was adequately documented,

ii) **Peer examination**: as already discussed in section 4.7.1.

4.7.4 Confirmability of Data

The neutrality or confirmability of the data was achieved by using the following strategies:

i) **Confirmability audit**: this was achieved in the same manner as for the dependability audit. The research consultant was able to track all decisions made by the researcher by following her descriptions, by understanding the coding system which consisted of various colours, as well as keeping the participants' tracking number linked to their responses. The following classes of records were kept and used for the audit trail:

- All raw data such as completed questionnaires;
- Data reduction and analysis products;
- Process notes: notes were kept by the researcher of the process which she followed;
- Instrument development information such as results from the pilot study;

- Data reconstruction products: all working documents were kept so that the development of each one could be tracked.

ii) **Data source triangulation**: as already discussed in section 4.7.1.

4.8 ROUND ONE QUESTIONNAIRE

4.8.1 Development of Round One Questionnaire

The first questionnaire consisted of open-ended questions requesting the research participants to identify professional competencies required for each of the phases of vocational rehabilitation[52], a generally accepted framework for delivery of work practice services in South Africa. These phases consist of:

- Evaluation/assessment of workers;
- Vocational guidance;
- Vocational preparation – specifically treatment/intervention;
- Vocational preparation – specifically training;
- Placement of workers;
- Follow up of workers.

Although vocational preparation is seen as one phase, it was separated by the researcher as it was anticipated that the knowledge, skills and values required for the delivery of services might differ.

The last page required the participants to identify professional competencies which did not fit into any of the vocational rehabilitation phases.

Knowledge, skills and professional values had to be listed separately. One page per phase appeared sufficient from the pilot study and this space was used as an indication of the amount/length of responses required. A pre-existing list was not used as this might have introduced researcher bias by prompting participants to include professional competencies which the researcher deemed important.

4.8.2 Round One Covering Letter

The Round One Covering Letter was developed and dealt with the following aspects:

- Informed Consent process;
- The value and contribution which the research participant could make as a result of being purposively selected for the research;
- Researcher's contact details;
- Voluntary participation.

4.8.3 Procedure

The following steps were followed:

- A Definition of Terms handout was developed by the researcher based on the literature review and the concepts discussed in Section 1.6. This was piloted as discussed in Section 4.6;
- The Round One Questionnaire was developed by the researcher and also piloted as discussed in Section 4.6;
- Identification and Contact Information Form was developed by the researcher in order to obtain contact and other relevant details from the participants. This was also piloted as discussed in Section 4.6;
- A Biographical Form was also developed by the researcher in order to obtain a profile of the research participants which would contribute towards the trustworthiness of data. This was also piloted as discussed in Section 4.6;
- These documents, together with a covering letter, were sent by post to the research participants on 30 July 2004 with a return date of 31 August 2004. Included in the envelope were the following:
    - Informed Consent Form (Annexure A);
    - Round One Covering Letter (Annexure E);
    - Identification and Contact Information Form (Annexure F);

- Biographical Form (Annexure G);
- Definition of Terms (Annexure H);
- Round One Questionnaire which included instructions for completion (Annexure I);
- A self-addressed franked envelope in which the questionnaire was to be returned to the researcher;

- Research participants were telephonically contacted to inform them that the documents had been posted, and should these not arrive, they should contact the researcher;
- Two weeks after the return date, participants whose information the researcher had not received were contacted to determine the progress of their response.

4.9 ROUND TWO QUESTIONNAIRE

4.9.1 Purpose of the Round Two Questionnaire

The purpose of this questionnaire was to:

- Determine from research participants to what extent they agreed or disagreed with the items generated from the first round questionnaire on a Likert Scale;
- To allow research participants an opportunity to add any comments they felt necessary;
- Identify which term research participants preferred to use in the area of work practice. These terms were “work preparation”, “vocational rehabilitation” and “work practice”;
- To obtain feedback on the categorization used by the researcher as a method of analyzing the data, as well as to obtain any suggestions regarding this categorization;
- To obtain feedback on the length and time required to complete the first questionnaire.

4.9.2 Development of Round Two Questionnaire

Data from the Round One Questionnaire was analyzed using Content Analysis (this will be discussed in Section 5.5). Due to the large volume of data generated from the first round, data analysis was a lengthy and time consuming process, taking longer than anticipated by the researcher.

The second questionnaire was developed using the responses from the first questionnaire. The nature of the questionnaire became more quantitative requiring the research participants to indicate to what extent they agreed or disagreed with the items (statements) generated from the first questionnaire using a Likert Scale. The Likert Scale used was as follows:

SA	-	Strongly agree
A	-	Agree
?	-	Uncertain
D	-	Disagree
SD	-	Strongly disagree

The Vocational Rehabilitation phases used in the first questionnaire were used as the main headings for the second questionnaire with the following new headings which had emerged as a result of the qualitative analysis:

- Other: this contained items which did not fit under any of the other headings;
- Legislation relating to the employment of people with disabilities,
- Employment settings referring to the types of employment settings for people with disabilities;
- General management (administration and financial);
- Embedded knowledge, skills and values: (aspects which related to occupational therapy and not specifically to the area of work practice).

Knowledge, skill and professional value items were identified for each heading and randomly listed as they emerged from the categorization. Knowledge items were listed as "K" with a number eg K1, K2, K3 etc. Skill items were listed as "S" in the same manner as were professional values as "V". After each section, a space was left for the participants to add items or give other suggestions regarding the questionnaire.

In order to obtain feedback as to the categorization used by the researcher, questions were posed to the research participant regarding this.

Research participants were also asked to indicate which term they preferred to use to cover all the services dealt with in the questionnaire. These terms were "work practice", "vocational rehabilitation" or "work preparation".

4.9.3 Round Two Covering Letter

The Round Two Covering Letter was developed and dealt with the following aspects:

- Motivating the research participants to continue participating in the research process;
- Giving the research participants feedback on the method of data analysis;
- Providing information as to the development of the second questionnaire;
- Providing insight into how the trustworthiness of the data was being maintained;
- Providing guidelines for the completion of the questionnaire.

4.9.4 Procedure

The following steps were followed:

- Data from the first questionnaire was analyzed using content analysis;
- The Round Two Questionnaire was developed by the researcher. This questionnaire was then peer reviewed by the Head of the Post-Graduate Committee. A feedback session was arranged in order to obtain feedback. Appropriate changes were made;
- The development of the questionnaire was subjected to a confirmability and dependability audit by the research consultant. A feedback session was held;
- The covering letter was edited;
- Research participants were telephonically contacted to confirm postal addresses and to inform them that the questionnaire was to be posted. It was explained to them that it was more cost and time effective to post the questionnaire than to send and return it electronically;
- These documents, together with a covering letter, were sent by post to the research participants who had responded to the first questionnaire on 21 February 2005 with a return date of 25 March 2005. Included in the envelope were the following:
    - A copy of the signed Informed Consent Form (for their record keeping);
    - Round Two Covering Letter (Annexure J);
    - Round Two Questionnaire, which included instructions for completion (Annexure K); and
    - A self-addressed franked envelope in which the questionnaire was to be returned to the researcher;
- Two weeks after the return date, participants whose information the researcher had not received were contacted to determine the progress of their response. Participants were followed up on a regular basis and every effort was made to collect questionnaires to maintain a 70% response rate set by the researcher.

4.10 ROUND THREE QUESTIONNAIRE

4.10.1 Modified Research Objectives

It was with the return of the Round Two Questionnaire, that the researcher realized that the obtaining of all the research objectives would not be possible due to amount of data generated and time constraints. The focus of the research remained the same, but the objectives were slightly modified. These are discussed in Table 6.

Table 6 : Modified Research Objectives

Initial research objective	Discussion	Reformulated research objective
Compile a profile of the work practice services currently delivered by occupational therapists.	Obtaining this objective would be possible, but was reworded for clarity.	Compile a profile of work practice services currently delivered by occupational therapists in South Africa.
Compile a comprehensive range of work practice services which should be delivered by occupational therapists to workers with disabilities in the South African open labour market.	Obtaining this objective would not be possible within the scope of one Master's study. Obtaining a list of work practice services which should be offered would be another Delphi study in itself.	This objective could be part of the current research study.
Identify professional competencies required by occupational therapists to deliver the identified services.	This was the same as the research aim, but would be possible to achieve.	The objective was reworded to include knowledge, skills and values.
Determine on which level the identified professional competencies should be developed.	The Delphi Technique had become an unexpectedly long process with the amount of data generated. This objective could not be achieved through this study, as it would take a minimum of three rounds of questionnaires to obtain consensus on professional competencies. It would then	Recommend on which level (under- or post-graduate) the identified professional competencies should be developed.

Initial research objective	Discussion	Reformulated research objective
	take additional rounds to obtain consensus on which level these professional competencies should be developed. The researcher could however make recommendations based on the results of the study. The objective was reformulated.	
Not an initial research objective.	The identification of methods used by occupational therapists to improve their professional competencies were closely linked to the objective of identifying professional competencies and would provide valuable information which could be used to make recommendations at the conclusion of the research. This was a new objective.	Identify the methods occupational therapists in work practice use to improve their professional competencies.
Not an initial research objective.	Reasons for non-delivery of work practice service could include that of inadequate professional competencies. Identifying these reasons would also form part of the research recommendations. This was a new objective.	Determine possible reasons for the non-delivery of work practice services in South Africa.

The research objectives were reorganized, and the following were then relevant to the study as listed in Section 1.5.:

i) Identify the knowledge, skills and values required by occupational therapists to deliver work practice services,;
ii) Identify the methods occupational therapists in work practice use to improve their professional competencies;
iii) Compile a profile of the work practice services currently delivered by occupational therapists in South Africa;
iv) Determine possible reasons for the non-delivery of work practice services in South Africa;
v) Recommend on which level (under- or post-graduate) the identified professional competencies should be developed.

A letter was sent to all the research participants who had returned the Round Two Questionnaire in order to keep them informed of the research progress (Annexure L).

4.10.2 Purpose of the Round Three Questionnaire

The purpose of this questionnaire was to:

- Ask research participants to what extent they agreed or disagreed with the items generated from the second round questionnaire;
- To allow research participants an opportunity to add any comments they felt necessary;
- Identify which term research participants preferred to use in the area of work practice. Consensus had not been achieved on this in the previous questionnaire and therefore additional information was provided to the research participants;
- Obtain information with which a profile of work practice services could be determined;

- Should services not be offered, determine possible reasons for this;
- Determine how professional competencies are developed.

4.10.3 Development of Round Three Questionnaire

Data was first analyzed quantitatively using descriptive statistics by a statistician from the Department of Statistics of the University of Pretoria (this will be discussed in more detail in Section 5.6. of the following chapter). Using these results, the researcher attempted to reduce the number of items by collapsing items. This led to the emergence of new headings under which the items were listed.

These new headings were:

- Knowledge of:
  - Conditions/medical aspects,
  - General work practice aspects,
  - Employment settings,
  - Evaluation,
  - Vocational guidance,
  - Treatment/intervention including preparation for placement.
  - Training,
  - Placement,
  - Follow-up.
- Skills in:
  - General work practice,
  - Communication,
  - Legislation,
  - Evaluation,
  - Job analysis,
  - Vocational guidance,
  - Treatment/intervention including preparation for placement,
  - Training,

  - Placement,
  - Follow up,
  - General,
  - Management.
- Professional values

Items were listed randomly as in the same manner as for the second questionnaire.

Participants were asked to again choose between “work practice” and “vocational rehabilitation” as the term they would prefer to use. Results from the previous questionnaire were given as well as comments from the participants as to the reasons for their choice of term.

4.10.4 Work Practice Survey

In order to obtain a profile of the work practice services which the research participants were currently delivering, a questionnaire was developed by the researcher. The work of Deen, Gibson and Strong[2] and Jundt and King[29] was reviewed and from this, a questionnaire was developed. The researcher also wished to obtain reasons for non-service delivery as well as the manner in which research participants developed their professional competencies.

4.10.5 Round Three Covering Letter

The Round Three Covering Letter was developed and dealt with the following aspects:

- Motivating the research participants to continue participating in the research process;
- Giving the research participants feedback on the method of data analysis;
- Providing information as to the development of the third questionnaire;

- Providing insight into how the trustworthiness of the data was being maintained;
- Explaining the value of the Work Practice Survey Form;
- Providing guidelines for completion of the questionnaire.

4.10.6 Procedure

The following steps were followed:

- Data from the second questionnaire was quantitatively and qualitatively analyzed;
- The Round Three Questionnaire was developed by the researcher. This questionnaire was then peer reviewed by the Head of the Post-Graduate Committee, as had been done with the second questionnaire. A feedback session was arranged. Appropriate changes were then made;
- The development of the questionnaire was subjected to a confirmability and dependability audit by the research consultant. A feedback session was held;
- The Work Practice Survey was developed;
- The Round Three Questionnaires and Work Practice Survey was electronically mailed to the statistician to determine the ease of data analysis. Change were made where appropriate;
- The covering letter was edited;
- Research participants were telephonically contacted to confirm postal addresses and to inform them that the questionnaire was to be posted. The researcher also again telephonically expressed appreciation for the completion of the questionnaire especially as this was the busiest time of the year;
- These documents, together with a covering letter, were sent by post to the research participants on 12 October 2005, with a return date of 4 November 2005. Included in the envelope were the following:
    - Round Three Covering Letter (Annexure M);

- Round Three Questionnaire which included instructions for completion (Annexure N);
- Work practice Survey (Annexure O); and
- A self-addressed franked envelope in which the questionnaire was to be returned to the researcher;

- Two weeks after the return date, participants whose information the researcher had not yet received were contacted to determine the progress of their response. Participants were followed-up on a regular basis in order to maintain the 70% response rate. Many participants hand-delivered their questionnaires to the researcher to ensure that their questionnaires were included.

4.11 CONCLUSION

The implementation of the Delphi Technique proved to be a very lengthy process which required dedication and commitment from the research participants. Without the detailed literature review which was conducted by the researcher, implementation of this process would have been difficult.

4.12 SUMMARY

The lengthy Delphi Technique research, as conducted by the researcher was explained in this chapter. In the absence of clear published guidelines on the Delphi Technique, the researcher conducted a literature study on the Delphi Technique used predominately in the Health Care Sciences. Guidelines as obtained in the literature were given in Chapter 3 with an indication of how these would be applied. In this chapter, these guidelines were applied by the researcher.

Information was provided on the principles used in the development of eligibility criteria for the panel of expert occupational therapists. A panel of 35 occupational therapists was selected using non-probability sampling.

Participants were firstly selected using quota sampling in order to ensure that the panel represented occupational therapists from different practice settings. Secondly, purposive selection was applied in order to select occupational therapists who, according to the set criteria, were deemed expert in the field of work practice.

A pilot study was conducted to test the first round questionnaire and other related documentation. Five pilot study members were selected from the list of potential panel members after the panel had been selected. Appropriate changes were made as a result of the pilot participants feedback.

The researcher implemented various strategies in order to ensure trustworthiness of data. Two important strategies were implemented in all three questionnaires. To achieve credibility of data, use was made of peer examination by the Head of the Post-Graduate Committee of the Occupational Therapy Department of the University of Pretoria. This occupational therapist had research experience as well as additional qualifications and clinical experience in work practice. All the questionnaires were reviewed by her and an interview and a feedback session held afterwards. To ensure dependability of data, a confirmability and dependability audit was conducted by a research consultant from the same department. An interview was also held. Following both interviews, appropriate changes were made to the second and third questionnaires before being sent out to the participants.

The first questionnaire and its subsequent data analysis formed the qualitative part of this research. More data than had been anticipated by the researcher was generated by the participants.

The second questionnaire initiated the start of the quantitative phase of the research. A Likert scale was used in the questionnaire in order for the participants to rate the importance of various professional competency items. With the return of the data, the researcher had to modify the research objectives due to the lengthy process involved.

Following the same process as was used for the development of the second questionnaire, the third questionnaire was developed and sent out with a work practice survey in order to identify work practice services delivered by South African occupational therapists, the reasons for non-service delivery as well as the methods which they used to develop professional competencies in work practice services.

The following chapter, Chapter 5 deals with the results of this Delphi Technique research process.

CHAPTER 5
RESEARCH RESULTS

5.1 INTRODUCTION

In this chapter results of the research, the aim and objectives of which were discussed in Section 1.5, will be given as determined by the researcher using the Delphi Technique.

The biographical profile of the research participants who completed the first round questionnaire will be given in terms of the practice settings in which they currently work, their years experience in occupational therapy, their under- and post-graduate qualifications as well as their membership of interest and other groups. This will give an indication of the expertise of the research participants who formed the expert panel.

The response rates of the individual questionnaires will be given. Because the Delphi Technique makes use of sequential questionnaires, the data analysis and results of the first two questionnaires will be given in relation to data management. An understanding of their data analysis and results thereof is required for the development of the third questionnaire.

Thereafter the results of the research will be given in relation to the research objectives. The manner in which this is handled is given in Table 7. The research aim will be discussed in Chapter 6.

Table 7 : Research Results in Relation to Research Objectives

Research objectives	Section
1. Identify knowledge, skills and values required by occupational therapists to deliver work practice services.	5.8
2. Identify the methods occupational therapists in work practice use to improve their professional competencies.	5.9
3. Compile a profile of the work practice services currently delivered by occupational therapists in South Africa.	5.10
4. Determine possible reasons for the non-delivery of work practice services in South Africa	5.11
5. Recommend on which level (under- or post-graduate) the identified professional competencies should be developed.	Chapter 6

5.2 RESULTS OF PANEL REPRESENTATION

A panel of 35 research participants was identified to participate in the study. Eligibility criteria were used in their selection and a combination of quota and purposive sampling was used. These were discussed in Sections 4.5.2 and 4.5.3 respectively.

The results of the panel selection are given in Table 8.

Occupational therapists in the “academic” and “training” strata did not necessarily have to meet any of the purposive criteria as all the occupational therapists involved were selected from the universities and the one training institution for people with disabilities in South Africa.

Table 8 : Results of Panel Representation

Eligibility criteria									
	Quota sampling	Purposive sampling							
Number of participants	Various strata	April 2002 w/s	September 2003 w/s	May 2002 w/s	May 2003 w/s	March 2003 w/s	August 2003 w/s	July 2003 w/s	Researcher identification
7	Academic OTs whose key lecturing responsibilities included that of teaching in the area of work practice.								
		•						•	
7	Private practitioners i.e. those OTs working in private practice with the focus on work practice.			•	•				
		•	•	•					
								•	•
				•					
			•						•
			•	•					•
7	OTs with a Post Graduate Diploma in Vocational Rehabilitation.				•	•			
		•		•					•
			•				•		
			•	•		•		•	
			•	•		•			
						•			•
			•						•
2	OTs with a track record in the field of work practice	•		•	•				•
			•	•	•	•			
1	OTs involved in the training of people with disabilities for the open labour market.								
1	OTs working in the supported model of employment								•
2	OTs actively implementing legislation	•	•	•					•
			•	•		•		•	•
2	OTs working full-time for a public or private school.			•					
				•					
3	OTs working for insurance companies.			•	•	•			
				•	•	•			•
			•	•					•
3	OTs working for the Department of Health in hospital environments.	•						•	•
		•						•	•
								•	

5.3 BIOGRAPHICAL PROFILE OF RESEARCH PARTICIPANTS

The research participants completed an "Identification and Contact Information Form" (Annexure F) as well as a Biographical Form (Annexure G). Information from these two forms was used to describe the panel of expert occupational therapists.

The profile of the 29 research participants who returned the Round One Questionnaire and the above forms are discussed in Sections 5.3.1 to 5.3.6.

5.3.1 Practice Settings

The criteria used in the identification of the various strata varied and included that of practice settings, qualifications, having a track record as well as whether the participants were known to be actively implementing legislation. Requesting information from these participants regarding their practice settings therefore resulted in a profile of where the occupational therapists worked being slightly different to that of the strata identified in Section 4.5.3, as more detailed information was obtained.

The diversity of practice setting in which the participants worked at the time of undertaking the research is reflected in Table 9.

Table 9 : Diversity of Practice Settings of Research Participants

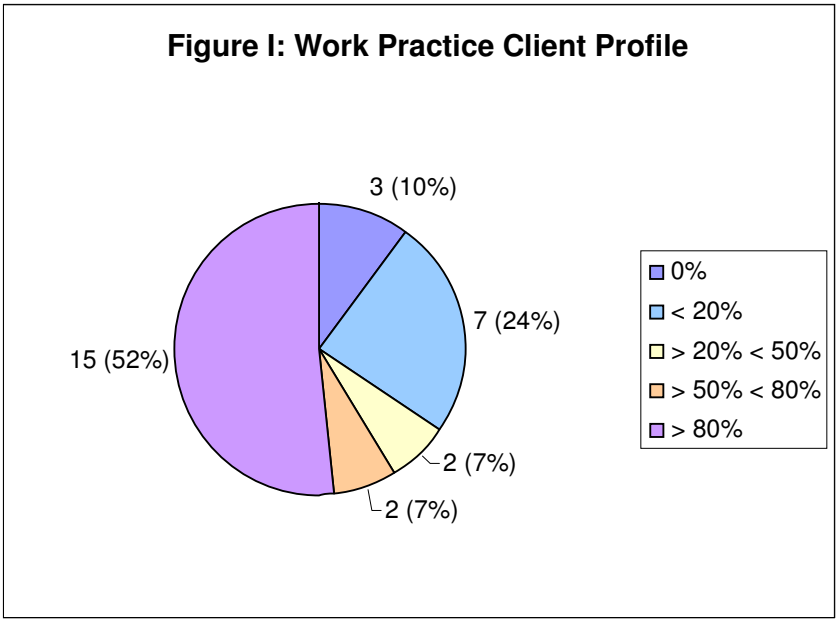
Practice setting	Number of participants	% of panel
Full-time private practice	9	31%
Predominantly private practice but combined with teaching at a university	3	10%
Department of Health	1	4%
Predominantly Department of Health but combined with part-time private practice	2	7%
School for learners with special educational needs	2	7%
Full-time insurance industry	5	17%
Full-time University	3	10%

Practice setting	Number of participants	% of panel
Predominantly university but combined with part-time private practice	3	10%
Training institution for people with disabilities	1	4%
Total	29	100%

From Table 9, it can be seen that 59% of the research participants worked in some form of private practice, either full- or part-time.

Research participants were asked to estimate the percentage of their practice clients who were referred to them for delivery of work practice services. The results of this question are illustrated in Figure I.

Figure I: Work Practice Client Profile



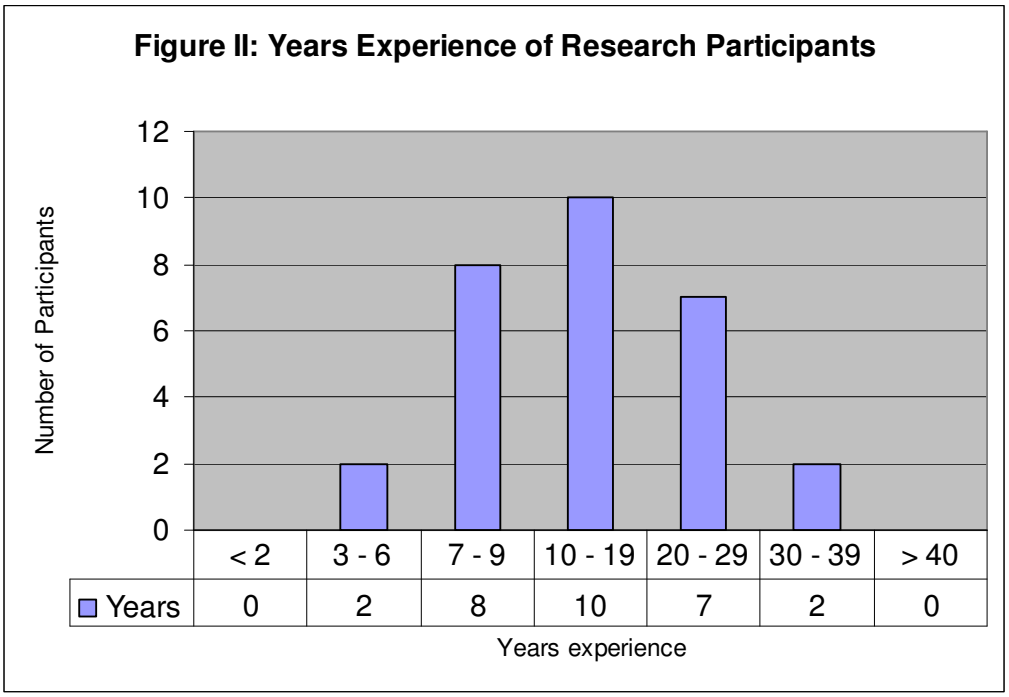
From Figure I, it can be seen that 59% (17) of the research participants delivered work practice service to clients who made up more than half of their practice clients.

Research participants who did not provide services to clients were those occupational therapists who worked in a lecturing capacity only. This represented 10% (3) of the research participants.

5.3.2 Years Experience

Years experience from the date of qualification varied amongst the research participants. Sixty five percent (65%) (19) of the panel had more than 10 years experience. Years experience in occupational therapy is seen in Figure II.

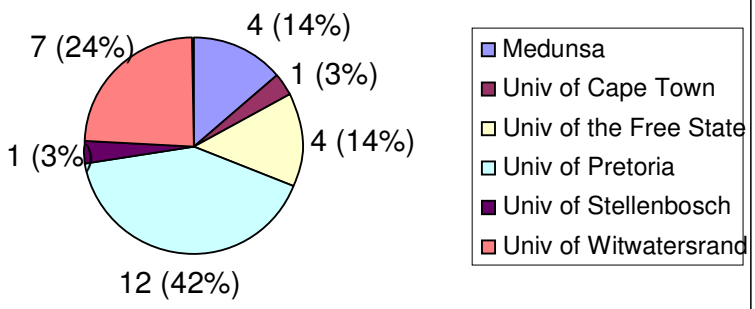
Figure II: Years Experience of Research Participants



5.3.3 Under-graduate Occupational Therapy Qualifications

Research participants obtained their under-graduate qualifications at 6 of the 8 universities offering occupational therapy training in South Africa. Forty two percent (42%) of the research participants graduated from the University of Pretoria. Universities from which research participants obtained their under-graduate occupational therapy qualification are seen in Figure III.

Figure III : Under-graduate Qualification Profile of Research Participants



Ninety seven percent (97%) (28) of the research participants reported that they had received lectures in the area of work practice as part of their under-graduate training, whilst 3% (1) said they did not.

5.3.4 Work Practice Terminology

Various terms were used for work practice lectures presented on an under-graduate level. These are indicated in Table 10.

Table 10 : Terminology Used in Under-graduate Work Practice Training

Terminology	Number of participants	% of panel
Uncertain/cannot recall	2	7%
Vocational Rehabilitation	11	38%
Work	3	11%
Work practice	2	7%
Work preparation	7	24%
Work rehabilitation	2	7%
Fitness for work	1	3%
No lectures	1	3%
Total	29	100%

Fifty five percent (55%) (16) of the research participants completed field work (clinical work) in work practice during their under graduate studies and 45% (13) indicated that they had only conducted field work visits as part of their training.

Fifty two percent (52%) (15) of the research participants found their under-graduate training useful, whilst 48% (14) did not.

5.3.5 Post-graduate Qualifications

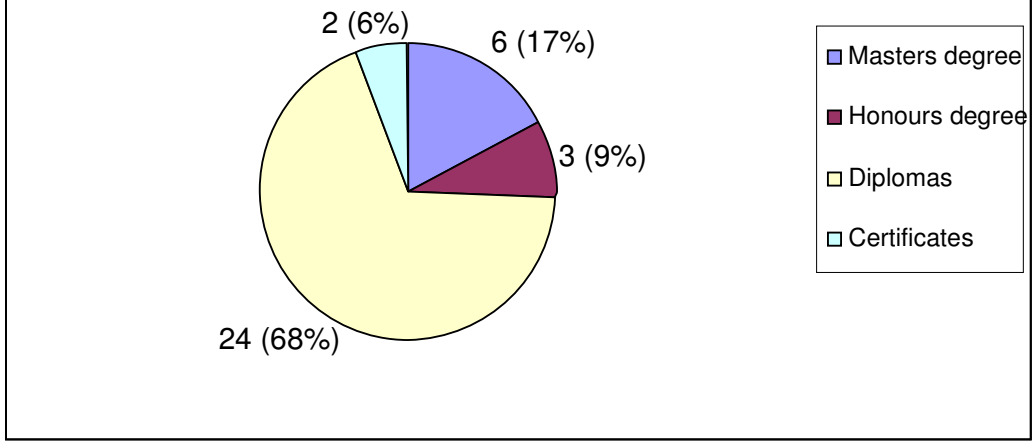
Ninety percent (90%) (26) of the research participants had post-graduate qualifications, the details of which is indicated in Table 11.

Table 11 : Post-graduate Qualification Profile of Research Participants

Qualification	Number of participants	% of panel
Masters degree in OT	5	14%
Masters degree in Business	1	3%
Honours degree in OT	2	6%
Honours degree (not in OT)	1	3%
Post-Graduate Diploma in Vocational Rehabilitation	18	51%
Diplomas related to teaching	3	8,5%
Diplomas related to a specific aspect of OT such as Neurology	3	8,5%
Certificate in Advanced Labour Law	2	6%
Total qualifications of research participants	35	100%

Figure IV combines the results of Table 11 and summarizes the types of post-graduate qualifications of the research participants.

Figure IV: Combined Post-graduate Profile of Research Participants



Eighty three percent (83%) (24) of the research participants were of the opinion that post-graduate qualifications had improved their professional competencies in the field of work practice whilst 7% (2) indicated that their studies were not useful. Ten percent (10%) (3) were unsure.

Seven percent (7%) (2) of the research participants were registered for further study including that of a BCom Business Management and a doctoral degree. Ninety three percent (93%) (27) of participants were not registered for further study at the time of the research.

5.3.6 Membership of Interest and Other Groups

The majority of the research participants were members of the Occupational Therapy Association of South Africa (OTASA). Research participants were, however, members of a variety of interest and other types of groups. Membership of these groups is indicated in Table 12.

Table 12 : Membership of Interest and Other Groups by Research Participants

Group	Number of participants	% of panel of 29 members
OTASA	21	72%
INSTOPP	11	38%
OTLA	9	31%
POTS	4	14%
WFOT	2	7%
Medico-legal Interest Group	8	28%
Work interest Group	6	21%
Management Group	2	7%
Diverse	4	14%
None	4	14%

5.3.7 Expertise of the Panel

From the profile of the research participants presented in sections 5.3.1 to 5.3.6, it can be deducted that the panel represented "expert" occupational therapists in a variety of practice settings. Fifty nine percent (59%) (17) of the participant's work practice client profile was made up of half or more of their clients seen in practice. Sixty five percent (65%) (19) of the participants had more than 10 years experience. Ninety percent (90%) (26) had post-graduate qualifications.

5.4 QUESTIONNAIRE RESPONSE RATES

The response rates of the questionnaires are given in Table 13.

Table 13 : Response Rates of Questionnaires

	Round 1	Round 2	Round 3
Number sent out	35	29	29
Number returned	29	29	28
Response rate	83%	100%	97%

The response rate was higher than 70% aimed at by the researcher as discussed in Section 3.12. In the opinion of the researcher this occurred firstly because the research participants deemed the research important and secondly, because personal contact was made to follow up non-respondents.

5.5 ROUND ONE QUESTIONNAIRE

5.5.1 Data Analysis

Data from the Round One Questionnaire was analyzed using content analysis. An electronic data management system was not available to the researcher so this had to be done manually. For clarity, the following terms apply:

Categories	:	headings in questionnaires
Themes	:	groups of items sharing common tenets grouped together under categories
Items	:	small units of information grouped under themes

The following process was followed:

- All the items as manually recorded by the research participants were transcribed verbatim by the researcher for each participant into an electronic format and printed. During this process no changes were made to the item other than correcting spelling errors. No item was omitted. The tracking number of the research participant was recorded at the end of each item for audit purposes. Knowledge, skill and value items were recorded on different coloured paper so as to avoid confusion during the next step. Should a research participant have incorrectly recorded an item for example, using the word “skill” under the heading of “knowledge”, this was placed under the “skill” item by the researcher, after considering the definitions given to the research participants;

- All of the items recorded on the different coloured papers were cut out, using a pair of scissors, by the researcher. This was done to facilitate the manual grouping of items. Data was then systematically analyzed and similar items were then grouped together and pasted down on large sheets of paper using the text shuffling or cut-and-paste method as described by McCluskey[16], quoting the work of Lofland and Lofland. This was the first grouping of items sharing common tenets;
- This grouping was then again systematically analyzed by the researcher using the following principles:
    - Items were not duplicated;
    - Grammatical errors were corrected;
    - Items of similar meaning such as “understanding” and “empathy” were retained at this stage;
    - Additional items suggested by research participants were added;
    - Items were arranged into themes which had emerged as a result of this analysis;
- Items were cross-checked to ensure that all items had been dealt with.

From the above the Round Two Questionnaire was developed. The following considerations were made in developing this questionnaire:

- Had an item have been listed as both a knowledge and a skill item, it was recorded only as a skill item, as knowledge is required in order to perform the skill;
- An item was only listed once for ease of data management. Had an item have been recorded under various phases of vocational rehabilitation discussed in Section 4.8.1, it was recorded under the first phase it was listed. Research participants were informed, through the Round Two Covering Letter, that they should assume that knowledge, skills and values from previous phases were applicable to the next one as a result of this;

- Data was again systematically analyzed in an effort to collapse the items and search for central tenets and the emergence of new themes. This process was repeated twice;
- At this stage tracking numbers were no longer used as the items had been combined where necessary;
- A data audit was conducted by the research consultant;
- The questionnaire was peer reviewed by the Head of the Post-graduate and Research Committee. Following a discussion and feedback, changes were made to the questionnaire;
- The questionnaire was finalized. New item numbers were allocated and items were randomly listed;
- An accurate track record was kept of how the items were managed.

5.5.2 Results of Round One Questionnaire

After the first grouping of items as described in Section 5.5.1. a total of 896 items were generated by the Round One Questionnaire. The details of this are listed in Table 14.

Table 14 : Number of Round One Items

Categories	Evaluation	Vocational Guidance	Treatment	Training	Placement	Follow up	Other
Knowledge	89	48	48	39	55	38	21
Skills	61	33	72	43	45	44	26
Values	42	35	40	34	42	33	8
Total	192	116	160	116	142	115	55
Total items 896							

Four new categories emerged. These were (1) legislation relating to the employment of people with disabilities, (2) employment settings (placement possibilities), (3) general management and (4) embedded knowledge, skills and values (the knowledge, skills and values necessary for the performance

of work practice services, but not necessarily part of work practice such as anatomy and physiology).

5.5.3 Development of Round Two Questionnaire

Four hundred and five (405) items were generated as a result of the completion of the data analysis process described in Section 5.5.1. These items were listed under 11 categories given in Table 15.

Table 15 : Round Two Categories and Items

Categories	Evaluation	Vocational guidance	Treatment	Training	Placement	Follow up	Other	Legislation	Employment settings	Management	Embedded
Knowledge	25	19	20	9	24	13	7	11	11	1	4
Skills	42	20	32	18	22	19	12	0	0	14	9
Values	31	12	12	6	6	2	1	0	0	2	1
Total	98	51	64	33	52	34	20	11	11	17	14
Total items 405 – 45% of Round 1 items											

Before the Vocational Guidance and Training categories, the research participants were asked whether these vocational rehabilitation phases should be conducted by occupational therapists. This was in response to participants reporting in the Round One Questionnaire that this was not part of an occupational therapist's work.

The Round Two Questionnaire is contained in Annexure K.

5.6 ROUND TWO QUESTIONNAIRE

5.6.1 Data Analysis

The first phase of the data analysis was a quantitative analysis, and the second part, a qualitative analysis.

5.6.1.1 Quantitative Data Analysis

A Likert scale, regarded as an ordinal scale[120-121] was used to collect the opinion of research participants regarding their level of agreement with the item under consideration. Greatorex and Dexter[127] state that scales upon which experts express their opinion can be assumed to be an interval scale which allows for the use of descriptive statistics such as the mean and standard deviation to be calculated. This has been done by researchers using the Delphi Technique[98,102,106,108,123]. The researcher, in consultation with the statistician used these statistical calculations in the analysis of the Round Two Questionnaire to ensure that the participants were in agreement with the items to be used for the following questionnaire.

The following process was followed:

- All the responses from the participants were statistically analysed by a statistician from the University of Pretoria. The mean and standard deviation was obtained for all the items in order to rank them in terms of measurement of agreement;
- Items were selected from this list for the next round, provided the mean and one standard deviation was greater than 3. This ensured agreement amongst the research participants,

5.6.1.2 Qualitative Data Analysis

- The above list was systematically analysed by the researcher. From this process categories of items emerged, and the process of combining items began in order to collapse the final number of items. Items were combined on the basis of being similar to, or as being part of, a specific item;
- As 86% of the participants felt that knowledge and skills of all the vocational rehabilitation phases were required in order to work in work practice, items were logically combined from all the vocational rehabilitation phases. This led to a change in the categories used for the third questionnaire. No longer were the phases of vocational rehabilitation used as categories, but knowledge, skills and values became the categories as a result of this process. The themes which emerged are given in Section 5.6.1.3;
- All the comments from the participants were taken into consideration. From these comments, items were either clarified using a description; omitted if one or more participants stated that they were unsure of the meaning of the item; or combined with another item;
- The process of collapsing items was repeated four times;
- An accurate track record was kept of how the items were managed;
- Data was subjected to an audit by a research consultant as discussed in Section 4.7.3 and 4.7.4.

5.6.2 Results of Round Two Questionnaire

Table 16 gives the results of the data analysis and item management used for the development of the Round Three Questionnaire.

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Table 16 : Results of Round Two Item Management

	Number of items in Round Two	Number of items combined	Number of items which remained the same	Number of items omitted	Number of new items added	Final number of items
Knowledge	144	50 35%	45 31%	49 34%	2	**66**
Skills	188	63 34%	72 38%	53 28%	6	**99**
Values	73	28 39%	36 49%	9 12%	2	**47**
Total items	405 100%	141 35%	153 38%	111 27%	10	**212**

As discussed in Section 5.6.1.2, knowledge, skills and values became the categories as opposed to the phases of vocational rehabilitation. The themes which emerged in these categories as well as the number of items are contained in Table 17.

Table 17 : Emergence of Round Two Categories and Themes

Knowledge category		Skill category		**Value category**
Themes	**Items**	**Themes**	**Items**	**Items**
1. Knowledge of conditions/medical aspects	4	General work practice skills	4	
2. Knowledge of general work practice aspects	7	Communication skills	5	
3. Knowledge of employment settings	5	Skills related to legislation	3	
4. Knowledge of legislation and related aspects	8	Teamwork/role player skills	7	
5. Knowledge of team members/role players	2	Evaluation skills	18	

Knowledge category		Skill category		Value category
Themes	**Items**	**Themes**	**Items**	**Items**
6. Knowledge of evaluation	8	Job analysis skills	4	
7. Knowledge of vocational guidance	1	Vocational guidance skills	2	
8. Knowledge of treatment/ intervention including preparation for placement	11	Treatment/intervention skills including preparation for placement	14	
9. Knowledge of training	1	Training skills	8	
10. Knowledge of placement	16	Placement skills	13	
11. Knowledge of follow-up	3	Follow up skills	4	
		General skills	8	
		Management skills	9	
66 items		99 items		47 items
212 items – 52% of Round 2 items				

Research participants were asked about their opinion regarding the vocational guidance and training phases being part of occupational therapy. Seventy nine percent of the participants agreed that vocational guidance should be carried out by occupational therapists, while 21% were unsure. Regarding the question of vocational training, participants were almost divided into three groups. Thirty eight percent (38%) felt that is should be left to the training experts, 28% were unsure and 34% disagreed that it should be left to the training experts.

Research participants were also asked to mark off which term they preferred to use to cover all the services identified in the questionnaire. The results of this are in Table 18.

Table 18 : Round Two Preferred Terminology

Total number of participants	Work practice services	Vocational rehabilitation	Work preparation
29 (100%)	14 (48%)	13 (45%)	2 (7%)

There was therefore no clarity on preferred terminology and research participants had to again be asked to reconsider their preferred term in the Round Three Questionnaire.

With respect to the length of the Round Two Questionnaire, 12 (41%) of the research participants found the questionnaire "too long", and 17 (59%) found it "just right". Three of the respondents who had indicated that although the questionnaire was long, they understood the reasons for this, and that this was as a result of a comprehensive list.

Regarding the question whether research participants would have preferred the researcher to further categorize the items in the Round Two Questionnaire, 4 (14%) of the research participants said "yes", 23 (79%) said "no" and 2 (7%) did not give an answer. Suggestions for further categorization addressed the issue of the length of the questionnaire. The researcher was therefore satisfied with the manner in which data was managed.

5.7 ROUND THREE QUESTIONNAIRE

5.7.1 Data Analysis

Data was statistically analyzed using frequencies. Consensus for this questionnaire was set at 80% as had been conducted by previous researchers[98,112]. This meant that 80% or more of the respondents had to agree or strongly agree with the item statement. This implied 23 or more of the 28 research participants were required.

5.7.2 Results of Round Three Questionnaire

Consensus was not achieved on 9 of the items. Items on which consensus was not achieved were:

- Knowledge of:
  - Physiology,
  - Dictionary of Occupational Titles.
- Skills in:
  - Marketing people with disabilities as potential employees,
  - Mediation skills,
  - Advising employer and client regarding legal aspects without moving into the terrain of a lawyer,
  - Developing a therapeutic milieu,
  - Developing home programmes,
  - Basic book keeping skills.

Regarding the use of preferred terminology in the field, the results are given in Table 19.

Table 19 : Round Three Terminology

Total number of participants	Work practice services	Vocational rehabilitation
28 (100%)	17 (61%)	11 (39%)

Consensus thus could not be achieved on the preferred term.

The results of the research will now be discussed in terms of the research objectives.

5.8 KNOWLEDGE, SKILLS AND VALUES REQUIRED BY OCCUPATIONAL THERAPISTS TO DELIVER WORK PRACTICE SERVICES

The first research objective was that of identifying knowledge, skills and values required by occupational therapists to deliver work practice services. This concept was described in Section 1.6 and refers to knowledge, skills and values. These, as identified by this research using a 80% consensus level as used by Barker and Burns[98] as well as Deane, Ellis-Hill, Dekker, Davies and Clarke[112], are listed in Table 20. These are not interpreted further as this will be done in Chapter 6.

Table 20 : Knowledge, Skills and Values

KNOWLEDGE
Knowledge of conditions/medical aspects
▪ Inappropriate illness behaviour ▪ Various medical conditions including cardiac conditions, neck and back conditions, cancer, pain and HIV and AIDS ▪ Anatomy
Knowledge of general work practice aspects
▪ Vocational Rehabilitation process ▪ Philosophy of work including benefits of employment and problems surrounding unemployment/non-productivity ▪ Injury prevention ▪ Cultural diversity ▪ Health risk management ▪ Disability equity consulting ▪ Disability management
Knowledge of employment settings
▪ Classification of physical demand characteristics of work i.e. sedentary, light, medium, heavy and very heavy ▪ Categories of occupations such as manual, clerical, domestic etc. ▪ Open labour market including expectations and requirements – norms against which the worker will be measured ▪ Different work settings (other than the open labour market) including sheltered and protective workshops as well as supported employment
Knowledge of legislation and related aspects
▪ Labour Relations Act including the Code of Good Practice: Dismissal (CGP: D) ▪ Employment Equity Act including the Code of Good Practice on the Employment of People with Disabilities ▪ Employment Equity for People with Disabilities ▪ Skills Development Act focusing on learnerships and Sector Education and Training Authorities (SETAs) including where to obtain information on learnerships and SETAs

- Occupational Health and Safety Act including Principles of Occupational Health and Safety
- Disability Insurance structures eg Workman's Compensation, insurance benefits
- Ergonomic and building guidelines (as related to potential and current disabilities) as defined by various authorities including the South African Bureau of Standards
- Human Resource principles including recruitment, selection, training, grievance procedures, performance management processes, employee benefits, job induction and conditions of service

Knowledge of team members/role players

- Various industry and other role players such as Unions, Human Resource Managers and Employee Assistance Practitioners
- Network opportunities

Knowledge of evaluation

- Functional Capacity Evaluation process
- A variety of various assessment techniques and methods including work samples, work simulation, job trials, formal tests and self-report questionnaires
- Norm referenced and criterion referenced testing
- Where to source assessment techniques / methods / work samples
- The context in which Functional Capacity Evaluations takes place including insurance assessment, compensation purposes and return-to-work
- Non-standardized testing
- Measurement of productivity/work speed
- OTs (own) strengths and limitations

Knowledge of vocational guidance

- Vocational guidance process

Knowledge of treatment/intervention including preparation for placement

- Goal setting
- On-site-treatment including the use of job trials and transitional work programmes
- Work hardening
- Work conditioning
- Work simulation
- Phases of recovery, resettlement and reintegration
- Occupational Therapy Models and theories including Occupational Science, Bio-psychosocial Model and Creative Participation. These are used as a scientific basis for treatment
- Stress Management
- Life skills training
- Prevocational skills training
- Job seeking (job acquisition) skills training

Knowledge of training

- Educational and training options for people with disabilities including options available in the absence of formal training such as the use of community settings for functional employment training

Knowledge of placement

- Factors affecting the employability of a person
- Reasonable accommodations and assistive devices - different types, costs and the legal aspects relating to the use and implementation of these
- Different placement options in order to make realistic recommendations regarding safe return-to-work
- Problems experienced by employers regarding the employment of people with disabilities

- Understanding the role of the OT in facilitating placement and the role of others in the placement process e.g. Social workers
- Research, policies and procedures affecting early return-to-work following illness/disability
- Employment barriers for people with disabilities and specific approaches/options in bridging these barriers
- Placement routes for able bodied people e.g. employment agencies, Department of Labour
- Job finding and job search resources including those for further referral and placement of people with disabilities, network opportunities and placement agencies
- Strategies to facilitate placement eg learnerships, skills development
- Placement process and procedures
- Legal aspects of placement
- Job matching
- Employment practice e.g. conducting interviews
- Availability of work/jobs
- How to set up a support system for the client

Knowledge of follow-up

- Purpose of follow-up, follow-up procedures and factors to address during follow-up
- Role of occupational therapist during follow-up
- Different approaches for follow-up in order to customize each case

SKILLS

General Work Practice skills

- Application of the vocational rehabilitation process
- Case management skills
- Consulting skills

Communication skills

- Report writing skills
- Verbal communication skills
- Competence in English as a business language
- Corporate presentation skills – present verbal and printed information in a corporate environment
- Presentation skills – develop and present information using appropriate media such as Power Point slide shows etc

Skills related to legislation

- Refer client to a “legal” specialist when necessary

Teamwork/role player skills

- Networking skills
- Refer client or suggest referral of client to appropriate team members / other role players
- Work with Human Resource representatives
- Work with potential employers
- Work with supervisors
- Work with safety representatives
- Work with union representatives

Evaluation skills

- Correlate observation skills with results of formal tests
- Formulate appropriate recommendations and conclusions including a realistic projection of the client’s ability to work
- Observation skills
- Record results of the evaluation

- Conduct a comprehensive Functional Capacity Evaluation including formulating purpose/aim of the evaluation, appropriate selection and use of tests and evaluation methods
- Score and interpret results of selected tests and evaluation methods
- Evaluate performance components including physical and psychological
- Detect sub optimal performance
- Environmental assessment skills (of the work environment)
- Develop rapport with evaluee
- Pain assessment
- Structure evaluation environment
- Identify whether training/reskilling is necessary
- Assess client support system
- Interview skills
- Assessment of interests when exploring different work types
- Accessibility assessment (assess interior and exterior environment in relation to an individual's physical and/or psychological abilities)
- Ergonomic assessment and recommendation skills

Job analysis skills

- Conduct a job analysis by means of reviewing job descriptions, using collateral information and/or conducting a work visit
- Match the job and the person using reasonable accommodations where necessary and appropriate
- Ability to assess a broad range of occupations and create a short list of options/possible jobs with or without modifications/accommodations for the client
- Conduct a work visit

Vocational guidance skills

- Apply vocational guidance process
- Develop client's insights into abilities and requirements of the work

Treatment/intervention skills including preparation for placement

- Measure progress and determine when treatment must be terminated
- Plan, implement, grade, evaluate and manage vocational preparation programme
- Rehabilitation skills (help individuals regain skills lost as a result of illness/disease/injury using compensatory or alternative methods and/or assistive devices)
- Work hardening skills
- Facilitation of motivation and participation
- Ability to predict success, facilitate outcomes and set alternatives
- Treatment of performance components
- Counseling skills
- Teach back saving principles, safe working principles to avoid further injury
- Apply theoretical frameworks
- Develop prevocational skills
- Teach the client job seeking skills (or assist with preparation). This includes interview skills, CVs, cover letters and referral letters

Training skills

- Suggest and implement reasonable accommodations and adaptations to training processes and materials
- Ongoing evaluation to identify and deal with client problems whilst client is training
- Match the client's abilities with the correct training course and refer appropriately in order to improve skills
- Sensitization of trainers where needed
- Implement job trials as part of training

- Implement work transitional programmes as part of training

Placement skills

- Advise employer and make recommendations regarding placement
- Prepare client adequately for placement taking work norms into consideration
- Fading skills – teach client to work independently
- Plan and implement placement process
- Provide employer with information regarding medical conditions and the functional limitations which may be associated with the condition
- Grade return-to-work with realistic indicators of success
- Employer negotiation skills
- Select appropriate placement possibility
- Identify job restructuring, job sharing and redeployment possibilities as placement opportunities
- Sensitize employer and employees regarding disability
- Skills in motivating/empowering client and family to view placement as important
- Facilitate and provide assistance during orientation when required
- Identify and overcome placement barriers including job site modifications

Follow-up skills

- Determine progress and identify any work related problems
- Facilitate the client's identification of problems and making of adaptations – teach client to problem solve
- Plan follow-up intervals with client and employer
- Close a case

General skills

- Thinking on your feet
- Clinical judgment
- Interpersonal skills
- Ability to be proactive – anticipate problems and try to prevent them
- Search for information on unfamiliar topics including medical conditions
- Lateral thinking skills
- Assertiveness
- Diplomacy

Management skills

- Time management skills
- Organizational skills
- Business planning skills
- Costing of services, billing and ensuring payment
- Project management skills including drawing up programmes, schedules and contracts
- Manage staff and clients
- Administration skills – running an office, stock control and record keeping
- Marketing skills

VALUES

- Ethical behaviour
- Objectivity
- Thoroughness
- Working with other professionals, knowing your professional limits and referring appropriately.
- Insight
- Integrity
- Being practical and realistic

- Consistency
- Deliver highest level of service possible
- Empower client versus doing it for them
- Reliability
- Focus on the client's abilities and strengths rather than the disabilities when guiding towards employment
- Confidence
- Maintain and update professional knowledge
- Giving appropriate feedback
- High standard of professional communication
- Goal orientation
- Obtain informed consent from client
- Holistic approach
- Respect
- Perseverance
- Client centered approach
- Quality assurance
- Innovation
- Need to be open to changes – trying different approaches with client's feedback
- Understanding
- Commitment to a win-win solution for all players
- Provision of cost effective services
- Dedication
- Adaptability
- Timeous reports and feedback
- Positive attitude
- Professional appearance
- Punctuality
- Compliance to, and respect for, rules, systems etc
- Empathy
- Sharing to promote the occupational therapy profession
- Creativity
- Scientific approach
- Sense of humour
- Firmness
- Optimism
- Persuasive
- Availability
- Apply principles where client is not being handed over, but that the OT is still involved and cares about the outcome
- Fairness as a basic human right
- Determination to overcome barriers

5.9 METHODS USED BY OCCUPATIONAL THERAPISTS TO IMPROVE THEIR PROFESSIONAL COMPETENCIES

Results of the Work Practice Survey (Annexure O) were used to determine this second research objective.

The research participants indicated that they used a variety of methods to improve their professional competencies. The three most often used were: attending short courses/workshops presented by universities (86%), networking and asking for advice from occupational therapy colleagues and friends (86%) and obtaining information from the web (82%). The three least used were studying for Honours degrees (11%), studying for Masters degrees (18%) and attending the OTASA National Congress (18%).

The results are indicated in Table 21.

Table 21 : Improvement of Professional Competencies

Mechanism	Number of participants
Reading	
South African Acts and Codes	**21 (75%)**
SA Journal of Occupational Therapy	**19**
International OT journals	9
FOCUS	9
INSTOPP Newsletter	8
Other identified reading mechanisms included: OT books, law books, SA Labour News, Newspapers, Occupational Health SA Journal and SA Journal of HIV Medicine	
Searching the web / using the internet	
Obtaining information from the web	**23 (82%)**
Attending short courses / workshops presented by:	
Universities	**24 (86%)**
OTLA	**15**
OTASA branch groups	**14**
INSTOPP	11
Medico-legal Interest Group	10
POTS	6

Mechanism	Number of participants
Gauteng Vocational Rehabilitation Work Group	6
OTASA National Congress	5
Workshops presented by the following were also identified: Department of Labour, SETAS, People with Disabilities, International Disability Management Seminars, corporate sector, Human Resource Managers, Occupational Health Practitioners.	
Attending interest groups / specialized meetings	
OTLA	**11**
Medico legal interest group	9
OTASA branch groups	7
Journal clubs	7
POTS	6
Other meetings included: Work interest groups, corporate industrial relations meetings, HIV Clinicians Society and practice meetings.	
Networking and asking for advice	
OT colleagues and friends	**24 (86%)**
University lecturers	**21 (75)**
Colleagues and friends who are not OTS	**18**
Useful people from whom occupational therapists could get advice included: Occupational Health Practitioners, Corporate Health Consultants, lawyers, physiotherapists, psychiatrists, Human Resource Managers and insurance specialists.	
Further study	
Post-graduate diplomas	**16**
Masters degrees	5
Honours degrees	3
Other areas of study included: Insurance Institute Certificates, Labour Law Certificates and BComm Management. Training in specific tests and assessment methods was also suggested.	

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5.10 PROFILE OF WORK PRACTICE SERVICES CURRENTLY DELIVERED BY OCCUPATIONAL THERAPISTS

The third research objective was that of identifying work practice services currently delivered by occupational therapists. Results of the Work Practice Survey (Annexure O) were also used to determine this.

All the identified services were being offered by at least one of the research participants. For the purpose of this discussion, more than 50% of the research participants (14 and more) had to be offering the service for the service to be listed in Table 22. The main referral source is also indicated for the request of the service.

Table 22 : Work Practice Services and Referral Sources

	Service	Referral base
Prevention / education services	Ergonomics	Employers
Evaluation / assessment services	Job analysis by means of work visits	Employers
	Functional Capacity Evaluations	Insurance companies
	Medico-legal assessments	Attorneys / lawyers
	Ergonomic assessment of work sites	Employers
	Job modification / reasonable accommodation assessment	Employers
Vocational guidance services	Vocational guidance / counselling	Employers
Intervention services	Job modification	Employers
	Reasonable accommodation	Employers
	Case management	Insurance companies
Placement services	Facilitating early return to work	Employers
	Identification of job restructuring, job sharing and redeployment possibilities as placement opportunities	Employers
Follow-up services	Follow up	Employers
Diverse services	Consulting services	Employers
	Advising client (employer or patient) regarding legal aspects without moving into the terrain of a lawyer	Client or patient

Other referral sources identified by the research participants were physiotherapists, human resource managers, parents, pension fund managers, unions and disability managers. Work practice services identified by the research participants and not listed by the researcher included independent disability claim assessments, development of insurance related products, disability claims assessment and management, and school to work programmes.

5.11 REASONS FOR NON-DELIVERY OF WORK PRACTICE SERVICES

Results of the Work Practice Survey (Annexure O) were again used to determine the fourth research objective that of identifying possible reasons for the non-delivery of work practice services. This part of the survey was not completed comprehensively, in the researcher's opinion, due to the length of the survey and the amount of detail required. The results are given in Table 23.

Table 23 : Reasons for Non-delivery of Work Practice Services

	Service	Main reason for non-delivery
Prevention / education services	Back education	Lack of referrals
	Injury prevention	Lack of referrals
	Stress management	Lack of referrals
	Joint protection/energy conservation	Lack of referrals
	Wellness and health promotion programmes	Lack of referrals
Evaluation / assessment services	Pre-employment assessment	Lack of referrals
	Disability grant assessment	Lack of referrals
	Assessment of learners (school children) with disabilities with a view to placement	Lack of referrals and lack of OT skills
	Disability determination for disability equity purposes (in terms of the EEA)	Lack of referrals
	Worker's compensation assessment	Lack of referrals
	Assessment for learnership purposes	Lack of referrals
Intervention services	Vocational skills development and/or training	Lack of referrals and lack of practice resources
	Work hardening	Insufficient practice resources
	Work conditioning	Lack of practice resources
	Treatment of acute injuries	Lack of OT skill
	Rehabilitation services	Lack of referrals
	Prevocational skills training	Lack of referrals
	Development of job seeking skills	Lack of referrals
	Sensitization programmes	Lack of referrals
Placement services	Job coaching as part of supported employment	Lack of referrals

	Service	Main reason for non-delivery
	Placement of people with disabilities	Lack of referrals
Diverse services	Disability management programmes	Lack of referrals
	Mediation services	Lack of referrals

As seen from Table 23, lack of referrals was cited as the most important reason for the non-delivery of the majority of work practice services. Lack of occupational therapy skill was also cited but to a lesser extent. Other reasons recorded by the participants under the heading “other” included: disinterest in delivering the service, personal choice for not delivering the service, lack of time, not the focus nor within the job description of the practice for whom they worked, and too much red tape, e.g. the amount involved in workman’s compensation clients.

5.12 CONCLUSION

The results of the first four research objectives yielded valuable information. Research participants had for example, indicated that the method most frequently employed for improving their professional competencies was attending short courses/workshops presented by the universities. This was a clear message that universities need to continue to play a role in preparing students, both under- and post-graduate, for the area of work practice. Another important aspect which was noted was the lack of referrals given as one of the reasons which led to the non-delivery of work practice services. Perhaps if occupational therapists were more skilled in marketing, this might change in the opinion of the researcher.

The researcher has used the term “work practice” as opposed to the commonly used term of “vocational rehabilitation” for this study, and it would appear that the research participants also preferred this term.

5.13 SUMMARY

In this chapter, the results of the research were given in relation to the research objectives, with the exception of the fifth research objective, which was to make recommendations regarding under- and post-graduate work practice training. This objective and research aim will be discussed in Chapter 6.

A panel of 35 occupational therapists, regarded as "expert" using predetermined criteria, was selected to participate in the study. Twenty nine of these participants returned the first and second questionnaires, with 28 returning the third questionnaire. The response rate of the three Delphi questionnaires was 83%, 100% and 97% respectively.

The biographical profile of the 29 participants who returned the first questionnaire reflected a diversity of practice settings which included those working for universities, the Department of Health, schools, insurance companies, training intuitions as well as private practices. Fifty nine percent (59%) of the participants worked in private practice, either full- or part-time. Clients who required work practice services made up more than half of the practice clients for 59% of the research participants. Sixty five percent (65%) of the participants had more than 10 years experience, with 90% having post-graduate qualifications and 7% registered for further study. Participants were members of various interest and other professional groups with 72% being members of OTASA, 38% of INSTOPP and 31% of OTLA.

The Round One Questionnaire requested participants to identify knowledge, skills and values required by occupational therapists to deliver work practice service to workers in the open labour market, using the vocational rehabilitation phases as a framework. Qualitative data analysis of the 29 questionnaires resulted in a list of 896 items being generated. Through a process of categorization, a final list of 405 (45%) items was identified for the Round Two Questionnaire.

Qualitative and quantitative data analysis as well as a process of further categorization of the Round Two Questionnaire yielded a list of 202 (52%) items for the third questionnaire.

Regarding the use of preferred terminology, 61% of the participants completing the Round Three Questionnaire preferred the term “work practice” whereas 39% preferred the term “vocational rehabilitation”.

A summary of the results of the research aim and objectives are given in Table 24.

Table 24 : Summary of Research Results

Research aim: To identify professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market.
Will be discussed in chapter 6.
First research objective: To identify knowledge, skills and values required by occupational therapists to deliver work practice services.
These were identified as: **Knowledge of:** Conditions/medical aspects, general work practice aspects, employment settings, legislation and related aspects, team members/role players, evaluation, vocational guidance, treatment/intervention including preparation for placement, training, placement and follow-up. **Skills**: General work practice, communication, legislation related, teamwork/role players, evaluation, job analysis, vocational guidance, treatment/intervention including preparation for placement, training, placement, follow-up, general and management skills. **Values**: Ethical behaviour, objectivity, thoroughness, working with other professionals, knowing your professional limits and referring appropriately, insight, integrity, being practical and realistic, consistency, delivering highest level of service possible, empowering client versus doing it for them, reliability, focussing on the client’s abilities and strengths rather than the disabilities

when guiding towards employment, confidence, maintaining and updating professional knowledge, giving appropriate feedback, high standard of professional communication, goal orientation, obtaining informed consent from client, holistic approach, respect, perseverance, client centered approach, quality assurance, innovation, the need to be open to changes – trying different approaches with client's feedback, understanding, commitment to a win-win solution for all players, providing of cost effective services, dedication, adaptability, timeous reports and feedback, positive attitude, professional appearance, punctuality, compliance to, and respect for, rules, systems etc, empathy, sharing to promote the occupational therapy profession, creativity, scientific approach, sense of humour, firmness, optimism, persuasiveness, availability, applying principles ensuring that client is not being handed over, but that the OT remains involved and cares about the outcome, fairness as a basic human right, and determination to overcome barriers

Second research objective:

Identify the methods occupational therapists in work practice use to improve their professional competencies

Although a variety of methods were identified by the research participants, the three most frequently used were:

- Attending short courses/workshops presented by universities (86%);
- Networking and asking for advice from OT colleagues and friends (86%);
- Obtaining information from the web (82%).

The three least used were:

- Studying for Honours degrees (11%);
- Studying for Masters degrees (18%);
- Attending the OTASA congress (18%).

Third research objective:

Compile a profile of the work practice services currently delivered by occupational therapists in South Africa.

Work practice services delivered by the majority of participants were:

Prevention/education services

- Ergonomics

Evaluation/assessment services

- Job analysis;
- Functional Capacity Evaluation;
- Medico-legal assessment;
- Ergonomic assessment;
- Job modification/reasonable accommodation assessment.

Vocational guidance services

- Vocational guidance/counseling.

Intervention services

- Job modification;
- Reasonable accommodation;

▪ Case management. **Placement services** ▪ Facilitating early return-to-work; ▪ Identification of job restructuring, job sharing and redeployment possibilities as placement opportunities. **Follow-up services** ▪ Follow-up. **Diverse services** ▪ Consulting; ▪ Advising client employer or client) regarding legal aspects without moving into the terrain of a lawyer.
Fourth research objective: Determine possible reasons for the non-delivery of work practice services in South Africa
The majority of participants cited non-referrals as the reason for non-delivery of work practice services. Lack of skill was cited as an additional reason for the non-delivery of assessment services of learners with disability with a view to placement.
Fifth research objective: Recommend on which level (under- or post-graduate) the identified professional competencies should be developed.
Will be discussed in Chapter 6.

Chapter 6 will deal with the research aim and fifth research objective, as well as discuss recommendations as a result of this study.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

In this chapter, the researcher will discuss the results of this research in terms of the research aim. The process followed by the researcher to formulate the results of the research aim is given. This discussion of the research aim leads to the identification of professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market.

Results of this research in terms of the first to fourth research objectives were discussed in Sections 5.8 to 5.11, a summary of which is included in Table 23. The fifth research objective, i.e. that of recommending on which level (under- or post-graduate), the identified professional competencies should be developed, which was not discussed in Chapter 5, will be discussed in this chapter. This discussion will only be given after the discussion of the research aim as the reader should have an understanding of the professional competencies identified as part of the research aim, before recommendations can be made.

Suggestions are also given by the researcher regarding the implementation of the research results. An evaluation of the research process is given.

Recommendations for further related research studies are also given in this chapter.

6.2 RESEARCH AIM

6.2.1 Process Followed

The aim of this research was to identify professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market. This was achieved by firstly analyzing both the results of the first research objective given in Section 5.8, as well as reviewing the document available from the Health Professions Council of South Africa (HPCSA) titled "Professional Guidelines" which deals with Ethics/Professional Conduct for practitioners registered with the HPCSA[128]. This was done to determine whether any of the values identified by the research participants reflected aspects of "ethical behaviour".

Secondly, in the absence of guidelines on professional competencies, the work of Coursey, Curtis, Marsh, Campbell, Harding, Spaniol et al[86] was considered during the formulation of the professional competencies. The formulation by these authors gave the researcher an indication of how to formulate professional competencies for this research study.

The above two processes, led to knowledge and skill items identified by the research participants being complied into 15 professional competency statements. Knowledge and skill themes used in the third questionnaire emerged naturally as 14 of the professional statements. General skills, as a theme in the third questionnaire, developed into the 15th professional competency statement which deals with professional behaviours and attributes. "Professional behaviours" was a term used by Strong, Baptiste and Salvatori[17] and the items listed by these authors appeared similar to those identified by the research participants.

The development of the 16th professional competency statement will be discussed in Section 6.2.3.

6.2.2 Professional Competencies Compiled from Knowledge and Skill Items

The process followed by reviewing knowledge and skill items resulted in the formulation of 15 professional competency statements. Occupational therapists, who therefore deliver work practice services to workers with disabilities in the South African open labour market, should reflect the following professional competencies as identified during this research process:

Professional Competency 1

Has knowledge of a variety of medical conditions including cardiac, neck and back conditions as well as cancer, pain and HIV and AIDS:

- understands the condition and its impact on the client's ability to work,
- understands the prognosis of the condition and knows of treatment options in order to improve the client's ability to work,
- understands inappropriate illness behaviour.

Professional Competency 2

Understands various work practice services and carries out these services:

- understands and applies the vocational rehabilitation process,
- understands the philosophy of work, the benefits of working as well as potential problems associated with unemployment,
- knows about a variety of work practice services including those of injury prevention, health risk management, disability management as well as disability equity consulting,
- manages a case which requires case management skills in order to facilitate return to work,
- consults with business, industry and other relevant role players regarding work practice services,

- understands cultural diversity and the implications thereof on work practice service delivery.

Professional Competency 3

Understands the requirements of various employment settings in order to facilitate employment/placement for people with disabilities:

- understands selected work classification systems including that of classifying work according to the physical demands of the work or fields of work,
- understands the expectations and requirements of the open labour market,
- knows of employment settings other than those of the open labour market such as sheltered, protected and supported employment,
- understands the employment process including recruitment, selection, training, grievance, performance management, employee benefits, job induction and conditions of services,
- understands the roles and functions of various role players in the employment context as well as opportunities for networking with these role players. Role players include Human Resource Managers, Union representatives and Employee Assistance Practitioners.

Professional Competency 4

Understands disability equity and other related legislation as well as statutory guidelines appropriate to the delivery of work practice services:

- understands legislative provisions related to the recruitment, selection and sustained employment of employees with disabilities as well as employees who might become injured/ill whilst in employ. These include the:
    - Labour Relations Act and its Code of Good Practice: Dismissal,

- Employment Equity Act and its Code of Good Practice on the Employment of People with Disabilities as well as the Technical Assistance Guideline on the employment of people with disabilities,

- understands legislation related to skills development including that of the Skills Development Act,
- understands occupational health and safety legislation including that of the Occupational Health and Safety Act,
- understands how benefits are structured for employees who become ill or injured including those of Workman's Compensation, Unemployment Insurance Fund and group insured benefits,
- understands ergonomic and building guidelines related to accessibility of buildings and offices for people with disabilities,
- understands when it is necessary to refer clients for legal assistance and refers appropriately when required.

Professional Competency 5

Communicates in a language appropriate to business settings using various media:

- compiles timeous reports addressed to various role players relating to work practice service delivery,
- communicates verbally with various role players regarding work practice services,
- compiles and presents information using visual media such as PowerPoint.

Professional Competency 6

Collaborates with various team members/role players in the provision of work practice services:

- networks and works within a team approach with various role players such as Human Resource Managers, potential employers, supervisors, safety representatives as well as union representatives.

Professional Competency 7

Evaluates work related abilities and skills of clients requiring work practice services by an occupational therapist:

- conducts Functional Capacity Evaluations using interview skills and a variety of standardized and non-standardized assessment techniques. Formulates appropriate recommendations and conclusions following these evaluations,
- understands and applies statistical analysis to all assessment methods used,
- understands various contexts in which Functional Capacity Evaluations can be conducted including those of insurance benefits, compensation purposes as well as return to work determination,
- detects sub-optimal performance during evaluation,
- conducts the following assessments as part of the Functional Capacity Evaluation process:
    - performance components (physical and psychological),
    - environmental assessment,
    - pain assessment,
    - assessment of potential to benefit from training/re-skilling,
    - assessment of client's support system,
    - assessment of interests when exploring various work options,
    - accessibility assessment of interior and exterior work environments,
    - ergonomic assessment.

Professional Competency 8

Conducts job analysis by reviewing job descriptions, using collateral information and/or conducting work visits:

- matches the requirements of the work and the abilities of the client using reasonable accommodations where reasonable and appropriate,
- assesses a broad range of occupations and compiles a short-list of options/possible jobs with or without modifications/accommodations for the client.

Professional Competency 9

Understands the vocational guidance process and applies the process when appropriate:

- develops clients' insights into their abilities and work requirements in order to facilitate further decision making and planning.

Professional Competency 10

Understands various treatment/intervention strategies and plans, implements, grades, evaluates and manages work readiness/work preparation programmes which facilitate return to work or employment for clients:

- understands the phases of recovery, resettlement and re-integration,
- knows of, and applies various intervention programmes/strategies which would facilitate return to work following illness/injury or would facilitate placement of workers with disabilities. These include:
    - on-site-treatment programmes such as job trials and transitional work programmes,
    - work hardening,
    - work conditioning,
    - work simulation,

- back hygiene principles and safe working principles,
- life skills training,
- stress management,
- pre-vocational skills training,
- facilitation of motivation and action,
- treatment of performance components,
- rehabilitation programmes, and
- job seeking skills training,

- understands various occupational therapy models and applies these models during intervention/treatment,
- measures progress and determines when treatment must be terminated,
- predicts success of programmes, facilitates outcomes and sets alternative when appropriate,
- counsels clients.

Professional Competency 11

Facilitates training/skills acquisition and re-skilling in order to facilitate placement in the open labour market:

- knows of educational and training options for people with disabilities including informal training such as those of community resources,
- matches the client's abilities with the correct training course and refers appropriately,
- suggests and implements reasonable accommodations and adaptations to training processes and materials,
- implements job trials and transitional work programmes as part of training;
- sensitizes trainers to disability when required,
- does ongoing evaluation of client during training to identify and deal with client problems.

Professional Competency 12

Facilitates placement/employment or return to work for clients who have disabilities/injuries or who are ill:

- plans and implements the placement process including matching a job with a client in order to facilitate employment/placement,
- understands placement routes for able bodied people,
- understands the role and functions of the occupational therapist and other role players in the placement process,
- understands the placement process and the legislative aspects facilitating placement or return to employment for people with disabilities,
- knows of research, policies and procedures affecting early return to work following illness/disability,
- knows of potential employment barriers for people with disabilities and how to bridge these,
- knows of job finding and job search resources including those for further referral and placement of people with disabilities, network opportunities and placement agencies,
- identifies job restructuring, job sharing and redeployment possibilities as placement opportunities,
- knows how to set up a support system for a client during the placement process and how to motivate the client's family to see placement as important,
- knows of employment practices such as job interviews,
- advises employer and makes recommendations regarding placement,
- provides employer with information regarding the client's medical condition and functional limitations which may be associated with the condition,
- sensitizes employers regarding disability when appropriate,
- negotiates with employer regarding placement.

Professional Competency 13

Implements follow-up processes to determine success of the work practice services:

- understands the purpose of follow-up, different follow-up approaches and factors which need to be addressed during follow-up,
- plans follow-up intervals with client and employer,
- facilitates client's problem-solving ability in order for the client to identify and solve his/her own problems at work,
- closes a case when appropriate.

Professional Competency 14

Possesses management skills:

- implements time management skills,
- exhibits organizational skills,
- has business planning skills,
- costs services, invoices clients and ensures payment,
- manages projects,
- manages staff and clients,
- exhibits administration skills and runs an office, controls stock and keeps records,
- markets work practice services.

Professional Competency 15

Reflects professional behaviors and attributes which are considered necessary to deliver work practice services:

- "thinks on his/her feet" and is able to make decisions quickly,
- exhibits clinical judgment,
- has interpersonal skills which reflect a diplomatic, assertive and *persuasive* practitioner,

- thinks proactively, anticipating problems and preventing them where possible,
- searches for information required to deliver the work practice service;
- thinks laterally,
- *works and reacts with confidence*,
- *works creatively and innovatively,*
- *reflects a dedicated and adaptable practitioner,*
- *shows determination to overcome barriers,*
- *has a sense of humour and reflects optimism and a positive attitude to the work.*

Those behaviours in "italics" listed under professional competency 15, are those which the research participants identified under "values", but which the researcher found to reflect "professional behaviours".

6.2.3 Ethical Behaviour

Values not listed under the 15th professional competency statement were scrutinized as described in Section 6.2.1. Through this process, it was found that these "values", identified by the research participants, reflected aspects of both the "General Ethical Guidelines" and the "General Ethical Duties" as contained in the Professional Guidelines Document from the HPCSA[128].

The "Core Ethical Values" reflected by the research participants through their identification of the values are illustrated in Table 25.

Table 25 : Core Ethical Values and Standards

Core ethical values and standards	
HPCSA guidelines	**"Values" identified by research participants**
Respect for persons	Respect
Best interest or well-being: beneficence	Work with other professionals, knowing your professional limits and refer appropriately Deliver highest level of service possible Commitment to a win-win solution for all players
Autonomy	Obtain informed consent

Core ethical values and standards	
HPCSA guidelines	**"Values" identified by research participants**
Integrity	Integrity Ethical behaviour Reliability
Truthfulness	Giving appropriate feedback
Compassion	Understanding Empathy Applies the principle that client has not been handed over, but that the OT is still involved and cares about the outcome
Justice	Firmness as a basic human right
Professional competence and self-improvement	Maintain and update professional knowledge

The "General Ethical Duties" reflected by the research participants through their identification of the values are illustrated in Table 26.

Table 26 : General Ethical Duties

General ethical duties	
HPCSA guidelines	**"Values" identified by research participants**
Duties to patients	
Patient's well-being or best interests	Objectivity Thoroughness Insight Be practical and realistic Deliver highest level of service possible Focus on the client's abilities and strengths rather than the disabilities when guiding towards placement Gives appropriate feedback Goal orientated Have holistic approach Shows respect Client centred approach Be open to changes – try different approaches with client's feedback Show empathy Use scientific approach
Respect for patients	Respect Understanding
Informed consent	Obtain informed consent from client
Patient participation in their own health care	Empower client versus doing it for them
Impartiality and justice	Fairness as a basic human right
Access to care	Work with other professionals, knowing your professional limits and refer appropriately
Potential conflicts of interest	Provide cost effective services

Duties to colleagues and other professionals	
Working with colleagues	Work with other professionals, knowing your professional limits and refer appropriately
Duties to yourself (OT)	
Knowledge and skills	Maintain and update professional knowledge Share knowledge to promote the occupational therapy profession
Maintaining a professional practice	Reliability High standard of professional communication Quality assurance Timeous reports and feedback Professional approach Punctuality Availability

The 16th professional competency statement is thus as follows:

Professional Competency 16

Reflects values consistent with the "Core Ethical Values and Standards", and "General Ethical Duties" as contained in the "Professional Guidelines" Document from the HPCSA[128]:

- reflects professional behaviours consistent with the ethical values of respect, beneficence, autonomy, integrity, compassion, justice and professional competence and self-development,
- adheres to the general ethical duties to patients, to colleagues and other professionals as well as duties to self (i.e. the occupational therapist).

6.2.4 Work Practice Professional Competency Statements

The conclusion of this research is that an occupational therapist who delivers work practice services to workers with disabilities in the South African open labour market should reflect the following professional competencies:

1. Have the knowledge of a variety of medical conditions including cardiac, neck and back conditions as well as cancer, pain and HIV and AIDS;
2. Understand various work practice services and carry out these services;
3. Understand the requirements of various employment settings in order to facilitate employment/placement for people with disabilities;

4. Understand Disability Equity and other related legislation as well as statutory guidelines appropriate to the delivery of work practice services;
5. Communicate in a language appropriate to business settings using various media;
6. Collaborate with various team members/role players in the provision of work practice services;
7. Evaluate work related abilities and skills of clients requiring work practice services by an occupational therapist;
8. Conduct job analysis by reviewing job descriptions, using collateral information and/or conducting work visits;
9. Understand the vocational guidance process and apply the process when appropriate;
10. Understand various treatment/intervention strategies and plan, implement, grade, evaluate and manage work readiness/work preparation programmes which facilitate return to work or employment for clients;
11. Facilitate training/skills acquisition and re-skilling in order to facilitate placement in the open labour market;
12. Facilitate placement/employment or return to work for clients who have disabilities/injuries or who are ill;
13. Implement follow-up processes to determine success of the work practice services;
14. Possess management skills;
15. Reflect professional behaviors and attributes which are considered necessary to deliver work practice services,
16. Reflect values consistent with the “Core Ethical Values and Standards”, and “General Ethical Duties” as contained in the “Professional Guidelines” Document from the HPCSA[128].

6.3 NON-CONSENSUS ITEMS

Research participants did not achieve consensus on the following items in the third and final questionnaire, and these are therefore not included in the professional competencies. These include the following:

- knowledge of physiology and the "Dictionary of Occupational Titles",
- skills in marketing people with disabilities as potential employees; mediation skills; advising employer and client regarding legal aspects without moving into the terrain of a lawyer; developing a therapeutic milieu; developing home programmes and basic bookkeeping skills.

This research did not facilitate reasons for non-consensus, but there is an indication that despite occupational therapists having knowledge of Disability Equity legislation, they should not be advising clients on these matters.

Although 61% of the participants selected the term "work practice" as the preferred terminology (as opposed to "vocational rehabilitation") to describe services identified in this study, consensus was not achieved as this was set at 70%.

6.4 UNDER- AND POST-GRADUATE RECOMMENDATIONS

6.4.1 Considerations

Recommending on what level, under- or post-graduate the identified professional competencies should be developed, is difficult as the opinion of the research participants on this issue could not be obtained until the aim of this research had been achieved i.e. that of identifying the professional competencies. Achieving this research objective by means of involving the research participants was thus not part of this research as discussed in Section 4.10.1. However, the researcher searched for some guidelines which could be used to assist in making curriculum recommendations.

Strong, Baptiste and Salvatori[17] who conducted research into what the authors term "vocational practice" in Canada, stated that post-graduate curriculum suggestions varied much in their various research participant groups. Their suggestions for post-graduate knowledge include knowledge of ergonomics, pain management and legislative updates. Skills include those of advanced disability management, marketing and business skills, costing, proposal writing, research skills and publishing.

Curtis[129] states that professionals working in the Disability Management Sector work in business environments which change constantly. He suggests that Disability Management Professionals, which by implication include occupational therapists, need to have a clear understanding of the business process and corporate requirements for making business decisions such as cost-benefit analysis, amongst other business related aspects.

In Australia, some compensation systems require formal recognition of skills before occupational therapists may work in "vocational rehabilitation/work practice". It is suggested that new graduates not work in this area, and that there is a strong emphasis on graduate programmes[1].

Taking the above into consideration, it is suggested that under-graduate students should have an understanding of the field of work practice service i.e. knowledge, but that further knowledge and skill development be developed as part of post-graduate and Continuing Professional Development programmes. Recommendations for under- and post-graduate training are made in Section 6.4.2.

6.4.2 Curriculum Recommendations

Recommendations for professional competency development are made in Table 27.

Table 27 : Curriculum Development

Professional competency	Under-graduate curriculum	Post-graduate curriculum
Professional Competency 1: Has knowledge of a variety of medical conditions including cardiac, neck and back conditions as well as cancer, pain and HIV and AIDS.	Understands the theoretical aspects of various medical and other conditions.	Has a deeper understanding of the case coupled with appropriate field-work (clinical) experience.
Professional Competency 2: Understands various work practice services and carries out these services.	Understands various work practice services, and applies the vocational rehabilitation process within the hospital, school and community contexts.	Conducts the identified services within a variety of contexts such as the business and industry-type environments.
Professional Competency 3: Understands the requirements of various employment settings in order to facilitate employment/placement for people with disabilities.	Has knowledge of selected work classification systems, the requirements of the open labour market as well as knowledge of employment settings other than the open labour market.	Has knowledge of the employment process as well as applying this process to his/her clients. Understands the role of various role players in the employment context.
Professional Competency 4: Understands Disability Equity and other related legislation as well as statutory guidelines appropriate to the delivery of work practice services.	Understands the purpose of the related Disability Equity laws, as well as a general understanding of the laws so that he/she can refer a client for assistance when appropriate.	Applies and integrates these laws to work practice service delivery i.e. has working knowledge of these laws. Advising clients on their legal rights is not a requirement of this competency.

Professional competency	Under-graduate curriculum	Post-graduate curriculum
Professional Competency 5: Communicates in a language appropriate to business settings using various media.	Compiles reports addressed to appropriate role players with guidance. He/she should master visual skill presentation as part of his/her under-graduate training.	OTs must be able to communicate with various role industry role players regarding work practice services.
Professional Competency 6: Collaborates with various team members/role players in the provision of work practice services	Develops in various contexts in which a student conducts field-work.	This is linked to the previous professional competency and is developed with experience.
Professional Competency 7: Evaluates work related abilities and skills of clients requiring work practice services by an occupational therapist	Conducts work related assessment, with guidance, in work, school and community settings. Requires guidance in the interpretation of the results and formulating a conclusion and recommendations.	Conducts work related assessments in a variety of contexts as well as for various purposes such as insurance benefits, compensation purposes as well as return-to-work determination.
Professional Competency 8: Conducts job analysis by reviewing job descriptions, using collateral information and/or conducting work visits.	Conducts job analysis with guidance.	Matches client's abilities to the requirements of the work using a variety of job analysis methods. Makes recommendations regarding reasonable accommodations and implements these. Is able to assess a broad range of occupations.
Professional Competency 9: Understands the vocational guidance process and applies the process when appropriate.	Understands the vocational guidance process.	Applies the vocational rehabilitation process.

Professional competency	Under-graduate curriculum	Post-graduate curriculum
Professional Competency 10: Understands various treatment/intervention strategies and plans, implements, grades, evaluates and manages work readiness/work preparation programmes which facilitate return to work or employment for clients.	Understands various intervention strategies and can implement these for individual and groups of clients in schools, hospitals and community settings. Has skills in the following programmes: life skills training, stress management, pre-vocational skills training, facilitation of motivation and action, treatment of performance components and rehabilitation aspects.	Implements treatment and prevention strategies in the work place for individual and groups of clients. Demonstrates skills in the following types of programmes: work hardening, work conditioning, work simulation, ergonomics, counselling and job seeking skills training.
Professional Competency 11: Facilitates training/skills acquisition and re-skilling in order to facilitate placement in the open labour market.	Has knowledge of various skill training programmes and refers clients appropriately.	Implements training programmes for clients to facilitate return-to-work and/or employment.
Professional Competency 12: Facilitates placement/ employment or return to work for clients who have disabilities /injuries or who are ill.	Has knowledge of the placement process.	Implements placement procedures in order to facilitate return-to-work and/or employment.
Professional Competency 13: Implements follow-up processes to determine success of the work practice services.	Has knowledge of the follow-up process.	Implements follow-up procedures.
Professional Competency 14: Possesses management skills.	Manages time and organizes work load.	Has knowledge and skills in the following: business planning, costing, managing projects, managing staff and clients, administration skills and marketing.

Professional competency	Under-graduate curriculum	Post-graduate curriculum
Professional Competency 15: Reflects professional behaviours and attributes which are considered necessary to deliver work practice services.	Professional behaviours are developed and nurtured.	Professional behaviours are further developed.
Professional Competency 16: Reflects values consistent with the "Core Ethical Values and Standards", and "General Ethical Duties" as contained in the "Professional Guidelines" Document from the HPCSA[128].	Ethical behaviours are developed and nurtured.	Ethical behaviours are further developed. Accountability for ethical behaviour is developed..

6.5 RESEARCH IMPLEMENTATION

6.5.1 Contribution towards existing body of knowledge

This research may contribute significantly towards the existing body of knowledge for South African occupational therapists in the area of work practice. This could be done in the following manner:

- A copy of the research results should be forwarded to the chairperson of the Integrated Curriculum for Occupational Therapy (PICOT) Committee of the University of Pretoria, for discussion during 2007. It is recommended that the current under- and post-graduate programmes related to the area of work practice should be reviewed using the results of this study. This must be done with consideration to the South African Qualifications Authority (SAQA) requirements. The under-graduate modules which may be affected by these research results include ART 382 and AKU 400. All the modules for the Post-Graduate Diploma in Vocational Rehabilitation should also be reviewed. The committee may consider, in conjunction with the Post-Graduate and Research Committee of the same department, developing a course work Master's degree in the area of work practice as

a progression from the Diploma to further studies at the University of Pretoria's Occupational Therapy Department;

- Suggestions for Continuing Professional Development should also be given to the Day Management Committee of the Occupational Therapy Department of the University of Pretoria. This committee may make recommendations regarding workshops etc, to the Service Delivery Committee for implementation;
- In addition, a copy of the professional competencies as identified by the researcher, should be forwarded to the Professional Board of Occupational Therapy for possible inclusion into their policy of Clinical Governance as reflected in their "Standards of Practice for Occupational Therapists" document dated February 2006[130]. The results of this study may contribute to the Development of Clinical Guidelines as well as the Clinical Audit Programme in the area of Work Practice. These competencies may, once published, therefore be used by employers as part of recruitment and performance management systems. The Board may however, take a decision to further this research and request consultation on a wider basis on the professional competencies identified by the researcher;
- A copy of the professional competencies as identified by the researcher should also be forwarded to the President of the Occupational Therapy Association of South Africa (OTASA). She, in consultation with the National Executive Committee, should consider these competencies and determine a plan of action which may include revision and inclusion into the current, but outdated, Position Paper on Work Practice Services. The Executive Committee may task an individual or a group of individuals, to carry out this task should they deem the research results of value.

6.5.2 Publication

In addition to publishing the results of this research, it is also recommended that the researcher publishes an article in the South African Journal of Occupational Therapy addressing the value of the Delphi Survey Technique in Occupational Therapy. The article should provide practical guidelines on the use of this technique.

6.6 EVALUATION

6.6.1 Strengths of this Study

The following are strengths of this study:

- In addition to a literature review on work practice services and professional competencies, an in-depth literature review and analysis was undertaken into the use of the Delphi Survey Technique, and attempts were made to base this research on guidelines from this study. This gave the research a foundation on which to build;
- The high return rates of the questionnaires ensured maximum participation of the research participants from a relatively small, although representative sample of research participants;
- Research participants, from diverse backgrounds and practice settings, had equal say during the generation of professional competencies, which might not have been achieved should face-to-face meetings have been held;
- All possible attempts were made to ensure that data achieved as a result of this research process were trustworthy. The use of two research consultants who carefully audited and monitored this process contributed greatly to the trustworthiness of data;
- The development of professional competencies emerged spontaneously during the three questionnaires. Other then language editing, the

researcher did not interfere in this process, and consistently used information presented by the research participants.

6.6.2. Limitations of this Study

The following are limitations of this study:

- Although professional competencies have been identified by a group of occupational therapists considered expert in the field of Occupational Therapy, there has not been an opportunity for feedback from occupational therapy representative groups such as OTASA, INSTOPP and the Medico-legal Interest Group. However, research results discussed in Section 5.3.6, indicated that 72% of the research participants were members of OTASA, 38% of INSTOPP and 28% of the Medico-legal Interest groups. Other groups such as a work interest group (21%) and OTLA (31%) were also represented. It is therefore hoped by the researcher than this limitation has been slightly bridged through the representation of the research participants;
- The research technique did not facilitate further discussion and feedback from the research participants. Discussion and exploration of the participants' suggestions might have yielded valuable information. However, there were opportunities for the research participants to make comments on all of the questionnaires thereby facilitating some discussion. Where relevant and appropriate this was taken into consideration by the researcher;
- The research process was lengthy and resulted in a huge amount of data being generated. This might had led to research fatigue during the final questionnaire as well as during completion of the Work Practice Survey. The researcher is not sure whether this did occur;
- Qualitative data analysis was conducted manually by the researcher. Electronic data management systems should be investigated for use in future Delphi Studies.

6.7 FURTHER RESEARCH

This research could initiate further research in the area of work practice. These may include the following:

- Determine what work practice services occupational therapists working in various settings should be able to offer. Professional competencies for these settings could therefore be identified, which could be used as a basis for in-service training as well as Continuing Professional Development. These settings could include occupational therapists working in:
    - hospitals managed by the Department of Health,
    - private practices,
    - schools for learners with special education needs,
    - sheltered and protective workshops,
    - insurance and related industries,
    - industries such as the mining, agricultural and manufacturing industries.
- Develop professional competency assessment methods in work practice. Each of the identified professional competency standards could be quantified with outcomes measures making clinical audit possible. This would lead to the development of quality assurance standards in the area of work practice.
- Determine which professional competencies should be developed on an under-graduate level, and which should be delivered on a post-graduate level. Recommendations are made in this chapter regarding this aspect, but they are based on the researcher's opinion, and are not research based.
- Determine reasons for non-delivery of work practice service from both an occupational therapy and consumer perspective. Once reasons for these have been identified through research, plans of action could be implemented, thereby creating further opportunities for work practice service delivery.

- Because consensus was not achieved on the use of terminology to describe “work practice services” as discussed in Section 5.7.2, use of various terms should be further researched.. Clarity should be obtained on “work practice” and “vocational rehabilitation”, and international opinions might be sought. The views of the American, Canadian, British and Australian occupational therapists should be sought. This could be obtained by means of postal and/or electronic feedback.

6.8 CONCLUSION

The aim of this research was to identify professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market. This was achieved by conducting three rounds of questionnaires using the Delphi Survey Technique. This process led to the identification of sixteen (16) professional competencies which addressed the following aspects:

1. Knowledge of medical conditions;
2. Various work practice services;
3. Employment setting requirements;
4. Disability Equity and other related legislation;
5. Communication;
6. Team work;
7. Evaluation of work abilities and skills;
8. Job analysis;
9. Vocational guidance;
10. Treatment/intervention strategies;
11. Training/skills acquisition;
12. Placement;
13. Follow-up;
14. Management skills;
15. Professional behaviours and attributes;
16. Ethical behaviour.

These professional competencies were compiled from the results of the first research objective which was to identify knowledge, skills and values required by occupational therapists to deliver work practice services. This objective, discussed in Section 5.8 in the previous chapter resulted in 11 knowledge themes, 13 skill themes and 47 value items.

The second research objective, discussed in Section 5.9, dealt with methods used by occupational therapists to improve their professional competencies. Research results yielded a variety of methods, the most common being the attendance of short courses/workshops presented by universities.

The third research objective was to compile a profile of work practice services currently delivered by occupational therapists. The results, discussed in Section 5.10 indicated that South African occupational therapists are able to offer a variety of services.

Linked to the third research objective, the forth research objective dealt with reasons for non-delivery of work practice services. The results, discussed in Section 5.11 show that the most common reason for non-delivery of services, was lack of referrals. This could either be because occupational therapists do not know how to market their services appropriately or that there is no need for the service. This issue should be researched further so that solutions could be implemented.

The sixth research objective was to make recommendations concerning which level - under- or post-graduate - the professional competencies should be developed. Under- and post-graduate recommendations were made in Section 6.4.

This chapter also gave an indication of how the research results could be implemented by the Occupational Therapy profession. Recommendations for research were also given.

It is the researcher's sincere hope that the results of this research will be implemented by the Occupational Therapy profession. The area of work practice service delivery by occupational therapists has grown considerably since the implementation of Disability Equity legislation, and implementation of this research will see the quality of training and service delivery improve.

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ANNEXURE A:

Informed Consent Form

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

INFORMED CONSENT FORM

TITLE OF STUDY

Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

1 Research study

I, _____ willingly agree to participate in this study which has been explained to me by Tania Buys. This research is being conducted by the Department of Occupational Therapy of the University of Pretoria and information obtained from the research will form part of the study for a Masters degree (MOccTher). Ethical approval certificate number S136/99.

2 Purpose of the study

To identify and rate professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market.

The research objectives are to:

i) compile a profile of the work practice services currently delivered by occupational therapists,
ii) compile a comprehensive range of work practice services which should be delivered by occupational therapists to workers with disabilities in the South African open labour market,
iii) identify professional competencies required by occupational therapists to deliver the identified services,
iv) determine on which level the identified professional competencies should be developed.

3 Description of procedures

You have been identified as an expert in vocational rehabilitation (also known as work preparation or work practice). As an expert in this field, you are invited to participate in this research study which uses the Delphi technique as its research methodology. The Delphi Technique is a survey technique that uses a series of questionnaires in such a way that the participants (usually experts in the field) reach consensus on a particular subject. As a research participant, you will serve as a valuable member of the panel of experts.

Once your consent has been obtained to participate in the study, the research will briefly involve the following:

- three or four questionnaires will be sent to the panel of experts, of which you will be a member. Each round of questionnaire will be accompanied by an explanatory letter which will assist you to complete the particular questionnaire
- the first of the questionnaires will be the most lengthy and time consuming to complete as it will require you to identify work practice services and their related professional competencies
- once the contents of the Round One Questionnaire have been analysed, the second questionnaire will be sent to you and the other members of the panel. This will require you to rate the professional competencies identified in the first questionnaire using either a Likert or Visual Analogue Scale, and will therefore be less time consuming. It will also require you to identify on which level, pre- or post graduate, these competencies should be trained
- the third and possibly fourth round of questionnaires, depending on whether consensus has been reached, will be developed in much the same way as the second questionnaire
- biographical information forms will be included with the first and second round of questionnaires which must also be returned with the questionnaire. Different types of information will be requested by each of the forms (instead of requiring you to complete one long form in the beginning). This information will be kept separate from the data on the questionnaire
- the questionnaires can either be e-mailed to you, or posted to you, depending on which you prefer and which is more convenient
- as it is vital for a valid research process to remain a panel member, a letter of reminder if necessary, will be sent to you to complete and return the questionnaire

4 Risks and discomforts

None.

5 Contact person

Tania Buys of the Department of Occupational Therapy of the University of Pretoria can be contacted at the following numbers:

Work	:	(012) 329 7800
Home	:	(012) 666 7408
Cell	:	083 407 8463
e-mail	:	tbuys@postino.up.ac.za

6 Benefits of the study

Information obtained through this study will be used for pre- and postgraduate curriculum development for the Occupational Therapy Department of the University of Pretoria. It will also be used to develop courses and workshops presented by the Department which will contribute towards continuing professional development.

Professional competencies required by occupational therapists to facilitate the implementation of legislation affecting potential and current workers with disabilities would be determined. This will ensure that the profession remains relevant.

Information will also be used to develop a South African position paper in the field of work practice. An article will be submitted for publication in the South African and American Journals of Occupational Therapy.

7 Voluntary participation

Participation in the study is voluntary, and there is no compensation for participation. You are free to withdraw your consent to participate in this research at any time.

8 Confidentiality

Your consent form, biographical information forms and questionnaires will be kept in separate confidential files, at the Occupational Therapy Department of the University of Pretoria. No information by which you can be identified will be released or published. Your information will however, remain known to the researcher. If you by chance, meet or get to know of other panel members/research participants, please do not discuss your responses with them.

9 Consent

I have read all of the above, had time to ask questions, received answers concerning areas I did not understand and I willingly give my consent to participate in this research. Upon returning this form, I will receive a copy of the form.

Research participant:

NAME: _____

SIGNATURE: _____DATE: ____/____/2004

Witness:

NAME: _____

SIGNATURE: _____DATE: ____/____/2004

Witness:

NAME: _____

SIGNATURE: _____DATE: ____/____/2004

Research leader:

NAME: Tania Buys

SIGNATURE: _____DATE: ____/____/2004

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

ANNEXURE B:

Informed Consent Form (Pilot Study)

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

INFORMED CONSENT FORM
(To participate in pilot study)

TITLE OF STUDY

Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

1 Research study

I, _____ willingly agree to participate in the pilot study of the above research project as has been explained to me by Tania Buys. This research is being conducted by the Department of Occupational Therapy of the University of Pretoria and information obtained from the research will form part of the study for a Masters degree (MOccTher). Ethical approval certificate number S136/99.

2 Purpose of the study

To identify and rate professional competencies required by occupational therapists who deliver work practice services to workers with disabilities in the South African open labour market.

The research objectives are to:

v) compile a profile of the work practice services currently delivered by occupational therapists,
vi) compile a comprehensive range of work practice services which should be delivered by occupational therapists to workers with disabilities in the South African open labour market,
vii) identify professional competencies required by occupational therapists to deliver the identified services,
viii) determine on which level the identified professional competencies should be developed.

3 Description of procedures

Experts in vocational rehabilitation (also known as work preparation or work practice) will be identified using a set of criteria. These experts will be invited to participate in this research study which uses the Delphi technique as its research methodology. Once consent has been obtained to participate in the study, the research will briefly involve the following:

- three to four questionnaires will be sent to the panel of experts, each accompanied by an explanatory letter which will assist them to complete the questionnaire
- the first of the questionnaires will be the most lengthy and time consuming to complete as it will require the participant/panel member to identify work practice services and their related professional competencies
- once the contents of the questionnaire have been analysed, the second questionnaire will be sent to the panel. This will require the members to rate the professional competencies identified in the first questionnaire using a Likert Scale, and will therefore be less time consuming. It will also require the panel member to identify on which level, pre- or post graduate, these competencies should be trained
- the third and possibly fourth questionnaire, depending on whether consensus has been reached, will be developed in much the same way as the second questionnaire
- a biographical form will be attached to each questionnaire which must also be returned with the questionnaire. Different types of information will be requested in each of the three biographical forms (instead of requiring the expert to complete one long form in the beginning). This information will be kept separate from the data on the questionnaire
- the questionnaires can either be e-mailed, or posted, depending on the preference of the panel member
- as it is vital to remain a panel member, a letter of reminder if necessary, will be sent

Before the research starts, the first questionnaire and biographical forms will be piloted and sent to six (6) occupational therapists also identified as potential experts using the same criteria, but who are not selected as panel members as only 35 panel members will be initially selected. You have been identified as a potential pilot study member, and should you agree to participate, you will be kindly requested to do the following:

- complete all the biographical forms
- complete the First Round Questionnaire
- complete a form on which you will be able to give constructive feedback on the above
- the questionnaires will be collected by Tania Buys 2 weeks after you have received the forms

4 Risks and discomforts

None.

5 Contact person

Tania Buys of the Department of Occupational Therapy of the University of Pretoria can be contacted at the following numbers:

Work	:	(012) 329 7800
Home	:	(012) 666 7408
Cell	:	083 407 8463
e-mail	:	tbuys@postino.up.ac.za

6 Benefits of the study

Information obtained through this study will be used for pre and postgraduate curriculum development for the Occupational Therapy Department of the University of Pretoria. It will also be used to develop courses and workshops presented by the Department which will contribute towards continuing professional development.

Professional competencies required by occupational therapists to facilitate the implementation of legislation affecting potential and current workers with disabilities would be determined. This will ensure that the profession remains relevant.

Information will also be used to develop a South African position paper in the field of work practice. An article will be submitted for publication in the South African and American Journals of Occupational Therapy.

7 Voluntary participation

Participation in the study is voluntary, and there is no compensation for participation.

8 Confidentiality

Your consent form, biographical information forms and questionnaires will be kept in separate confidential files, at the Occupational Therapy Department of the University of Pretoria. No information by which you can be identified will be released or published. Your information will remain known to the researcher.

9 Consent

I have read all of the above, had time to ask questions, received answers concerning areas I did not understand and I willingly give my consent to participate in the pilot study of this research. Upon signing this form, I will receive a copy of the form.

Research participant for pilot study:

NAME: _____

SIGNATURE: _____DATE: ____/____/2004

Witness:

NAME: _____

SIGNATURE: _____DATE: ____/____/2004

Witness:

NAME: _____

SIGNATURE: _____DATE: ____/____/2004

Research leader:

NAME: Tania Buys

SIGNATURE: _____DATE: ____/____/2004

ANNEXURE C:

Pilot Study Feedback Form

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Report back form for the pilot study participants

Thank you for taking the time to complete the questionnaire. Your time and input is greatly valued. I would sincerely appreciate any constructive feedback which you may have, so that this can be taken into consideration before the final questionnaire and forms are sent out.

Please could you write a critical evaluation under the following headings – you may also write on the appropriate forms for additional clarity.

1. Clarity and comprehensiveness of the covering letter

2. Clarity and comprehensiveness of the Consent Form

3. Layout and ease of completion of the Identification and Contact Details Form

4. Layout and ease of completion of Biographical Information: section 1 form

5. Layout and ease of completion of Biographical Information: section 2 form

6. Clarity and usefulness of the Definition of Terms Form

Please complete the following table:

Definition	**Is this definition clear? Please tick your response**		Comments
	Yes	**No**	
Professional competencies			
Work practice services			
Workers with disabilities			
South African open labour market			

7. Layout, ease of completion and clarity of Round One Questionnaire

8. Time taken to complete the above forms

9. Any other comments not covered by the above

Thank you for your valuable time

Tania Buys

ANNEXURE D:

Report-back from Pilot Study Members

Report back from the pilot study participants

1. Clarity and comprehensiveness of the covering letter

	Positive aspects	Aspects requiring attention	Suggestions
Participant 1	▪ Easy to understand, short and precise		▪ Perhaps number the various sections (this was for the pilot study and numbering is therefore not appropriate) ▪ "Operational definitions" does not correspond to the heading of the "Definitions of terms" form" (changed to Definition of Terms)
Participant 2			▪ Maybe give a short clarification of the Delphi Technique or a definition thereof (included in the Informed Consent Form)
Participant 3	▪ Clear	▪ Look again at the ethical issue. The telephonic contact explained in the last line sounds like one wants to convince the participant to participate if they decide not to participate. This is an ethical issue. (Add on that telephonic or email contact would be made in order to prevent unnecessary delays in the research process) ▪ Take "of" out of line 3 on page 1(done)	

	Positive aspects	Aspects requiring attention	Suggestions
Participant 4	▪ Information well set out, understood in what order to do the forms		▪ Covering letter could be marked with a heading of "Covering Letter / General Information Letter (letter titled invitation to participate in research study)
Participant 5			▪ Consent Form should be referred to as Informed Consent Form (as listed on page 1) (done)
Action taken	▪ Letter personally addressed – "Dear colleague" taken out ▪ Letter titled "Invitation to participate in research" as this was seen to be appropriate. Starting with the title of the research appeared too "blunt" as a start. It required a direct request to participate with an explanation to follow this ▪ Section 1 taken out of Biographical Information Form as the second form is given a different and more appropriate name ▪ Self addressed and stamped envelope replaced with "A return envelope – the postage of which has been prepaid" ▪ Grammatical and editorial errors corrected as indicated above ▪ Explanations added for clarification ▪ It was made clear that the research participant would form part of the panel of experts ▪ Home telephone added as research participants might want to contact the research leader after hours ▪ Questionnaires referred to as Rounds of questionnaires		

2. Clarity and comprehensiveness of the Informed Consent Form

	Positive aspects	Aspects requiring attention	Suggestions
Participant 1	▪ Easy to understand and comprehensive		
Participant 2	▪ Very comprehensive		
Participant 3	▪ Very long but clear		
Participant 4	▪ Clearly marked ▪ Clear information, not persuasive, leaving the participant to decide for		

	Positive aspects	Aspects requiring attention	Suggestions
	himself (no pressure)		
Participant 5		▪ Three to four questionnaires should read three *or* four (done) ▪ Use one term only – both panel member and participant is used (participant is used)	▪ This letter is written to be read by the participant – so write it for that person and do not refer to the "panel member" – makes it more personalized (done) ▪ Section 3: add it is vital for *a valid research process* to remain a member (done) ▪ Not sure whether it is necessary to mention the use of criteria for the selection of panel members. (only relevant in the pilot study consent form) ▪ Take out "initially" when referring to the number of panel members. Replace it with "selected for the main study" (only relevant for the pilot study)
Action taken	▪ Grammatical and editorial errors corrected as indicated above ▪ The term participant is used for all the questionnaires ▪ Explanations added for clarification ▪ Participants requested not to discuss their responses under the Confidentiality Section ▪ Questionnaires referred to in rounds as in the covering letter ▪ Visual analogue Scale added as this might be the preferred method of consensus analysis		

3. Layout and ease of completion of the Identification and Contact Details Form

	Positive aspects	Aspects requiring attention	Suggestions
Participant 1	▪ Easy to fill in		▪ Blocks in type of employment/work setting question can be bigger (made bigger)
Participant 2			▪ Inclusion of places for training/vocational rehabilitation like Access College, MODE under the heading of type of employment setting (to be included under other) ▪ What about places /organizations/positions in the open labour market (this is included under other. Positions not relevant to the study)
Participant 3		▪ Qualifications – must just the last one be listed or all of them? (Add: please list all) ▪ The space under type of employment setting is too small (done)	
Participant 4	▪ First half of page 1 – easy and clear	▪ Not sure of what to fill in at "Type of employment / work setting – for our practice, it is not that straight forward (Participant filled in correctly. Not changed as other participants did not experience difficulty with this)	

	Positive aspects	Aspects requiring attention	Suggestions
Participant 5		▪ Employment settings – must only work type of setting be named? (Yes – specific information not required) ▪ Not sure whether the use of "mine" is the correct terminology? (Changed to mining industry) ▪ Organizational membership – should only the OT related organizations be listed otherwise participants could list "flower arranging" (Add: OT related organizations)	▪ 60+ years should be 61+ years (done) ▪ Change the table format in type of employment setting as this is easier for data capture (Changed slightly for ease of completion)
Action taken	▪ Grammatical and editorial errors corrected as indicated above ▪ Suggested layout changes made ▪ Explanations added for clarification ▪ Add Medico-legal Interest Group as this was listed by the pilot participants ▪ Provincial Hospital changed to Department of Health as this is the appropriate employer ▪ Participant number included on top of page ▪ Ticks consistently used to denote where the participants have to mark off information		

4. Layout and ease of completion of Biographical Information: section 1 form – changed to Biographical Information

	Positive aspects	Aspects requiring attention	Suggestions
Participant 1		▪ First qualified as an OT is confusing – perhaps rather state under/pre graduate course (Question changed to "When did you qualify as an occupational therapist? This is less confusing)	
Participant 2		▪ What about specialized courses like MODAPTS, AMPS, VALPAR etc. It is through these courses that I gained my	

	Positive aspects	Aspects requiring attention	Suggestions
		knowledge / upgraded my knowledge. Maybe workshops should also then be included (this is included in the second form)	
Participant 3		▪ Question 4: what about two degrees registered at the same university? How does one fill this in? (Add: "Please list all qualifications obtained from the university." More space added.	
Participant 4	▪ Comfortable reading layout. Understandable, no confusion, easy		
Participant 5		▪ Question 3.6: one cannot "motivate" an answer (Changed to "please explain".) ▪ Question 4.1: list the universities in alphabetical order and write out Wits fully (done) ▪ Question 5: list the universities in alphabetical order and write out Wits fully (done)	▪ Use a participant number at the top of the page (Names taken off all forms, and a participant number added) ▪ Question 2: list the universities in alphabetical order. Write out Wits fully (done) ▪ Number Question 4.1 and 4.2 (done) ▪ Question 5: replace the word registration with "enrolling"? (Registration is the appropriate word. Enrolled changed to registered at the top of the page)

	Positive aspects	Aspects requiring attention	Suggestions
Action taken	▪ Form called Biographical Information Form ▪ Name taken out and participant number included to protect anonymity ▪ Grammatical and editorial errors corrected as indicated above ▪ Suggested layout changes made ▪ Explanations added for clarification ▪ Numbering corrected ▪ Questions 3.3 taken out as this will not contribute towards data collection as information depends on the memory recall of the participant		

5. Layout and ease of completion of Biographical Information: section 2 form – changed to Professional Competencies Form

	Positive aspects	Aspects requiring attention	Suggestions
Participant 1		▪ Not sure what was meant by question 3 (not changed as this was not a problem experienced by other participants) ▪ Not sure how much detail was required by question 4(not changed as this was not a problem experienced by other participants. Wording appears clear)	
Participant 2		▪ Do you want/need information on assessment techniques (Good suggestion. Question added regarding assessment/evaluation techniques used as this would contribute towards the competencies of the OTs)	▪ More space for work experience section (table changed as already discussed)
Participant 3		▪ Can you improve skills through reading? (the word" knowledge" added as skills cannot be adequately improved through reading) ▪ Page 5: not sure about friends? (the	▪ Question 6: Include both knowledge and skills – not only skills (changed) ▪ Page 7: repeat the heading of "yes, no, not sure" at the top

	Positive aspects	Aspects requiring attention	Suggestions
		word friends taken out) ▪ Spelling error of colleagues on page 5 (corrected)	of the table (done)
Participant 4	▪ Question 2: no problems ▪ Question 5: no problems	▪ Question 1: was not sure of how detail at point 1, not enough space (another column added to separate dates and number of years worked. Description of OT practice taken out, and key responsibilities left in, as this would indicate relevant experience. Improves clarification) ▪ Question 3: repeat from Question 1 (see above. Question 3 and Question 1 combined for clarity. Question 3 addresses the professional competencies only) ▪ Question 4: no example at diagnostic group – not sure what was needed. Did not understand client profile (Eg given of diagnostic group. Client profile changed to "reasons for referral". Add column titled work practice services offered) ▪ Question 6:not enough space (separate heading of books included as the participants included other journal and books under the same heading) ▪ Question 7: incorrectly numbered. No sub-heading on 2nd page (corrected)	
Participant 5		▪ Is the term "biographical " the correct one for the information gathered on the form? (changed to Professional	▪ Select a method of giving the dates in Question 1 (already dealt with)

	Positive aspects	Aspects requiring attention	Suggestions
		Competencies Profile) ▪ Eg should be ”eg” (corrected) ▪ Question 1: 2 different things are asked as description of practice implies the number of patients, the size of the practice etc. Is the researcher focussing on the Key responsibilities on the work setting? (changed) ▪ Question 3: is this question not the same as question 1? What additional information is required in this question? (already dealt with) ▪ The answering of Question 4 could be given in a manner which is not easy to understand (already dealt with)	▪ Questions 2, 5: Instead of justifying the choice of answer, rather use the term please “explain” (changed to “give reasons”) ▪ Question 6: should handbooks (text books) not be listed separately, and then a list of books given? (already dealt with) ▪ Question 7: Include “others” which the participant thinks is relevant (changed)
Action taken	▪ Grammatical and editorial errors corrected as indicated above ▪ Suggested layout changes made ▪ Explanations added for clarification ▪ Numbering corrected		

6. Clarity and usefulness of the Definition of Terms Form

Definition	Is this definition clear? Please tick your response		Comments
	Yes	No	
Professional competencies			
Participant 1	✓		▪ I had to read it a couple of times, but I understood it
Participant 2	✓		▪ Cognitive domain: include work assessment or evaluation? ▪ Skills: assessment skills?
Participant 3	✓		
Participant 4		✓	▪ Had difficulty to know what exactly was needed. Had to think a lot about the answers, still not too sure. Maybe I could have written more if I understood it clearly. ▪ Felt like a university question, which students usually do not understand 100% correctly
Participant 5			
			Action taken: ▪ Further explanations added for clarification
Work practice services			
Participant 1		✓	▪ Not sure what restorative/ compensatory exactly meant. This should be clear to a qualified OT. No other comments received in this regard.
Participant 2	✓		
Participant 3	✓		▪ Difference between intervention and training can be explained. Explained in Round One Questionnaire ▪ The different use of the terms evaluation and assessment must also be clarified. Explained in Round One Questionnaire

Definition	Is this definition clear? Please tick your response		Comments
	Yes	No	
Participant 4	✓		
Participant 5			
<u>Workers with disabilities</u> **Participant 1**	✓		
Participant 2	✓		▪ Workers with disabilities who are working but require service/guidance to enable them to continue working – do not know where / how you want to include these? Definition is sufficiently clear to cover these workers current "current workers".
Participant 3	✓		
Participant 4	✓		▪ Very nicely set out
Participant 5			
South African open labour market **Participant 1**	✓		
Participant 2	✓		▪ Should one say produce work according to standards set by the employer / labour market? Added to definition.
Participant 3	✓		
Participant 4	✓		
Participant 5			

7. Layout, ease of completion and clarity of Round One Questionnaire

	Positive aspects	Aspects requiring attention	Suggestions
Participant 1	▪ No problems with layout	▪ It took forever to complete this form ▪ I was not 100% sure what vocational guidance meant	
Participant 2	▪ Very extensive ▪ Layout is conducive to the types of answers required		▪ Maybe placement and follow-up can be grouped together. One would like to see a continuation between the 2 – the same person who places to do the follow up (from a theoretical perspective, it is appropriate to keep the two phases separate)
Participant 3		▪ Very time consuming ▪ Are the values not the same for the different processes? (This needs to be determined by the research process) ▪ I eventually became discouraged at the end	▪ Clarify the difference between assessment and evaluation in section 1. Both added as OTs use these terms interchangeably in practice.
Participant 4		▪ Sometimes it felt like I was duplicating. But then again, I was not sure of what was needed or if my answers were correct ▪ Uncertainty caused me not to spend too much time with this form	▪ Was not sure what detail is needed, or direction of thoughts. Maybe an example will be good, stimulating the thought processes without directing the participants. Example not included as this could contaminate the research.
Participant 5	No comments given		

	Positive aspects	Aspects requiring attention	Suggestions
Action taken	▪ It was suggested that the participants read the questionnaire first as this might ease completion of the questionnaire ▪ Participant number included ▪ Definition of vocational guidance as taken from the ILO ▪ Return information deleted as this is dealt with in the covering letter ▪ Additional page added for information which the participant felt did not fit into any of the other headings		

8. Time taken to complete the above forms

- **Participant 1** : 3 to 4 hours
- **Participant 2** : 4 hours
- **Participant 3** : 2 hours
- **Participant 4** : 3 to 4 hours. I think this it is acceptable if you consented, you are willing to do it. Maybe you should give an indication of how long it would take in the covering letter
- **Participant 5** : No comments given.

9. Any other comments not covered by the above

Participant 1:
None

Participant 2:
The division of the sections into preparation, training and placement and follow-up, has made me realize how important it is for A OT to specialize in either of these sections in order to be effective. From my experience, OTs that work in placement are scarce and this is a gap in our service. The need to be out there in he labour market is important.

Participant 3:
Bind the different forms together otherwise one does not know where to start. Put the Definition of Terms after the Informed Consent Form.

Participant 4:
Most information was clear even though I was Afrikaans. Only really battled with the Round 1 Questionnaire due to uncertainty.

Participant 5:
References were not given on the list of Definition of Terms. The pilot member asked whether this was the researcher's own definitions, or taken from specific literature. If so, the references must be given. It was added that the definitions were specific for the study.

ANNEXURE E:

Round One Covering Letter

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Post Net Suite 135
Private Bag X4
Wierda Park
0149

30 July 2004

Dear

INVITATION TO PARTICIPATE IN RESEARCH

Title of research study

Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

You have been identified as a potential research participant in the above research project. A process of criteria sampling was used to identify a panel of occupational therapy experts in the field known as either work practice/ vocational rehabilitation and/or work preparation.

This letter serves as a formal invitation to participate in the study.

For your information, the following are included:

- Informed Consent Form
- Identification and Contact Information Form
- Biographical Information Form
- Definition of Terms
- Round One Questionnaire
- A return envelope – the postage of which has been prepaid

The Delphi Technique is used in this research study and will require a commitment from the panel members ie the research participants, to complete 3 to 4 rounds of questionnaires sent 6 to 8 week after the return of the previous round questionnaire.

The research process and procedures are described in the Informed Consent Form. Please read this, before you consider consent to participate in this study.

Having read this above form, may I please add that you have been hand picked using a number of criteria. These criteria ensure that the panel is representative of **diversity of practice**, and that the panel members have indicated a **commitment to professional development**. Your participation is therefore very important and will greatly contribute towards the success of the study. The outcome of this study will benefit occupational therapists in the field traditionally known as vocational rehabilitation, as well as the clients, which we serve.

Please do not hesitate to contact me to discuss any aspect of this study. You can reach me at:

Cell	:	083 407 8463
Work	:	(012) 329 7800 (mornings, leave a message if I am not available)
Home	:	(012) 666 7408
E-mail	:	tbuys@postino.up.ac.za

Please could you complete and return the following:

- The Informed Consent Form
- The Identification and Contact Details Form
- Biographical Form
- Round One Questionnaire using the Definition of Terms Form, which you must please keep, as you will need it for subsequent questionnaires

Please return the forms to me in the enclosed envelope by 31 August 2004.

Should you require subsequent questionnaires to be e-mailed to you, please indicate this.

Should you however, not wish to participate, or be unable to do so; please could you contact me telephonically or via e-mail as soon as possible. This will prevent unnecessary delays in the research process.

Kind regards

Tania Buys
Research leader

ANNEXURE F:

Identification and Contact Information Form

Participant number

Identification and contact details

Please complete the following and return it with the consent form:

(Mark with an "✔" in the appropriate block where indicated)

Surname					
Title					
Full names					
Age group	20 – 25 yrs			26 – 30 yrs	
	31 – 35 yrs			36 – 40 yrs	
	41 – 45 yrs			46 – 50 yrs	
	51 – 55 yrs			56 – 60 yrs	
	61+ yrs				
Qualifications *(Please list all qualifications)*					
Postal address	Code:				
Work telephone number					
Fax number					
Cell number					
E-mail address					

Type of employment / work setting				
		Please ✔		
Private		Full time		
		Part time		

practice		Predominantly private practice, but combined with other OT practice eg work at a Dept of Health hospital		Please name the other type of work practice eg combined with work in a hospital etc
Type of employment / work setting				
Department of Health		Full time		
		Part time		
		Specialized work unit eg Medical Fitness for Work Unit at Pretoria Academic Hospital		Please state whether full time or part time
		Predominantly Department of Health, but combined with other OT practice eg private practice		Please name the other type of work practice eg combined with private practice etc
School for learners with special education needs		Only school		
		Predominantly school, but combined with other OT practice eg private practice		Please name the other type of work practice eg combined with private practice etc
Insurance industry		Full time		
		Part time		
		Predominantly insurance, but combined with other OT practice eg private practice		Please name the other type of work practice eg combined with private practice etc
University		Full time		
		Part time		
		Predominantly university, but combined with other OT practice eg private practice		Please name the other type of work practice eg combined with private practice etc
Mining		Full time		

industry		Part time		
		Predominantly mining industry, but combined with other OT practice eg private practice		Please name the other type of work practice eg combined with private practice etc
Other		*Please name this type of employment eg MODE, Access College, Placement agency etc*		
		Full time		
		Part time		
		Combined with other OT practice eg private practice		Please name the other type of work practice eg combined with private practice etc

What percentage of your clients are referred to you for work related aspects (an estimate)?		*Please tick ✔*
	Less than 20% of your total clients.	
	Between 21 and 50% of your total clients.	
	Between 51 and 80% of your total clients.	
	More than 80% of your total clients.	

In which manner would you prefer to receive and return the questionnaires?	**Method**	Please tick ✔	**Details *(if different to the above)***
	Post		
	Fax		
	E-mail		

		Please tick ✔
Of which of the following groups/ organizations are you a member?	OTASA *(OT Association of South Africa)*	
	INSTOPP *(SA Institute of Occupational Therapists in Private Practice)*	
	OTLA *(Occupational Therapists in Life Assurance)*	
	POTS (Psychiatric OT Interest Group)	
	WFOT (World Federation of OTs)	
	Medico-legal Interest Group	

	Special interest groups. Please give details	
	Other OT related groups/organizations– please give details	

Thank you

Tania Buys

ANNEXURE G:

Biographical Form

Participant number

Biographical information

This information will remain confidential as agreed to in the consent form. The information however remains known to the researcher and is used for interpretation purposes only.

Thank you for taking time to complete this form. Please do not hesitate to contact me should you require assistance or clarification.

Cell : 083 407 8463
Work : (012) 329 7800 (mornings)
Home : (012) 666 7408

1. In which year did you qualify as an occupational therapist?
   _____

2. At which university did you obtain this degree/diploma?
   (Please tick one)

University	Please tick ✔	Specify degree or diploma
Medical University of SA (Medunsa)		
University of Cape Town		
University of Durban/Westville		
University of the Free State		
University of Pretoria		
University of Stellenbosch		
University of the Western Cape		
University of the Witwatersrand		
Other:		

3. With respect to your training ie the above degree/diploma:

3.1 Did you have lectures on work practice / work preparation / vocational rehabilitation? Yes No

3.2 What were these lectures called? (eg work preparation)

3.3 Did you complete a clinical practical / field work where the focus was on work preparation / vocational rehabilitation / work practice?
Yes No

3.4 If yes, what was the length of this clinical work? Also please state in which year this took place eg 6 weeks full time in third year.

_____

_____

_____

_____

3.5 Are you finding this under graduate information/training useful in your current practice as occupational therapist? Yes No

3.6 Please give reasons for your answer.

_____

_____

_____

_____

_____

4.1 Have you completed any post graduate qualifications – either specifically related to occupational therapy or, another direction?
Yes No

4.2 If yes, please complete the following table.

Training institution	Please tick ✔	**Specify degree, diploma and/or certificate** **(Please list all qualifications obtained at the institution)**	**Year(s) obtained**
Medical University of SA (MEDUNSA)			

Training institution	Please tick ✔	Specify degree, diploma and/or certificate (Please list all qualifications obtained at the institution)	Year(s) obtained
University of Cape Town			
University of Durban/Westville			
University of the Free State			
University of Pretoria			
University of SA (UNISA)			
University of Stellenbosch			
University of the Western Cape			
University of the Witwatersrand			
Other:			

4.3 Has any of the above been useful in terms of your work practice / work preparation / vocational rehabilitation services which you as an occupational therapist deliver? Yes No

4.4 If yes, please explain.

_____

_____

_____

_____

_____

5.1 Are you currently registered for any further study? Yes No

5.2 If yes, please complete the following table.

Training Institution	Please tick ✔	Specify degree, diploma and/or certificate	Duration of the course
Medical University of SA (MEDUNSA)			
University of Cape Town			
University of Durban/Westville			
University of the Free State			
University of Pretoria			
University of SA (UNISA)			
University of Stellenbosch			
University of the Western Cape			
University of the Witwatersrand			
Other:			

5.3 What was your main intention/reason(s) for registering for the above?

_____

_____

_____

_____

_____

Thank you

Tania Buys

ANNEXURE H:

Definition of Terms

Definition of terms

TITLE OF STUDY

Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

The following is a list of definitions which are to be used as part of the research study. The definitions have been developed by the researcher using various occupational therapy and other sources and are specific for the study. Please use them in completing the questionnaires, and keep it handy when completing the various rounds of questionnaires. Thank you.

Professional competencies

Professional competencies refer to the sum total of capacities that a qualified occupational therapist possesses which are believed to be relevant to practice. The concept of professional competency is multifaceted and dynamic and refers to the following:

Knowledge	Skills	Professional values
Cognitive domain	*Psychomotor domain*	*Affective domain*
Specific to the field of vocational rehabilitation / work practice and/or work preparation.	Technical and other OT related skills required by an OT working in the field vocational rehabilitation / work practice and/or work preparation. These skills are considered essential.	These refer to the principles, beliefs, ethics and moral standards by which an OT should practice in the field of vocational rehabilitation / work practice and/or work preparation.
Refers to the theoretical aspects of the field.	Refers to the application of knowledge – the doing of tasks and activities required in the field.	These qualities are considered desirable and will contribute towards the standard and professionalism of the field.
Objective aspects	Objective aspects	Subjective aspects

Work practice services

These refer to those therapeutic interventions and programmes in occupational therapy, which aim to **enable clients to undertake and maintain participation in productive activities or work**. Work practice services could be **preventive, evaluative, remediative, restorative or compensatory**. Settings for the provision of these services could include, but are not limited to acute care and rehabilitation facilities, industrial and office environments, educational and training programmes, private practices, insurance facilities, community settings, non-governmental facilities, sheltered and protective workshops, and home environments.

Workers with disabilities

These refer to both potential and current workers.

Potential workers are those who:

- do not currently work, but who will likely be able to work
- could have either once worked, but have lost their work due to an injury or illness
- could never have worked although they are of working age
- are still in the process of preparing for work as they are not yet of working age
- could be job seekers

These workers could possibly be considered as employment equity candidates according to the Employment Equity Act of 1998 due to the nature of their disability.

Current workers are those who are working. Their work performance could be affected by an injury or illness, and could be considered as “incapacitated” according to the Labour Relations Act of 1995. The incapacity could be of a permanent or temporary nature.

South African open labour market

This refers to **competitive work settings in the formal and informal sector** of business, government and other organisations that are not considered as protective or sheltered employment environments. Workers perform productive activities which could provide a service or commodity needed by others. These workers are paid for their productive activities. They produce work according to the standards set by the employer and/or required by competitive work settings.

ANNEXURE I:

Round One Questionnaire

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Participant number

Round 1 Questionnaire

TITLE OF STUDY

Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

Thank for taking the time to complete this questionnaire. Please do not hesitate to contact me should you require more information or clarification, at:

Cell : 083 407 8463
Work : (012) 329 7800
Home : (012) 666 7408

Please refer to the attached Definition of Terms form, which will be of assistance to you. It is also suggested that you read through the various sections (there are 7 sub-sections) before you start completing the questionnaire as this might help you.

Please remember, if by chance, you identify another member of the panel, please do not discuss your opinion or the contents of your response in order to ensure the anonymity of the panel of experts.

Thank you

Tania Buys

1. In terms of the **evaluation/assessment** of workers (potential and current) in the open labour market, what, in your opinion, are the professional competencies required by the occupational therapist? Please list them under the headings of knowledge, skills and professional values.

Knowledge

Skills

Professional values

2. *Vocational guidance is the process of assisting an individual in terms of choice of occupation/work having taken their strengths and limitations into account.* In terms of **vocational guidance** of workers (potential and current) in the open labour market, what, in your opinion, are the professional competencies required by the occupational therapist? Please list them under the headings of knowledge, skills and professional values.

Knowledge

Skills

Professional values

3. In terms of the **vocational preparation – <u>specifically treatment (intervention)</u>** of workers (potential and current) in the open labour market, what, in your opinion, are the professional competencies required by the occupational therapist? Please list them under the headings of knowledge, skills and professional values.

Knowledge

Skills

Professional values

4. In terms of the **vocational preparation –<u>specifically the training aspect</u>** of workers (potential and current) in the open labour market, what, in your opinion, are the professional competencies required by the occupational therapist? Please list them under the headings of knowledge, skills and professional values.

Knowledge

Skills

Professional values

5. In terms of the **placement** of workers (potential and current) in the open labour market, what, in your opinion, are the professional competencies required by the occupational therapist? Please list them under the headings of knowledge, skills and professional values.

Knowledge

Skills

Professional values

6. In terms of the **follow up** of workers (potential and current) in the open labour market, what, in your opinion, are the professional competencies required by the occupational therapist? Please list them under the headings of knowledge, skills and professional values.

Knowledge

Skills

Professional values

7. Use this page to fill in any aspects which you felt did not fit into the previous sections Please list them under the headings of knowledge, skills and professional values if possible.

Knowledge

Skills

Professional values

ANNEXURE J:

Round Two Covering Letter

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Post Net Suite 135
Private Bag X4
Wierda Park
0149

21 February 2005

Dear

Round 2 Questionnaire

Title of research study

Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

A sincere thank you for completing the Round 1 Questionnaire. The response rate was 83% (29 out of a panel of 35 experts). More data was generated from this questionnaire than I had anticipated, hence the delay in sending out the second questionnaire. Another factor contributing towards this delay is the lack of clarity in the literature on the compilation of the second questionnaire. It is for this reason that I have added questions relating to the composition of this questionnaire. I am therefore in the process of studying the Delphi Technique as I feel this is a valuable research methodology. Your feedback, as a panel member, on this aspect will assist in the use of the Delphi Technique in occupational therapy research studies.

In order to contribute towards the **credibility and transferability of this research**, as well **maintain research rigor**, I would like to appeal to you to continue participating in this important study. Your input as an identified expert in the field is extremely valuable.

As explained in the Informed Consent Form, a copy of which has been included for you to keep, the first of the questionnaires was in all probability the most time consuming to complete. Although the second questionnaire appears longer than the first, it should take you *much less time to complete.* You are required to indicate to what degree you agree or disagree with the items as generated by the expert panel using a Likert Scale. After careful consideration of the specific item, you need therefore only **tick off your response**. After each subheading, there is space for you to add additional items which you feel have been omitted, or to provide other suggestions and feedback as to the wording/clarity of the items; items which do not fit under the heading and/or subheading; as well as other comments.

Would you kindly complete this questionnaire and return it to me in the self addressed franked envelope by 25 March 2005.

For your insight, I thought it important to explain how the second questionnaire has been compiled. The following was done:

- All the responses, as given by the participants, were transcribed *verbatim* under the headings as identified by the research participants. Spelling errors were corrected.

- The data was systematically analysed and *items* were identified. During this process of identifying items, the following principles were adhered to:
  - No items were omitted.
  - Items which could appear similar in meaning, were retained, for example "understanding" and "empathy".
  - If an item had been incorrectly placed under a Knowledge, Skill or Professional Value subheading, this was corrected by the researcher.
  - No additional items were added by the researcher.
  - One of the co-research supervisors conducted a confirmability audit on the generation of the above items. This contributes towards the **confirmability/neutrality of data.**

- From the above the Round 2 Questionnaire was complied with the following principles:
  - Items which were duplicated were omitted.
  - Grammatical errors were corrected.
  - If an item had been identified under both the sub-headings of Knowledge and Skill, it was only listed under Skill as knowledge is required in order to develop a skill.
  - An item was listed only once. For example, if it fell under the Evaluation and Placement phases of Vocational Rehabilitation, it was only listed under Evaluation, in order to avoid further duplication and to assist in making the data more manageable. You should thus accept that items from previous phases could be relevant to the next phase.

- Additional groupings of items emerged as participants frequently listed these items under all the Vocational Rehabilitation phases. These new groups are:
  - Legislation relating to the employment of people with disabilities
  - Employment settings
  - General Management
  - Embedded Knowledge, Skills and Professional Values

- This questionnaire was subjected to peer examination by a colleague in the field of Vocational Rehabilitation, in order to contribute towards **dependability of data**.

- The Round 2 Questionnaire was finalized.

Please do not hesitate to contact me to discuss any aspect of this study. You may reach me at:

Cell	:	083 407 8463
Work	:	(012) 329 7800 (mornings. Please leave message)
Home	:	(012) 666 7408
E-mail	:	tbuys@postino.up.ac.za

Kind regards

Tania Buys
Research Leader

ANNEXURE K:

Round Two Questionnaire

Participant number

Round 2 questionnaire

Using the Likert Scale, please indicate to what degree you agree or disagree with the items as generated from the Round 1 questionnaire. Your response must be considered in relation to the question: " **What are the professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market?"**

Please tick the appropriate column. After each sub-heading, there is a space for you to add additional items which you feel have been omitted, or to provide other suggestions and feedback as to the clarity of the items; items which do not fit under the heading and/or subheading; as well as other comments.

The items have been listed alphabetically.

The abbreviations used for the Likert scale are as follows:

SA - Strongly agree
A - Agree
? - Uncertain
D - Disagree
SD - Strongly disagree

EVALUATION / ASSESSMENT OF WORKERS						
Evaluation - Knowledge of the following:						
		SA	**A**	**?**	**D**	**SD**
K1	A variety of various assessment techniques and methods including work samples, work simulation, job trial and formal tests					
K2	Norm referenced and criterion referenced testing					
K3	Different tests: ▪ Beck Depression Inventory					
K4	▪ Chessington Occupational Therapy Neurological Assessment Battery (COTNAB)					
K5	▪ Therapist Portable Assessment Laboratory (T/Pal)					
K6	▪ WEST					
K7	Factors influencing the employability of a person including general and specific work skills					
K8	Functional Capacity Evaluation process					
K9	Impact of medical conditions on work performance					
K10	Inappropriate illness behaviour					
K11	Insurance industry including definitions of disability, employee benefits and insurance processes					
K12	Meaning of work					

Evaluation - Knowledge of the following (cont):						
		SA	A	?	D	SD
K13	Non-standardized testing					
K14	Own strengths and limitations					
K15	Pain and pain behaviours					
K16	Placement possibilities					
K17	Population statistics including distribution, numbers, disability distributions					
K18	Secondary gain					
K19	The adult – needs, roles, motivation					
K20	The context in which Functional Capacity Evaluations takes place including insurance assessment, compensation purposes and return-to-work					
K21	The reliability and validity of all tests used					
K22	Various role players					
K23	Vocational Rehabilitation process					
K24	Where to source various assessment methods and tools					
K25	Workstudy (both method study and work measurement) with emphasis on predetermined time standards					
Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.						

Evaluation – Skills:						
		SA	A	?	D	SD
S1	Analytical thinking skills					
S2	Apply the theory of MODAPTS					
S3	Apply vocational rehabilitation process					
S4	Appropriate selection and use of tests and evaluation methods					
S5	Clinical reasoning skills					
S6	Computer skills					
S7	Conduct comprehensive Functional Capacity Evaluation					
S8	Conduct work simulation					
S9	Conduct work visits					
S10	Consulting skills					
S11	Correlate assessment of client with assessment of job					
S12	Correlate observation skills with results of formal evaluation tests					
S13	Define purpose/aim of evaluation					
S14	Detect sub-optimal performance					
S15	Driving skills					
S16	Employer negotiation skills					
S17	Environmental assessment skills					
S18	Formulation of opinion and drawing of conclusions					

Evaluation - Skills (cont):						
		SA	A	?	D	SD
S19	Information technology skills					
S20	Interpersonal skills					
S21	Interview skills					
S22	Job analysis skills					
S23	Justify use of selected methodologies					
S24	Lateral thinking skills					
S25	Listening skills					
S26	Make a realistic projection of client's ability to work					
S27	Mathematic skills					
S28	Mentoring skills					
S29	Observation skills					
S30	Pain assessment					
S31	Pre-employment assessment					
S32	Problem solving skills					
S33	Record results of the evaluation					
S34	Report writing skills					
S35	Score and interpret results of selected tests and evaluation methods					
S36	Search for information on unfamiliar topics including medical conditions					
S37	Statistical skills					
S38	Storage and retrieval of assessment records					
S39	Structure evaluation environment					
S40	Thinking on your feet					
S41	Typing skills					
S42	Verbal communication skills					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Evaluation - Professional Values:						
		SA	A	?	D	SD
V1	Astute (perceptive)					
V2	Confidence					
V3	Confidentiality					
V4	Consistency					
V5	Contribute towards the development of occupational therapy – research and publications					
V6	Dedication					
V7	Deliver highest level of service possible					
V8	Empathy					
V9	Ethical behaviour					
V10	Flexibility					
V11	Hard working					

Evaluation - Professional Values (cont):						
		SA	A	?	D	SD
V12	Honesty					
V13	Insight					
V14	Integrity					
V15	Maintain and update professional knowledge					
V16	Objectivity					
V17	Open mindedness					
V18	Positive attitude					
V19	Professional appearance					
V20	Professional behaviour					
V21	Reliability					
V22	Remain within the scope of occupational therapy					
V23	Respect					
V24	Scientific approach					
V25	Sense of humour					
V26	Sharing to promote the occupational therapy profession					
V27	Thoroughness					
V28	Trust worthiness					
V29	Warm professional approach					
V30	Work with other professionals					
V31	Work within a team					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

VOCATIONAL GUIDANCE

		SA	A	?	D	SD
D1	Vocational guidance should not be carried out by occupational therapists					

Vocational Guidance - Knowledge of the following:						
		SA	A	?	D	SD
K26	Availability of jobs					
K27	Career pathways					
K28	Career planning					
K29	Dictionary of Occupational Titles					
K30	Educational and training options for people with disabilities					
K31	Employment opportunities					
K32	Intervention / treatment					
K33	Job seeking skills					
K34	Learnerships					
K35	Life skills					
K36	Motivational theories					

Vocational Guidance - Knowledge of the following (cont):						
		SA	A	?	D	SD
K37	Occupational Science					
K38	Public transport					
K39	Reasonable accommodations					
K40	Resources for further referral and placement					
K41	Sector Education Training Authorities (SETAs)					
K42	South African Qualifications Authority (SAQA)					
K43	Vocational guidance models					
K44	Vocational guidance process					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Vocational Guidance – Skills:						
		SA	A	?	D	SD
S43	Ability to assess broad range of occupations and create a "short list" of options/possible jobs with or without modifications/accommodations for the client					
S44	Advocacy skills					
S45	Apply vocational guidance techniques					
S46	Assertiveness					
S47	Assessment of: ▪ Aptitude					
S48	▪ Education					
S49	▪ Interests					
S50	▪ Training potential					
S51	Counseling skills					
S52	Empower client to problem solve					
S53	Group skills					
S54	Guide the client to a type of work which will suit his/her skills without letting the client think that you have made the choice					
S55	Identify and overcome barriers					
S56	Impart excitement and motivation					
S57	Job coaching skills					
S58	Make appropriate recommendations and conclusions					
S59	Networking skills					
S60	Refer client appropriately					
S61	Role play skills					
S62	Skills in finding work for clients					

Vocational Guidance – Skills:

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Vocational Guidance - Professional Values:

		SA	A	?	D	SD
V32	Being realistic					
V33	Creativity					
V34	Empower clients versus doing it for them					
V35	Enthusiasm					
V36	Focus on the client's abilities and strengths rather than the disabilities when guiding towards employment					
V37	Innovation					
V38	Know professional limits and refer appropriately					
V39	Neatness					
V40	Networking					
V41	Optimism					
V42	Provide support so that the client can determine own goals					
V43	Punctuality					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

VOCATIONAL PREPARATION - TREATMENT

Treatment - Knowledge of the following:

		SA	A	?	D	SD
K45	Expected recovery time and sick leave associated with specific medical conditions					
K46	Goal setting					
K47	How community settings could be used for functional employment training					
K48	Industry role players such as Unions, Human Resource Managers					
K49	Injury prevention					
K50	Measurement of productivity					
K51	National Occupational Safety Association (NOSA)					

Treatment - Knowledge of the following (cont):						
		SA	A	?	D	SD
K52	Policies and procedures affecting early return-to-work					
K53	Reasonable accommodations and assistive devices					
K54	Scientific theory underpinning treatment					
K55	Specific work interventions: ▪ Job shadowing as part of preparation					
K56	▪ Work simulation					
K57	▪ Learnerships					
K58	▪ On-site-treatment					
K59	▪ Prevocational skills training					
K60	▪ Transitional work programs					
K61	▪ Use of actual job trials					
K62	▪ Work conditioning					
K63	▪ Work hardening					
K64	▪ Work preparation tools					
Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.						

Treatment – Skills:						
		SA	A	?	D	SD
S63	Ability to determine when treatment must be terminated					
S64	Ability to predict success, failure, outcomes and set alternatives					
S65	Adapt different devices like ADL, mobility devices, wheelchairs					
S66	Case management skills					
S67	Coaching of the job coach					
S68	Develop client's insight into his/her abilities and requirements of the work					
S69	Develop home programs					
S70	Develop prevocational skills					
S71	Facilitation of motivation and participation					
S72	Further evaluation skills					
S73	Identify functional training and preparation settings					
S74	Improve work behaviours and worker ability					
S75	Job restructuring skills					
S76	Leadership skills					
S77	Make pressure garments					
S78	Measure progress					
S79	Negotiation skills with employer and insurer to conduct treatment while client continues to work in the same capacity					
S80	Neuro-development techniques					

Treatment – Skills (cont):						
		SA	A	?	D	SD
S81	Plan, implement, grade and evaluate vocational preparation programs					
S82	Prepare client adequately for placement taking work norms into consideration					
S83	Presentation skills					
S84	Skills in motivating/empowering clients and families to view employment as important					
S85	Source potential jobs					
S86	Splint making					
S87	Teach back saving principles safe working principles to avoid further injury					
S88	Work hardening skills					
S89	Work with: ▪ Human Resource representatives					
S90	▪ Potential employers					
S91	▪ Safety representatives					
S92	▪ Supervisors					
S93	▪ Those providing bursaries for training					
S94	▪ Unions					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Treatment - Professional Values:						
		SA	A	?	D	SD
V44	Adaptability					
V45	Availability					
V46	Enablement approach					
V47	Giving appropriate feedback					
V48	Goal orientation					
V49	Need to be open to changes – trying different approaches with client's feedback					
V50	Need to be practical and realistic					
V51	Obtain informed consent from client					
V52	Patience					
V53	Persistence					
V54	Trans-disciplinary approach especially important during this phase as OTs / employers / physiotherapists / speech therapists need sharing and role release					
V55	Understanding					

Treatment - Professional Values (cont):

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

VOCATIONAL PREPARATION - TRAINING

		SA	A	?	D	SD
D2	This is best left to the training experts					

Training - Knowledge of the following:

		SA	A	?	D	SD
K65	Criteria for self-employment					
K66	Disability policies and company policies regarding training					
K67	Entry requirements for training					
K68	Funding available for training: bursaries, learnerships and the Department of Labour					
K69	Life skills training					
K70	Options available in the absence of formal training					
K71	The needs of business					
K72	Train the trainer programs					
K73	Training resources and options (formal and informal) for various sectors					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Training – Skills:

		SA	A	?	D	SD
S95	Assess client and job to determine whether client is trainable					
S96	Assist clients with preparing CVs, cover letters and referral letters					
S97	Communication with training providers					
S98	Develop natural and other supports in the workplace					
S99	Facilitate on the job training					
S100	Identify goal of training					
S101	Identify whether training / reskilling is necessary					
S102	Implement a vocational preparation program to suit a client in a particular job / position					

Training – Skills (cont):						
		SA	A	?	D	SD
S103	Implement job trials					
S104	Implement transitional work programs					
S105	Make reasonable accommodations and adaptations to training processes and materials					
S106	Match the client's abilities with the correct training course					
S107	Ongoing evaluation whilst client is in training to identify and deal with client problems					
S108	Prompting / teaching specific skills					
S109	Provide a comprehensive training program					
S110	Referral for improvement of skills					
S111	Sensitization of trainers when needed					
S112	Teach the client networking skills					
Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.						

Training - Professional Values:						
		SA	A	?	D	SD
V56	Accept responsibility for adequate and effective supervision of OT support staff who may be involved in vocational training					
V57	Client centred approach					
V58	Firmness					
V59	Love for people					
V60	Perseverance					
V61	Quality assurance					
Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.						

PLACEMENT

Placement - Knowledge of the following:						
		SA	A	?	D	SD
K74	Customer driven approach					
K75	Employee assistance programs					
K76	Employment barriers for people with disabilities					
K77	Employment equity for people with disabilities					

Placement - Knowledge of the following (cont):						
		SA	A	?	D	SD
K78	Employment practices eg conducting interviews					
K79	Energy / labour saving methodology					
K80	How to expand job opportunities					
K81	Human Resource principles and practices					
K82	Job inductions					
K83	Job matching					
K84	Job search support eg job networks, placement agencies					
K85	Legal aspects of placement					
K86	Network opportunities					
K87	Placement routes for able bodied people eg employment agencies, Department of Labour etc					
K88	Placement process and procedures					
K89	Principles of enablement					
K90	Problems experienced by employers regarding employment for people with disabilities					
K91	Reasonable accommodations (types, legal aspects, costs)					
K92	Specific approaches / options available in bridging general placement barriers					
K93	Strategies to facilitate placement eg learnerships, skills development					
K94	Stress management					
K95	The client's abilities and different placement options in order to make realistic recommendations regarding safe return to work					
K96	Timing of placement					
K97	Understanding the role of the OT in facilitating placement and the role of others in the placement process eg social workers					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Placement – Skills:						
		SA	A	?	D	SD
S113	Accessibility assessment					
S114	Advise employer and make recommendations					
S115	Assist employer to find the most suitable candidate					
S116	Desensitize employer and employees					
S117	Ergonomic skills					
S118	Facilitate intervention procedures					
S119	Facilitation skills					
S120	Grade the return-to-work with realistic indicators of success					

Placement – Skills (cont):

		SA	A	?	D	SD
S121	Identify possible short comings or areas of concern and develop support networks for the client					
S122	Identify redeployment and job sharing opportunities as placement opportunities					
S123	Implement placement process					
S124	Manage the process involving the person with a disability, employer, family					
S125	Market people with disabilities as potential employees					
S126	Match the job and the person using reasonable accommodations where necessary					
S127	Plan placement process					
S128	Predict placement obstacles					
S129	Prepare the client for placement					
S130	Provide assistance during orientation – skills in facilitating and doing this					
S131	Provide the employer with information regarding medical conditions and the functional limitations which may be associated with the condition					
S132	Select appropriate placement possibility					
S133	Teach client job seeking skills eg interview skills					
S134	Use business jargon in order to leverage the right drivers within the work place					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Placement - Professional Values:

		SA	A	?	D	SD
V62	Apply principles that client is not being handed over, but that the OT is still involved and cares about the outcome					
V63	Be prepared to try again when failure happens					
V64	Commitment to a win-win solution for all players					
V65	High standard of written communication					
V66	Persuasive					
V67	Timeous reports and feedback					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

FOLLOW- UP

Follow-up - Knowledge of the following:

		SA	A	?	D	SD
K98	Common problems from common diagnosis (medical background and its effects on performance areas)					
K99	Different approaches for follow up in order to customize each case					
K100	Factors to address during follow up					
K101	Follow up procedures					
K102	Health risk management					
K103	How to set up a support system					
K104	Human Resource functions such as general functions, performance appraisals					
K105	Job coaching					
K106	Methodologies which will enable the client to be at the required productivity levels					
K107	Phases of recovery, resettlement and reintegration					
K108	Purpose of follow up					
K109	Research relating to importance of early return-to-work					
K110	Role of OT in follow up					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Follow-up – Skills:

		SA	A	?	D	SD
S135	Ability to be proactive – anticipate problems and try and prevent them					
S136	Ability to know and accept when a client is not coping with a job/work					
S137	Ability to sum up situations					
S138	Adequate mastery of languages					
S139	Assess client support system					
S140	Be willing to explore the unexplored – creative but practical options of return-to-work					
S141	Close a case					
S142	Determine progress and identify any work related problems					
S143	Diplomacy					
S144	Empower client to work					
S145	Facilitate the client's identification of problems and making of adaptations					
S146	Fading skills – teach client to work independently					

Follow-up – Skills (cont):

		SA	A	?	D	SD
S147	Implement follow up activities according to predetermine schedule					
S148	Implement job site modifications					
S149	Implement monitoring systems					
S150	Job restructuring skills					
S151	Plan follow up intervals with employer and client					
S152	Telephone skills					
S153	Wean client and manager					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Follow-up - Professional Values:

		SA	A	?	D	SD
V68	Compliance to rules, systems etc					
V69	Holistic approach					

Items which you feel have been omitted, suggestions and feedback as to the clarity of the items; items which do not fit under the heading and/or subheading; as well as other comments

OTHER

Other - Knowledge of the following:

		SA	A	?	D	SD
K111	Cultural diversity					
K112	Disability Management					
K113	Employment equity consulting					
K114	National education System					
K115	Risk factors affecting underwriting					
K116	South African morbidity and mortality rates					
K117	The areas with which work surfaces – insurance, medical, litigation, state departments, welfare and other non-governmental organizations					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Other – Skills:

		SA	A	?	D	SD
S154	Ability to see whole picture when writing a report					
S155	Competence in English as business language					
S156	Consulting skills					
S157	Corporate presentation					
S158	Disability claims assessment					
S159	Marketing skills					
S160	Multi tasking					
S161	Research skills using information technology					
S162	Sales skills					
S163	Self questioning skills					
S164	Use of computer programs eg spread sheets, word processing, book keeping					
S165	Written presentation					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Other - Professional Values:

		SA	A	?	D	SD
V70	Consider everyone you meet a potential client					

LEGISLATION RELATING TO THE EMPLOYMENT OF PEOPLE WITH DISABILITIES

Legislation - Knowledge of the following:

		SA	A	?	D	SD
K118	Labour Relations Act (LRA)					
K119	Code of Good Practice: Dismissal (CGP:D) as attached to the LRA					
K120	Employment Equity Act (EEA)					
K121	Code of Good Practice on the Employment of People with Disabilities as part of the EEA					
K122	Skills Development Act (SDA)					
K123	Occupational Health and Safety Act (OHSA)					
K124	Mines Health and Safety Act					
K125	Compensation for Occupational Injuries and Diseases Act (COIDA)					
K126	Unemployment Insurance Fund (UIF)					
K127	Disability insurance structures eg Workman's Compensation, Self Insured Benefits					
K128	Dispute Resolution eg Commission for Conciliation, Mediation and Arbitration (CCMA), Labour Court					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

No Skills or Professional Values identified

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

EMPLOYMENT SETTINGS

Employment - Knowledge of the following:

		SA	A	?	D	SD
K129	Availability of work					
K130	Categories of employment eg light, heavy, sedentary					
K131	Categories of occupations					
K132	Different work settings					
K133	Economic impact of injury and disability in the work place					
K134	Economic trends eg down sizing					
K135	Job grading					
K136	Open labour market including expectations and requirements – norms against which the worker will be measured					
K137	Protective workshops					
K138	Sheltered workshops					
K139	Supported employment					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

No Skills or Professional Values identified

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

GENERAL MANAGEMENT

Management - Knowledge of the following:

		SA	A	?	D	SD
K140	Financial administration					

Management – Skills:

		SA	A	?	D	SD
S166	Administration skills – running an office, stock control, record keeping					
S167	Basic book keeping skills					
S168	Business planning skills					
S169	Costing of services – billing and ensuring payment					
S170	Draw up programs, schedules and contracts					
S171	Financial record keeping skills					
S172	Manage staff and clients in a work assessment unit					
S173	Manage work preparation program					
S174	Management skills					
S175	Organizational skills					
S176	Record keeping skills					
S177	Set up a training facility					
S178	Time management					
S179	Timely invoicing and checking whether payment has been made					

Items which you feel have been omitted, suggestions and feedback as to the clarity of the items; items which do not fit under the heading and/or subheading; as well as other comments

Management - Professional Values:

		SA	A	?	D	SD
V71	Charge fair and acceptable rates					
V72	Provision of cost effect services					

Items which you feel have been omitted, suggestions and feedback as to the clarity of the items; items which do not fit under the heading and/or subheading; as well as other comments

EMBEDDED

Embedded - Knowledge of:

		SA	A	?	D	SD
K141	Anatomy					
K142	Occupational Therapy models and theories: Occupational Science, Bio-psychosocial model and creative participation					
K143	Physiology					
K144	Various medical conditions including cardiac conditions, neck and back conditions, cancer, HIV and AIDS					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Embedded - Skills:

		A	SA	?	D	SD
S180	Apply theoretical frameworks					
S181	Clinical judgment					
S182	Clinical skills					
S183	Decision making skills					
S184	Develop a therapeutic milieu					
S185	Develop rapport with evaluee					
S186	Evaluation of performance components including physical and psychological					
S187	Rehabilitation skills					
S188	Treatment of performance components					

Please add Items which you feel have been omitted, give suggestions as to the clarity of the items; identify items which do not fit under the heading and/or subheading; or any other comments.

Embedded - Professional Values:

		A	SA	?	D	SD
V73	Assessment is therapist directed					

Items which you feel have been omitted, suggestions and feedback as to the clarity of the items; items which do not fit under the heading and/or subheading; as well as other comments

Please answer the following questions:

1. Please tick the term which you prefer to use to cover all the services identified in the above questionnaire:
   a. Work practice services _____
   b. Vocational rehabilitations _____
   c. Work preparation _____

   Please give your reasons for this.

2. If you work in this field of occupational therapy, do you need to have knowledge and skills in all the vocational rehabilitation phases ie evaluation, preparation, vocational guidance, placement and follow up? Yes _____ No _____

   Please give your reasons for this.

3. Please give some indication of how you would suggest that the above items be further categorized. For example, would you prefer to use the phases of vocational rehabilitation or any other way?

4. How long did it take you to complete this questionnaire? _____

5. In terms of the purpose of this study, did you find this questionnaire (please tick):
   a. Too long _____
   b. Too short _____
   c. Just right _____

6. Would you have preferred the researcher to further categorize the items in this questionnaire? Yes _____ No _____
   Please give reasons for this.

Any other comments or suggestions regarding the Round 2 Questionnaire.

ANNEXURE L:

Research Update

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Post Net Suite 135
Private Bag X4
Wierda Park, 0149
21 June 2005

Dear

Research update
Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

A sincere thank you for completing the Round 2 Questionnaire. The response rate was 100%. This is incredible and I appreciate your time, input and feedback.

I would like to bring you up to date with the research process. Once I had received all the questionnaires, I conducted a preliminary data analysis, but realized that the data analysis was more complex than I had anticipated. Together with my research supervisor, we approached the Department of Statistics at the University of Pretoria for further assistance as well as Mrs Susan Beukes of the Professional Board for Occupational Therapy and Medical Orthotics/Prosthetics – both of which were very helpful in furthering my research. The Department of Statistics is currently in the process of capturing the data and analysing your questionnaires.

Research data will be compared with the document dealing with Standards of Practice for Occupational Therapists which is available on the HPCSA's website. The purpose of this is to identify similarities and differences so that professional competencies required for vocational rehabilitation can be formulated in line with work already conducted by the HPCSA. I am very excited about this, as the research will have an impact on occupational therapists in the field of vocational rehabilitation.

It is also important to note that I have had to change the focus of the research objectives slightly. Due to the lengthy research process, I will be unable to determine on which level (under or post graduate) the identified professional competencies should be developed. I will also only be able to compile a profile of work practice services currently delivered by OTs, and not what should be delivered, as this is another Delphi Study!

As a result, the Third Questionnaire will only be posted within the next 6 to 8 weeks. This questionnaire should take you less time to complete than the second one. It will be accompanied by a questionnaire relating to work practice services and the improvement of professional competencies. This will help to draw up a profile of the services offered as well as reasons for non-delivery of services.

May I again appeal to you to continue supporting this research through your time and input. Research rigor will be maintained through a high response rate and I hope that we can achieve a 100% response rate with the next questionnaire!

Please do not hesitate to contact me to discuss any aspect of this study. You may reach me at:

Cell : 083 407 8463 Home : (012) 666 7408
Work : (012) 329 7800 (mornings. Please leave message)
E-mail : tbuys@postino.up.ac.za

Kind regards
Tania Buys (Research leader)

ANNEXURE M:

Round Three Covering Letter

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Post Net Suite 135
Private Bag X4
Wierda Park
0149

12 October 2005

Dear

Round 3 Questionnaire

Title of research study

Professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market.

A sincere word of thanks for completing the Round 2 Questionnaire. The response rate was 100% - all 29 research participants returned their questionnaires! I hope that we are able to achieve the same response rate for this questionnaire and thus maintain the research rigour which we have thus far achieved.

As for the Second Questionnaire, I thought it necessary to explain how this questionnaire has been compiled. The following was done:

- All the responses from the participants were statistically analysed. The mean and standard deviation was obtained for all the items and then ranked.
- Items were selected from this list provided they met the following criteria:
    - The mean of the item was 3,5 and higher, indicating agreement between the participants.
    - The standard deviation was subtracted from the mean of these items. Only those items whose mean (after the standard deviation had been subtracted) was equal to 3,5 or higher were selected for the Third Questionnaire.
- The above items were organized in rank order of their mean. From this categories of items emerged, and the process of combining items began in order to collapse the final number of items. Items were combined on the basis of being similar to, or as being part of, a specific item. Values were not categorized and are included as one group only, as participants felt that values were applicable to the vocational rehabilitation process, and not only one aspect thereof. This avoids duplication. As 86% of the participants felt that knowledge and skills of all the phases were required in order to work in vocational rehabilitation, items were logically combined from all the vocational rehabilitation phases.
- All the comments from the participants were taken into consideration. From these comments, items were either clarified using a description; omitted if one or more participants stated that they were unsure of the meaning of the item; or combined with another item.
- The process of collapsing items was repeated 4 times
- An accurate track record was kept of how the items were managed.

- The Third Questionnaire was then developed. New numbers were assigned to the items. This questionnaire was:
  - Subjected to peer examination by a colleague in the field in order to contribute towards the dependability of the data (as was the Second Questionnaire). Appropriate changes were made following this feedback
  - Checked by the statistician for ease of statistical analysis
  - Subjected to a confirmability audit by one of the co-research supervisors. This contributes towards the neutrality of data.

The Round 3 Questionnaire was finalized. A summary of the final compilation of items in this questionnaire is included in the table below.

	Number of items in Round 2 Question-naire	**Number of items combined**	**Number of items which remained the same**	**Number of items omitted**	**Number of new items added**	**Final number of items**
Knowledge	144	50 35%	45 31%	49 34%	2	**66**
Skills	188	63 34%	72 38%	53 28%	6	**99**
Values	73	28 39%	36 49%	9 12%	2	**47**
Total items	405 100%	141 35%	153 38%	111 27%	10	**212**

You will note that I have again asked you to identify your preference of terminology for this field. This is explained on the last page of the questionnaire.

As for the second questionnaire, you are required to indicate to what degree you agree or disagree with the items, using a Likert Scale. After careful consideration of the specific item, please **tick off your response**. There is also space for general comments.

Also complete the form requesting you to identify the services which you currently offer as an occupational therapist in this field. This will assist in the final interpretation of data and facilitate appropriate recommendations.

Would you kindly complete this questionnaire and the form, and return them to me in the self addressed franked envelope by 4 November 2005.

Many thanks for your patience and commitment to this extended process. Please do not hesitate to contact me to discuss any aspect of this study. You may reach me at:

Cell : 083 407 8463 Work : (012) 329 7800
Home : (012) 666 7408 E-mail : tbuys@postino.up.ac.za

Kind regards

Tania Buys
Research Leader

ANNEXURE N:

Round Three Questionnaire

Participant number

Round 3 questionnaire

Using the Likert Scale, please indicate to what degree you agree or disagree with the items as generated from the Round 2 questionnaire. Your response must be considered in relation to the question: " **What are the professional competencies required by occupational therapists delivering work practice services to workers with disabilities in the South African open labour market?**"

Please tick the appropriate column. After each section, there is a space for you to add any comments you feel relevant. The items have been listed randomly.

The abbreviations used for the Likert scale are as follows:

SA - Strongly agree
A - Agree
? - Uncertain
D - Disagree
SD - Strongly disagree

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
	KNOWLEDGE					
	Knowledge of conditions/medical aspects:					
1K	Inappropriate illness behaviour					
2K	Various medical conditions including cardiac conditions, neck and back conditions, cancer, pain and HIV and AIDS					
3K	Anatomy					
4K	Physiology					
	Knowledge of general work practice aspects:					
5K	Vocational Rehabilitation process					
6K	Philosophy of work including benefits of employment and problems surrounding unemployment/non-productivity					
7K	Injury prevention					
8K	Cultural diversity					
9K	Health risk management					
10K	Disability equity consulting					
11K	Disability Management					
	Knowledge of employment settings:					
12K	Classification of physical demand characteristics of work ie sedentary, light, medium, heavy and very heavy					
13K	Categories of occupations such as manual, clerical, domestic etc					
14K	Open labour market including expectations and requirements – norms against which the worker will be measured					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
15K	Different work settings (other than the open labour market) including sheltered and protective workshops as well as supported employment					
16K	Dictionary of Occupational Titles (DOT)					
	Knowledge of legislation and related aspects					
17K	Labour Relations Act including the Code of Good Practice: Dismissal (CGP: D)					
18K	Employment Equity Act including the Code of Good Practice on the Employment of People with Disabilities					
19K	Employment equity for people with disabilities					
20K	Skills Development Act focusing on learnerships and Sector Education and Training Authorities (SETAs) including where to obtain information on learnerships and SETAs					
21K	Occupational Health and Safety Act including principles of occupational health and safety					
22K	Disability Insurance structures eg Workman's Compensation, insurance benefits					
23K	Ergonomic and building guidelines (as related to potential and current disabilities) as defined by various authorities including the South African Bureau of Standards					
24K	Human Resource principles including recruitment, selection, training, grievance procedures, performance management processes, employee benefits, job induction and conditions of service					
	Knowledge of team members/role players					
25K	Various industry and other role players such as unions, Human Resource Managers and Employee Assistance Practitioners					
26K	Network opportunities					
	Knowledge of evaluation:					
27K	Functional Capacity Evaluation process					
28K	A variety of various assessment techniques and methods including work samples, work simulation, job trials, formal tests and self-report questionnaires					
29K	Norm referenced and criterion referenced testing					
30K	Where to source assessment techniques / methods / work samples					
31K	The context in which Functional Capacity Evaluations takes place including insurance assessment, compensation purposes and return-to-work					
32K	Non-standardized testing					
33K	Measurement of productivity/work speed					
34K	OTs (own) strengths and limitations					
	Knowledge of vocational guidance					
35K	Vocational guidance process					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
	Knowledge of treatment/intervention including preparation for placement:					
36K	Goal setting					
37K	On-site-treatment including the use of job trials and transitional work programs					
38K	Work hardening *(type of treatment programme that is graded work simulation to increase an individual's productivity to an acceptable level to be able to function in a work environment)*					
39K	Work conditioning *(an intensive work related, goal orientated conditioning programme designed specifically to restore systemic neuro-muscular functions and cardiopulmonary functions. The objective of this programme is to restore physical capacity and function to enable the patient/client to return to work)*					
40K	Work simulation					
41K	Phases of recovery, resettlement and reintegration					
42K	Occupational Therapy Models and theories including Occupational Science, Bio-psychosocial model and Creative Participation. These are used as a scientific basis for treatment					
43K	Stress Management					
44K	Life skills training					
45K	Prevocational skills training					
46K	Job seeking (job acquisition) skills training					
	Knowledge of training:					
47K	Educational and training options for people with disabilities including options available in the absence of formal training such as the use of community settings for functional employment training					
	Knowledge of placement:					
48K	Factors affecting the employability of a person					
49K	Reasonable accommodations and assistive devices - different types, costs and the legal aspects relating to the use and implementation of these					
50K	Different placement options in order to make realistic recommendations regarding safe return-to-work					
51K	Problems experienced by employers regarding the employment of people with disabilities					
52K	Understanding the role of the OT in facilitating placement and the role of others in the placement process eg Social workers					
53K	Research, policies and procedures affecting early return-to-work following illness/disability					
54K	Employment barriers for people with disabilities and specific approaches/options in bridging these barriers					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
55K	Placement routes for able bodied people eg employment agencies, Department of Labour					
56K	Job finding and job search resources including those for further referral and placement of people with disabilities, network opportunities and placement agencies					
57K	Strategies to facilitate placement eg learnerships, skills development					
58K	Placement process and procedures					
59K	Legal aspects of placement					
60K	Job matching					
61K	Employment practice eg conducting interviews					
62K	Availability of work/jobs					
63K	How to set up a support system for the client					
	Knowledge of follow up:					
64K	Purpose of follow up, follow up procedures and factors to address during follow up					
65K	Role of OT during follow up					
66K	Different approaches for follow up in order to customize each case					
	Comments regarding knowledge:					
	SKILLS					
	General work practice skills					
1S	Apply the vocational rehabilitation process					
2S	Case management skills					
3S	Consulting skills (assisting a client or agency or other provider by identifying and analyzing issues, providing information and advice, and developing strategies for current and future actions)					
4S	Market people with disabilities as potential employers					
	Communication skills:					
5S	Report writing skills					
6S	Verbal communication skills					
7S	Competence in English as a business language					
8S	Corporate presentation skills – present verbal and printed information in a corporate environment					
9S	Presentation skills – develop and present information using appropriate media such as Power Point slide shows etc					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
	Skills related to legislation:					
10S	Mediation skills					
11S	Advise employer and client regarding legal aspects without moving into the terrain of a lawyer					
12S	Refer client to a "legal" specialist when necessary					
	Teamwork/role player skills:					
13S	Networking skills					
14S	Refer client or suggest referral of client to appropriate team members / other role players					
15S	Work with Human Resource representatives					
16S	Work with potential employers					
17S	Work with supervisors					
18S	Work with safety representatives					
19S	Work with union representatives					
	Evaluation skills:					
20S	Correlate observation skills with results of formal tests					
21S	Formulate appropriate recommendations and conclusions including a realistic projection of the client's ability to work					
22S	Observation skills					
23S	Record results of the evaluation					
24S	Conduct a comprehensive Functional Capacity Evaluation including formulating purpose/aim of the evaluation, appropriate selection and use of tests and evaluation methods					
25S	Score and interpret results of selected tests and evaluation methods					
26S	Evaluate performance components including physical and psychological					
27S	Detect sub optimal performance					
28S	Environmental assessment skills (of the work environment)					
29S	Develop rapport with evaluee					
30S	Pain assessment					
31S	Structure evaluation environment					
32S	Identify whether training/reskilling is necessary					
33S	Assess client support system					
34S	Interview skills					
35S	Assessment of interests when exploring different work types					
36S	Accessibility assessment (assess interior and exterior environment in relation to an individual's physical and/or psychological abilities)					
37S	Ergonomic assessment and recommendation skills					
	Job analysis skills:					
38S	Conduct a job analysis by means of reviewing job descriptions, using collateral information and/or conducting a work visit					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
39S	Match the job and the person using reasonable accommodations where necessary and appropriate					
40S	Ability to assess a broad range of occupations and create a short list of options/possible jobs with or without modifications/accommodations for the client					
41S	Conduct a work visit					
	Vocational guidance skills:					
42S	Apply vocational guidance process					
43S	Develop client's insights into abilities and requirements of the work					
	Treatment/intervention skills including preparation for placement:					
44S	Measure progress and determine when treatment must be terminated					
45S	Plan, implement, grade, evaluate and manage vocational preparation program					
46S	Rehabilitation skills (help individuals regain skills lost as a result of illness/disease/injury using compensatory or alternative methods and/or assistive devices)					
47S	Work hardening skills					
48S	Facilitation of motivation and participation					
49S	Develop a therapeutic milieu					
50S	Ability to predict success, facilitate outcomes and set alternatives					
51S	Treatment of performance components					
52S	Counseling skills					
53S	Teach back saving principles, safe working principles to avoid further injury					
54S	Develop home programs					
55S	Apply theoretical frameworks					
56S	Develop prevocational skills					
57S	Teach the client job seeking skills (or assist with preparation). This includes interview skills, CVs, cover letters and referral letters					
	Training skills:					
58S	Suggest and implement reasonable accommodations and adaptations to training processes and materials					
59S	Ongoing evaluation whilst client is training to identify and deal with client problems					
60S	Match the client's abilities with the correct training course and refer appropriately in order to improve skills					
61S	Sensitization of trainers where needed					
62S	Communication with training providers					
63S	Implement job trials as part of training					
64S	Implement work transitional programs as part of training					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
65S	Assist client with application for training including completing application forms, letters of motivation					
	Placement skills:					
66S	Advise employer and make recommendations regarding placement					
67S	Prepare client adequately for placement taking work norms into consideration					
68S	Fading skills – teach client to work independently					
69S	Plan and implement placement process					
70S	Provide employer with information regarding medical conditions and the functional limitations which may be associated with the condition					
71S	Grade return-to-work with realistic indicators of success					
72S	Employer negotiation skills					
73S	Select appropriate placement possibility					
74S	Identify job restructuring, job sharing and redeployment possibilities as placement opportunities					
75S	Sensitize employer and employees regarding disability					
76S	Skills in motivating/empowering client and family to view placement as important					
77S	Facilitate and provide assistance during orientation when required					
78S	Identify and overcome placement barriers including job site modifications					
	Follow up skills:					
79S	Determine progress and identify any work related problems					
80S	Facilitate the client's identification of problems and making of adaptations – teach client to problem solve					
81S	Plan follow up intervals with client and employer					
82S	Close a case					
	General skills:					
83S	Thinking on your feet					
84S	Clinical judgment					
85S	Interpersonal skills					
86S	Ability to be proactive – anticipate problems and try to prevent them					
87S	Search for information on unfamiliar topics including medical conditions					
88S	Lateral thinking skills					
89S	Assertiveness					
90S	Diplomacy					
	Management skills:					
91S	Time management skills					
92S	Organizational skills					
93S	Business planning skills					
94S	Costing of services, billing and ensuring payment					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
95S	Project management skills including drawing up programs, schedules and contracts					
96S	Manage staff and clients					
97S	Administration skills – running an office, stock control and record keeping					
98S	Marketing skills					
99S	Basic book keeping skills					
	Comments regarding skills:					
	VALUES					
	Values:					
1V	Ethical behaviour					
2V	Objectivity					
3V	Thoroughness					
4V	Work with other professionals, knowing your professional limits and refer appropriately.					
5V	Insight					
6V	Integrity					
7V	Practical and realistic					
8V	Consistency					
9V	Deliver highest level of service possible					
10V	Empower client versus doing it for them					
11V	Reliability					
12V	Focus on the client's abilities and strengths rather than the disabilities when guiding towards employment					
13V	Confidence					
14V	Maintain and update professional knowledge					
15V	Giving appropriate feedback					
16V	High standard of professional communication					
17V	Goal orientation					
18V	Obtain informed consent from client					
19V	Holistic approach					
20V	Respect					
21V	Perseverance					
22V	Client centered approach					
23V	Quality assurance					
24V	Innovation					
25V	Need to be open to changes – trying different approaches with client's feedback					

		SA	A	?	D	SD
	Office use only	**5**	**4**	**3**	**2**	**1**
26V	Understanding					
27V	Commitment to a win-win solution for all players					
28V	Provision of cost effective services					
29V	Dedication					
30V	Adaptability					
31V	Timeous reports and feedback					
32V	Positive attitude					
33V	Professional appearance					
34V	Punctuality					
35V	Compliance to, and respect for, rules, systems etc					
36V	Empathy					
37V	Sharing to promote the occupational therapy profession					
38V	Creativity					
39V	Scientific approach					
40V	Sense of humour					
41V	Firmness					
42V	Optimism					
43V	Persuasive					
44V	Availability					
45V	Apply principles that client is not being handed over, but that the OT is still involved and cares about the outcome					
46V	Fairness as a basic human right					
47V	Determination to overcome barriers					
	Comments regarding values:					

You were asked in the second questionnaire to select a term which you prefer to use to cover the services identified in the questionnaire. The results of this question are as follows:

Total number of participants	Work practice services	Vocational rehabilitation	Work preparation
29 (100%)	14 (48%)	13 (45%)	2 (7%)

These results indicate that there is not consensus on which term to use, and it is important to ask you to again identify which term you would prefer. As few participants preferred the term “work preparation”, only the terms “work practice services and vocational rehabilitation” will be taken into account. For your information, I have included the following:

Work practice	Vocational rehabilitation
Definition	
Those therapeutic interventions and programmes in occupational therapy which aim to enable clients to undertake and maintain participation in productive activities. Reference: Joanne Pratt and Karen Jacobs (editors). (1997). *Work Practice International Perspectives*. Oxford: Butterworth-Heinemann.	*A process which enables disabled persons to secure, retain and advance in suitable employment and thereby furthers their integration or reintegration into society.* Reference: International Labour Office. (2002). *Managing disability in the workplace*. Geneva: International Labour Office.
Comments from participants	
❑ It avoids words like rehabilitation which implies a problem ❑ Most encompassing term – in some cases, the services are purely evaluative / advisory and no rehabilitation or work preparation takes place ❑ Vocational rehabilitation is not accepted in a business model. Few people in the open labour market know what vocational rehabilitation means ❑ It is wider than the other 2 terms - includes traditionally non medical services ❑ It also encompasses non disabled clients ❑ Comprehensive term	❑ Easier to search for information using vocational rehabilitation ❑ Most "legislations" use this term ❑ Umbrella term – its phases cover all aspects of work preparation ❑ It provides a professional medical term which covers all aspect of work for people with disabilities ❑ Well known term ❑ It is a term known to OTs and to non OTs ❑ Work practice services can refer to recruitment / personnel services ❑ Most comprehensive term

Having read through the above information, please tick the term which you would suggest to use to cover all the services identified in this questionnaire:

Work practice	
Vocational rehabilitation	
Please give reasons for your choice	

ANNEXURE O:

Work Practice Survey

Participant number

Vocational rehabilitation / work preparation / work practice services

1. Please complete the following table regarding the vocational rehabilitation / work preparation / work practice services which you currently are able to deliver. Please tick ✔ the appropriate columns. Should a service which you provide, not be listed, please add it at the end of the table under other services.

	Do you provide this service?		**If yes, what is your referral base? You may tick more than one column.**						**If no, what is the main reason for this? You may tick more than one column.**				
Service	Yes	No	Doctors	Insurance companies	Employers	Attorneys / lawyers	Client or "patient"	Other (please specify)	Lack of referrals	Insufficient practice resources	Lack of funding	Lack of OT skill	Other (please specify)
Office use only	1	2	3	4	5	6	7	8	9	10	11	12	13
Prevention/education services													
1. Back education													
2. Ergonomics													
3. Injury prevention													
4. Stress management													
5. Joint protection/energy conservation													
6. Wellness and health promotion programs													
Evaluation/assessment services													
7. Job analysis by means of work visits													

Service	Do you provide this service?		If yes, what is your referral base? You may tick more than one column.						If no, what is the main reason for this? You may tick more than one column.				
	Yes	No	Doctors	Insurance companies	Employers	Attorneys / lawyers	Client or "patient"	Other (please specify)	Lack of referrals	Insufficient practice resources	Lack of funding	Lack of OT skill	Other (please specify)
Office use only	1	2	3	4	5	6	7	8	9	10	11	12	13
8. Functional Capacity Evaluations													
9. Medico-legal assessments													
10. Pre-employment assessment													
11. Disability grant assessments													
12. Assessment of learners (school children) with disabilities with a view to placement													
13. Ergonomic assessment of work sites													
14. Disability determination for disability equity purposes (in terms of the EEA)													
15. Worker's compensation assessment													
16. Job modification / reasonable accommodation assessment													

Service	Do you provide this service?		If yes, what is your referral base? You may tick more than one column.						If no, what is the main reason for this? You may tick more than one column.				
	Yes	No	Doctors	Insurance companies	Employers	Attorneys / lawyers	Client or "patient"	Other (please specify)	Lack of referrals	Insufficient practice resources	Lack of funding	Lack of OT skill	Other (please specify)
Office use only	1	2	3	4	5	6	7	8	9	10	11	12	13
17. Assessment for learnership purposes													
Vocational guidance services													
18. Vocational guidance/counselling													
Intervention services													
19. Job modification													
20. Reasonable accommodation													
21. Case management													
22. Vocational skills development and/or training													
23. Work hardening													
24. Work conditioning													
25. Treatment of acute injuries eg splint making													
26. Rehabilitation services[1]													
27. Prevocational skills training													

[1] Help regain skills lost as a result of illness/disease/ injury using compensatory or alternative methods and/or assistive devices. Quick Reference Dictionary for Occupational Therapists (3rd edition). Thorofare: Slack Incorporated, 2001.

Service	Do you provide this service?		If yes, what is your referral base? You may tick more than one column.						If no, what is the main reason for this? You may tick more than one column.				
	Yes	No	Doctors	Insurance companies	Employers	Attorneys / lawyers	Client or "patient"	Other (please specify)	Lack of referrals	Insufficient practice resources	Lack of funding	Lack of OT skill	Other (please specify)
Office use only	1	2	3	4	5	6	7	8	9	10	11	12	13
28. Development of job seeking skills eg interview skills, CVs etc													
29. Sensitization programs (regarding disability)													
Placement services													
30. Job coaching as part of supported employment													
31. Facilitating early return to work of existing employees													
32. Identification of job restructuring, job sharing and redeployment possibilities as placement opportunities													
33. Placement of people with disabilities													
Follow up services													
34. Follow up services													

Service	Do you provide this service?		If yes, what is your referral base? You may tick more than one column.						If no, what is the main reason for this? You may tick more than one column.				
	Yes	No	Doctors	Insurance companies	Employers	Attorneys / lawyers	Client or "patient"	Other (please specify)	Lack of referrals	Insufficient practice resources	Lack of funding	Lack of OT skill	Other (please specify)
Office use only	1	2	3	4	5	6	7	8	9	10	11	12	13
Diverse services													
35. Consulting services[2]													
36. Disability management programs[3]													
37. Mediation services													
38. Advising client (employer or "patient") regarding legal aspects without moving into the terrain of a lawyer													
Other services													
(Please specify)													

[2] Assisting a client or agency or other provider by identifying and analysing issues, providing information and advice and developing strategies for current and future actions. Jacobs K, Jacobs L (editors). Quick Reference Dictionary for Occupational Therapists (3rd edition). Thorofare: Slack Incorporated, 2001.

[3] A work place process designed to facilitate the employment of people with disabilities through a coordinated effort and taking into account individual needs, work environment, enterprise needs and legal responsibilities. International Labour Office. Managing disability in the workplace. Geneva: International Labour Office, 2002

2. How have you developed your vocational rehabilitation / work preparation / work practice services knowledge and skills? *Please tick the appropriate columns, and feel free to give comments where appropriate*.

	Please tick ✔	Comments
Reading		
1. FOCUS		
2. South African Journal of Occupational Therapy		
3. INSTOPP newsletter		
4. International Occupational Therapy journals		
5. South African Acts and Codes of Good Practice		
6. Other *(please give some information)*		
Searching the web / using the internet		
7. Obtaining information by searching the web		
Attending short courses / workshops presented by:		
8. Universities		
9. OTASA branch groups		
10. OTASA (National Congress)		
11. INSTOPP		
12. OTLA		
13. POTS		
14. Gauteng Vocational Rehabilitation Work Group		
15. Medico-legal Interest Group		

	Please tick ✔	Comments
16. Others *(please give information)*		
Attending interest groups / specialized meetings		
17. OTASA branch groups *(please give information)*		
18. Medico-legal interest group		
19. OTLA		
20. Journal clubs		
21. POTS		
22. Other interest groups *(please give information)*		
Networking and asking for advice/information/guidance		
23. University lecturers		
24. OT colleagues and friends		
25. Colleagues and friends who are not OTs		

	Please tick ✔	Comments
26. Other *(please give information)*		
Further study		
		Please specify the name of the degree etc
27. Honours degree		
28. Masters degree		
29. Post Graduate Diploma		
30. Other *(please give information)*		
Other		
31. *(Please give information)*		