

THE MEETING POINT: PUBLIC NARRATIVES

This chapter sets the stage for the meeting between the three actors, Orthotics/Prosthetics, Psychology and Higher Education. The story map organises the public narratives in past and present experiences and future intentions. The narrative framework provides a narrative core for orthotics/prosthetics, psychology and higher education as the plot unfolds.

In this chapter I introduce you, the reader, to The Meeting Point of the public narratives in the form of a play, because just like Burke (1945, 1969, 1973), I believe that life itself is a theatre and that all utterances are performances. Rising to the challenge of creating a 'story' from historical texts (the literature), I have applied the logic of Burke's (1945) pentad in analysing narrative performances (acts) to see how Orthotics/Prosthetics, Psychology and Higher Education (the actors) interact with culturally available meta-narratives (genres) in the course of a psychology module for B.Tech Medical Orthotics and Prosthetics (scene). The pentad serves as an analytic system by which to understand human motives rhetorically. The pentad consists of act or action (what happens/happened or is/was done), an agent or actor (the one who does/did the act), the scene (the setting in which an act takes/took place), agency (the means by which the act is/was carried out), and purpose (the goal or objective of the act) (Burke, 1945).

I am specifically interested in how public narratives emerge in social interaction and how meta-narratives position performers as authoritative or not. Burke (1945) suggests that critical analysis should be directed at the dyadic tension between pairs

of elements in the pentad. When some element in the pentad is disturbed – for example, an actor may find that the scene changes or that a new action has been initiated – the elements no longer maintain their balance and seek a new balance, or are destroyed in the process of change (Burke, 1945).

Richmond's (2002) story map provides temporality to the stories being told by dividing them into past experiences, present experiences and future intentions. Furthermore, the narrative framework focuses on the core narrative through the categories of abstract, orientation, complicating action, resolution, evaluation and coda (Labov, 1972) (see chapter 3, *A story map to guide the way, Step 2: Analysis*, for a discussion of these concepts).

In the following section, I introduce my construction of academic texts regarding teaching and learning practices in higher education, historical texts regarding the history of orthotics/prosthetics and psychology in South Africa, and informal and formal documentation on the process of establishing a new postgraduate learning programme in B.Tech Medical Orthotics and Prosthetics. These narratives are presented in the form of a play that takes place in different historical scenes that represent the 'evolution' of Orthotics/Prosthetics (Act I), Psychology (Act II) and Higher Education (Act III) in the South African context. The meeting point between the three actors culminates in the construction of a psychology module for B.Tech Medical Orthotics and Prosthetics (Act IV). I conclude this section by synthesising highlights in the public narratives and reflecting on narrative themes that emerged in the analysis of the public texts.

As the narrator and author of this thesis I cannot remove myself from the text; I can only pick the disguise in which I will appear (Tenni, Smyth & Boucher, 2003). You will recognise my research voice in the disguise and position of the narrator that I have negotiated in the play. Furthermore, I include my research voice through sections printed in italics, which contain evaluative comments following the Labov's (1972) structure of abstract, orientating the audience, complicating actions, resolution and coda. The public stories that I tell about The Meeting Point are my interpretation of interpretations of historical texts and are influenced by the meta-narratives that were culturally available to me. The way in which I allow some voices to be heard and other voices to be silent is

merely one of representation (or social construction) and not truth statements. I would like to invite you, as the audience, to construct your own meanings of the play.

THE MEETING POINT

A play by
Ilzé Grobler

Cast of Characters

Orthotics/Prosthetics (O/P): Can be played by a male/female dressed in a white jacket that represents the professional practice of orthotics/prosthetics.

Psychology: Can be played by a male/female whose formal role is to help people manage the distressing problems of life and represents the professional practice of psychology, as well as the academic involved in knowledge construction and theory building.

Higher Education: Can be played by a male/female who represents the institutional practice of knowledge construction.

Act I: Orthotics and Prosthetics

Scene One

(Draw curtain, lights on)

Scene

The scene is depicted in the décor of a world war and transforms later in Scene One into an Artificial Limb Centre somewhere in South Africa.

Time

Past experiences

The narrator introduces the first actor, Orthotics/Prosthetics, to the audience

Narrator: *(Orientating the audience)*

Orthotics and prosthetics are unique allied health science professions focusing on a common overall goal of rehabilitation. Orthotics involves precision and creativity in the design and fabrication of external braces (orthoses) as part of a patient's treatment process. The orthosis acts to control weakened or deformed regions of the body of a physically challenged person. Orthoses may be used on various areas of the body including the upper and lower limbs, cranium, or spine. Common orthotic interventions include spinal orthoses for scoliosis, haloes used in life-threatening neck injuries, and ankle foot orthoses used in the rehabilitation of children with cerebral palsy. More recently, orthoses have been designed to dramatically realign the bones of the skull in infants with positional plagiocephaly (Georgia Institute of Technology, 2003).

Prosthetics involves the use of artificial limbs (protheses) to enhance the function and lifestyle of persons with limb loss. The prosthesis must be a unique combination of appropriate materials, alignment, design, and construction to match the functional needs of the individual. These needs are complex and vary for upper and lower extremities. Lower limb protheses might address stability in standing and walking, shock absorption, energy storage and return cosmetic appearance and even extraordinary functional needs associated with running, jumping, and other athletic activities. Upper limb protheses might address reaching and grasping, specific occupational challenges such as hammering, painting, or weight lifting, and activities of daily living such as eating, writing, and dressing (Georgia Institute of Technology, 2003).

Certified orthotists and prosthetists in practice commonly lean towards providing care in a single discipline, although they have the knowledge to combine their training and experience in both disciplines to enhance each. The orthotist/prosthetist works as a member of the patient's

rehabilitation team. Potential members of a rehabilitation team include physician, orthotist/prosthetist, nurse, physical and/or occupational therapist, psychologist, social worker, dietician, vocational counsellor, and, most importantly, the patient. A sound understanding of the patient's condition, prognosis, and available treatment options can help each member in the multidisciplinary team to educate patients to become active partners in their own rehabilitation (Georgia Institute of Technology, 2003).

Abstract

The profession of orthotics and prosthetics began with the training of tradesmen as bonesetters and brace makers and evolved after the First and Second World War to in-service training of orthotists and prosthetists with the establishment of national and international Artificial Limb Centres. Standardisation of training led to the introduction of a National Diploma: Medical Orthotics and Prosthetics (equivalent to International Society on Prosthetics and Orthotics [ISPO] Category II) at Technikon Pretoria in 1985. The ISPO recognised the need for Category I professionals in developing countries to train and supervise Category II and III professionals. This, together with the larger international context of orthotist/prosthetist training, set a specific standard or social reality by which southern African training would be benchmarked. The approval and introduction of a new learning programme in B.Tech: Medical Orthotics and Prosthetics at Tshwane University of Technology in 2003 represents the first step towards the international recognition of orthotists and prosthetists as key members of the rehabilitation team.

Narrator: *(Orientating the audience)*

The narrative beginnings of the orthotist/prosthetist profession and the international context seem to guide the public narratives of the evolution of a B.Tech Medical Orthotics and Prosthetics programme in southern Africa. These public narratives shape the development of a professional identity in orthotics and prosthetics. Could you tell me more about the origins of this profession?

O/P: The first traces of the orthotist/prosthetist profession date back to the

5th Egyptian Dynasty (2750-2625 B.C.), with the excavation of the oldest splint – a primitive brace. In 500 B.C., Herod wrote of a prisoner who escaped from the stocks by cutting off his foot, which he later replaced with a wooden substitute – the earliest known reference to an artificial limb (Oandp.com development team, 1990). Bonesetters and brace makers eventually developed into what we now call orthopaedic surgeons and orthotists.

The study of prosthetics has been closely associated with amputation surgery performed as a lifesaving measure from the aftermath of battle. Each major war has been the stimulus for the improvement of amputation surgical techniques and for the development of improved prostheses. It was not until the twentieth century when the most significant contributions to prosthetic/orthotic sciences were made, stimulated by the aftermath of the First and Second World Wars and the polio epidemics of the late 1940s and early 1950s (Wilson, 1992). In order to improve the quality and performance of assistive devices at the end of World War II, particularly for veteran amputees, the U.S. Government sponsored a series of research and development projects under the auspices of the National Academy of Sciences that would forever change the manner in which orthotics and prosthetics would be practised (Committee on Artificial Limbs, 1947).

Narrator: How did the profession evolve in South Africa as opposed to the rest of the world?

O/P: Between 1945 and 1976, universities, the Veterans Administration, private industry, and other military research units were subcontracted to conduct various prosthetic research projects (Fishman, 2001). Although the focus of the Artificial Limb Programme was prosthetics, it was anticipated that these efforts would also benefit orthotics. In 1947, Artificial Limb Centres were established in South Africa. The Auckland Park Centre (Johannesburg) and Vrede Hospital (East London)

opened their doors for a four-year in-service training programme for orthotic and prosthetic technicians, driven by physicians and nursing personnel (J. Burger, personal communication, August 3, 2004). By the 1980s the continuing introduction of new materials and methods spurred the profession of prosthetics and orthotics to rapidly evolve as a changing discipline.

In an attempt to keep its professionals updated, the 1990s saw significant advancement in the development of educational programmes with the establishment of national education accreditation through a subsection of the American Medical Association. The Department of Education in South Africa standardised the training of orthotists and prosthetists in 1978, and in 1985 Technikon Pretoria offered the first diploma training in orthotics and prosthetics (J. Burger, personal communication, August 3, 2004). The diploma consisted of three years of theoretical and practical training followed by one year of experiential training (internship).

Narrator: It seems as though there was a movement towards standardisation within the profession of orthotics/prosthetics, but what's in a title?

O/P: Because different titles were used in different areas for the same kind of work, with further confusion introduced by language and translation, the International Society on Prosthetics and Orthotics (ISPO) developed a categorisation system based on the levels of education and training provided, which avoided dependence on titles (Hughes, 1998). The categories include the following (ISPO, 1998, no page number):

- *Category I*

Prosthetist/Orthotist (or equivalent term)

Entry requirement: University entry level (or equivalent)

Training: three to four years formal structured training leading to university degree or equivalent

- *Category II*

Orthopaedic Technologist (or equivalent term)

Entry requirement: 'O' level (or equivalent) – the usual requirement for paramedic education in developing countries

Training: three years formal structured training – lower than degree level

- *Category III*

Prosthetic/Orthotic Technician (or equivalent term)

Entry requirement: Elementary school diploma.

Training: in-service

Narrator: What informs the need for training in developing countries?

O/P: Only two institutions in Africa offer training in orthotics/prosthetics. The Tanzania Training Centre for Orthopaedic Technologists (TATCOT), Tanzania, and the Tshwane University of Technology (formerly Technikon Pretoria), South Africa catered for Category III (Orthotic/Prosthetic Technician) and Category II (Orthopaedic Technologist) training until 2002. However, at the International Society on Prosthetics and Orthotics (ISPO) Asian Prosthetics and Orthotics Workshop 1998 in Japan, the need for Category I (Prosthetist/Orthotist Meister) training in developing countries was recognised. This marked a significant step forward in African history:

It is recognized that for the meantime training in Category I does not exist anywhere in the developing countries and is only available in the industrial world. Despite this it is felt important that some personnel in developing countries should be trained to this level to provide leadership for the prosthetic/orthotic profession and be responsible for education and training within their own countries (Hughes, 1998, no page number).

Furthermore, the ISPO (1998) indicated that only Category I professionals will be qualified to manage centres, supervise Category II

and III practitioners and act as educators for students and staff.

Narrator: It is good to see that the ISPO acknowledges the need for training in developing countries! Are there any obstacles or problems that affect prosthetic and orthotic development in developing countries such as South Africa?

O/P: The following issues and problems of prosthetic and orthotic (P&O) development in developing countries were identified at the ISPO Congress in Glasgow (Pupulin, 2001, no page number):

- The P&O services are often limited to the capital or major provincial cities;
- The services often focus on prosthetics production, though there is a greater need for orthotics;
- The number of P&O personnel in developing countries is completely insufficient;
- Category I professionals are needed for the supervision of training and education, and as consultants;
- The P&O schools are insufficient in number to cover the demand for professionals;
- It is difficult to find funds for the training; the students themselves cannot meet the costs and it is difficult to find fellowships; and
- Many of the students that are trained cannot get employment in their home countries – some of them therefore emigrate.

Narrator: Surely disability must also be a problem in developing countries. What are the current statistics?

O/P: The ISPO Asian Prosthetics and Orthotics Workshop specifically highlighted the problems of disability in developing countries.

According to Milan (1998), as many as 300 million people in the Asian and Pacific region are disabled, compared to the estimated 500 million people globally. Up to 80% of the disabled live in isolated rural areas and, for the most part, are subjected to poverty and deprived of accessible rehabilitation services (Milan, 1998). Following a World Health Assembly resolution in 1976 and the Alma Ata Conference, the World Health Organisation (WHO) launched community-based rehabilitation (CBR) as the innovative approach to enable developing countries to offer essential services to as many disabled persons as possible in the areas where they live, at a low cost and at a convenient time. Implemented in the context of primary health care, CBR is believed to be the most viable strategy to meet the global challenge of disability.

However, the biggest challenge is to find some way to produce and adequately train prosthetists and orthotists in sufficient numbers to tackle the developing world's problems: "it is probable that in the developing world there is a need for about 20,000 trained professionals and a current provision of at the most 2,000" (Hughes, 1998, no page number). In South Africa, only 69 orthotic/prosthetic practices are registered with the South African Orthotic and Prosthetic Association in 2005 (<http://www.saopa.co.za>). Furthermore, it is predicted that by the year 2020, more than 1.5 million people nationwide will not have access to certified orthotic services and over 227,000 will not be able to receive prosthetic care (Hovorka, Shurr & Bozik, 2002).

Narrator:

In light of the need in developing countries and efforts of the ISPO to upgrade training of orthotists/prosthetists, Tshwane University of Technology (formerly Technikon Pretoria) initiated a Bachelor's Degree in Technology: Medical Orthotics and Prosthetics that would enable candidates to be classified as Category I practitioners.

Elsewhere in Africa, the Tanzania Training Centre for Orthopaedic Technologists (TATCOT) recently initiated a four-year Category I (BSc) curriculum accredited by the International Society of Prosthetics and Orthotics (ISPO) in addition to the three-year Category II degree, through the support of the USAID and the World Health Organisation. In 2003, the International Society of Prosthetics and Orthotics (ISPO) also recognised the wheelchair technologist qualification, offered by TATCOT, as equivalent to the Category II Lower Limb Prosthetics and Orthotics Technologist certificate courses (<http://www.kcmc.ac.za/TATCOT/>).

However, the process to compile and approve a new learning programme in the higher education context is a lengthy one. In my readings of minutes of Medical Orthotics/Prosthetics Advisory Committee meetings, I discovered that the process took eight years (from 1994 to 2002) before the first B.Tech degree in Medical Orthotics and Prosthetics was offered at Tshwane University of Technology in South Africa, in January 2003. Could you give me some more information about the background to this development and why it took so long to instate the training programme?

O/P:

On 17 November 1994 the Medical Orthotics/Prosthetics Advisory Committee gave their formal support to the development of a degree course in orthotics/prosthetics, which would be in line with the introduction of degree courses at technikons nationwide. All orthotist/prosthetist practitioners in southern Africa were invited to attend a 're-curriculation workshop' on 22-23 June 1995, facilitated by Mr. Louis Steyn, an expert on the development of new learning programmes from the Skiereiland Technikon (Koeleman, 1995).

In recognition of prior learning, the Professional Board for Medical Orthotists and Prosthetists, under the auspices of the South African Medical and Dental Council, sent a formal notification to all of its

members with specific reference to the rules for registration of medical orthotists and prosthetists. In terms of section 32(1) read with section 61(4) of the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act 56 of 1974), the following rules would substitute the rules published under the Government Notice R1846, dated 16 September 1977, as amended by Government Notice R268 and promulgated on 16 April 1981 (Prinsloo, 1996):

Rule 1: Registration categories

The council may register a person in the following categories:

- National Certificate Medical Orthotics and Prosthetics

Persons in possession of a junior certificate may sit for a practical proficiency test on completion of four years' practical training in an institution approved by the council for the training of medical orthotists and prosthetists, and persons in possession of a senior certificate may sit for this examination on completion of three years' practical training in an institution approved by the council for the training of medical orthotists and prosthetists.

- National Diploma Medical Orthotics and Prosthetics (will only be recognised if studies commenced after 1 January 1985)

Persons who have been trained for a period of at least four years of which the first three years will be in order to attain the National Diploma in Medical Orthotics and Prosthetics and the fourth year will be an internship during which the holder of the National Diploma will undergo practical training of a minimum of 1200 hours at a unit approved by the council.

Rule 2: Persons who were registered as medical mechanics and surgical appliance makers under the provisions of Government Notices 2041 of 30 September 1949, 667 of 22 March 1951, as amended, or R1712 of 30 October 1964, or as medical technicians under the provisions of Government Notice R3211 of 5 September 1969, shall be deemed to be registered under these rules as medical

orthotists and prosthetists.

Rule 3: Where, in the case of an application for registration, the qualification on which the application is based has not already been approved by the council, the applicant shall be required to cause the Professional Board for Medical Orthotists and Prosthetists and the council to be furnished with authoritative information for such qualifications, where upon if such standard of training is considered satisfactory by the council, such qualification may be recognised (Prinsloo, 1966).

Narrator: The amendment of the rules for registration as Medical Orthotists and Prosthetists recognised prior learning and set the platform for all medical orthotists and prosthetists to continue with an advanced career path.

O/P: Yes, indeed! The compilation of a new curriculum/learning programme in B.Tech Medical Orthotics and Prosthetics became a standard item on the Medical Orthotics and Prosthetics Advisory Committee agenda. A proposed curriculum for the B.Tech degree was sent to all members and the Professional Board for inputs and comments in 1996. Shortly after submission, the Medical Orthotics and Prosthetics Advisory Committee received a letter from the Professional Board stating that the syllabus for the Diploma and B.Tech Degree should include Cerebral Palsy, Ethics, Forearm Muscle Anatomy and Practice Management. It was decided that a modular or short course for the Management subject could be accommodated in the diploma course and a full Management subject in the B.Tech degree course (Orthotics and Prosthetics Advisory Committee meeting, 11 October 1996).

In February 1997, the B.Tech Medical Orthotics and Prosthetics curriculum was presented to the Department of Education for approval

and to the Certification Board of Technikons (SERTEC) for quality evaluation. November 1997 marked another important event in history: “the B.Tech proposal has been accepted by the Department of Education which is a major break-through and means that this course was found substantial enough to warrant a B.Tech” (Orhotics and Prosthetics Advisory Committee meeting, 28 November 1997, p.2). However, acceptance of the curriculum did not imply that the course would be implemented the next year or the following. The Advisory Committee discussed entry requirements for the B.Tech course, of which a national diploma or equivalent, as recognised by the South African Qualifications Authority (SAQA), would be a prerequisite.

Narrator: The larger international context for the training of orthotists/prosthetists set a specific standard or social reality by which southern African training would be benchmarked. How was this achieved?

O/P: AOPPP and Orthomed sponsored a representative of the Department of Medical Orthotics/Prosthetics to visit various training institutions in Germany, the Netherlands, England and Scotland in order to compare international training with training in southern Africa. A presentation on training practices of the world’s leading international institutions in orthotics and prosthetics, Strathclyde University (Scotland) and the Bundesfachschule für Orthopädie Technik (BUFA, or Federal School for Orthopaedic Technology), Germany was given at the Medical Orthotics and Prosthetics Advisory Committee meeting in September, 1998.

The University of Strathclyde (Scotland) has a National Centre for Training and Education in Prosthetics and Orthotics operating within the Faculty of Engineering. The Centre focuses primarily on high-quality training and education for health care professionals and students. However, it also conducts research and maintains an awareness of worldwide clinical research and development (Stephens,

1999a). Strathclyde offers a four-year full time BSc (Hons) degree course for persons planning to enter the prosthetist/orthotist profession as clinical practitioners. This qualification is similar to the National Diploma in Medical Orthotics and Prosthetics at Tshwane University of Technology, South Africa, and equivalent to ISPO Category II registration. The MSc and Postgraduate Diploma in Prosthetics and Orthotics are specialist courses offered by Strathclyde. Applicants for the MSc are required to have an Honours degree in prosthetics and orthotics from a recognised academic institution; however, candidates with alternative professional qualifications or appropriate experience are also considered. The normal duration of the MSc course is 12 months. Supervised research programmes enable prosthetists/orthotists to achieve a Master's (MPhil) or doctoral (PhD) degree at Strathclyde University. Postgraduate diploma courses by distance learning enable participants to explore biomechanical implications of P&O techniques without leaving full-time employment. Postgraduate diplomas are available in Lower Limb Prosthetic Biomechanics, Lower Limb Orthotic Biomechanics, and Clinical Gait Analysis (www.strath.ac.uk/Departments/NatCentre/).

BUFA is acclaimed for its technological expertise, a strong sense of prosthetic/orthotic education, and a long-standing tradition of craftsmanship. Another world leader in prosthetics and orthotics is Germany. There are about 1,600 registered orthotic/prosthetic facilities in Germany, each run by a certified orthotist/prosthetist, or Meister. Only Meisters may operate an orthotic/prosthetic facility and train apprentices (Stephens, 1999b). The BUFA School is unique in that it is funded entirely by private O&P facility owners themselves via membership of a funding association also assisted by manufacturers, under the aegis of the Federal Association of Guilds in Orthopaedic Technology. The school employs 17 permanent faculty and staff members, along with 60 outside lecturers per year. A dual system exists in which the theoretical aspect of orthopaedic vocational

education is provided through vocational schools and the practical aspect is provided by a registered O&P facility. The journeyman degree (ISPO Category II) involves a three-and-a-half year apprenticeship with final exams, which includes structured theoretical training in a vocational public school and parallel practical training in an orthopaedic technology business under the supervision of a Meister. Entry requirements for the Meister-training course are a journeyman degree and a minimum of two or more years of working experience under the supervision of a Meister. The Meister-training course involves one full year, filled with about 2,040 intensive hours of education at the BUFA. The programme leads the successful graduate to a Meister certification, matching ISPO Category I and the European directive.

Narrator: What was the stance of the world's leading international institutions towards the establishment of postgraduate training of orthotists and prosthetists in South Africa?

O/P: The Medical Orthotics and Prosthetics Advisory Committee noted at its meeting on 22 September 1998 that "Prof. Hughes (University of Strathclyde, Scotland) is positive about mutual suggested liaison where ever practical. Dr. Funkelstad (BUFA, Germany) is positive about higher education in Africa as well as broadening our field in terms of training in South Africa". Furthermore, it was noted that the possible future name change from Technikon to University of Technology should solve problems that might arise in terms of international acceptance and the query of standard equivalents. The Medical Orthotics and Prosthetics Advisory Committee added that the B.Tech degree would be equivalent to a university honours degree because it is a post-diploma qualification. In order to address the problem that the University of Technology requires lecturers to have the same or higher qualification than the qualification in which they lecture, the committee proposed that various professionals, like

orthopaedic surgeons, could be contracted in.

Narrator: Getting formal accreditation for a learning programme must be a cumbersome process.

O/P: Although the B.Tech degree has been approved by the Department of Education, Technikon Pretoria retains the prerogative as to whether it is economically viable to offer the learning programme or not. The Department of Orthotics and Prosthetics was in dire need of an additional lecturer. The Medical Orthotics and Prosthetics Advisory Committee (23 April 1999) decided to advertise a position through mailing all registered South African orthotists/prosthetists using a list obtained from the South African Medical and Dental Council. The committee also noted the benefit of the outcomes based educational (OBE) system in recognising prior learning in order to ensure equal access to all orthotists/prosthetists applying for the B.Tech degree (Medical Orthotists and Prosthetists Advisory Committee, 23 April 1999).

In May 1999 a survey was conducted amongst all advisory committee members to decide whether the B.Tech degree should lead to two separate qualifying categories (orthotics **or** prosthetics) or remain, as initially proposed, a qualification in orthotics **and** prosthetics. The results of the survey indicated that the majority of the Medical Orthotics and Prosthetics Advisory committee members were in favour of the B.Tech degree allowing candidates to qualify in both Orthotics and Prosthetics. All technikons in southern Africa were surveyed to indicate their interest in offering the B.Tech degree in Medical Orthotics and Prosthetics. From this survey Technikon Pretoria was the only institution that indicated an interest in offering the B.Tech learning programme. Possible reasons for the other institutions' lack of interest can be attributed to the extensive costs involved in running such a learning programme, as well as the unavailability of trained

staff.

The approved curriculum for the B.Tech degree in Medical Orthotics and Prosthetics was discussed at the Medical Orthotics and Prosthetics Advisory Committee meeting on 14 September 2000, and it was resolved that the curriculum would include the following modules:

- Applied psychology and Pharmacology II (Psychology I – prerequisite subject)
- Business practice I
- Research methods and techniques
- Orthotics and prosthetics theory IV

The means of offering the learning programme, either full-time, part-time or on a block basis still had to be decided. The formation of a Standard Generating Body (SGB) for Orthotics and Prosthetics was initiated at this meeting (Medical Orthotics and Prosthetics Advisory Committee, 14 September 2000). The SGB was made official with the implementation of Continual Professional Development points in April 2002, and the Professional Board for Occupational Therapy and the Medical Orthotics and Prosthetics Board became members of the SGB.

The South African Association for Prosthetics and Orthotics (SAOPA) congratulated Technikon Pretoria on its approval of the B.Tech curriculum (Medical Orthotics and Prosthetics Advisory Committee meeting, 26 October 2001). The technikon's staff, total infrastructure and resources were evaluated by the Council on Higher Education (CHE), Higher Education Quality Committee during 2002, and on 3 September 2002 the Council on Higher Education (CHE) formally accredited the new learning programme Baccalaureus Technologiae: Medical Orthotics and Prosthetics (Magabane, 2002). The

commencement date of the B.Tech learning programme coincided with the formal name change of Technikon Pretoria to Tshwane University of Technology in January 2003, as a result of the merger announced by the Minister of Education between Technikon Pretoria, Technikon North-West and Technikon Northern Gauteng (Ministry of Education, 2001). The two lecturers from the Department of Medical Orthotics and Prosthetics were the first pilot (train-the-trainer) group to attend the B.Tech Medical Orthotics and Prosthetics programme. Successful completion of the B.Tech degree would lead to ISPO Category I registration as Orthopaedic Meister and enable them to train and supervise Category I, II and III students.

(Fade lights)

Curtain

Act I

Scene Two

(Draw curtain, lights on)

Scene

Tshwane University of Technology, School for Medical Orthotics and Prosthetics

Time

Present experiences

Narrator: Finally, the B.Tech Medical Orthotics/Prosthetics learning programme was offered in January 2003. Can you tell me more about the instatement of the programme and the selection of the first learners for the pilot group?

O/P: The B.Tech Medical Orthotics and Prosthetics learning programme is registered with the South African Qualifications Authority (SAQA) as a NQF level 8-qualification within the field of Health Sciences and Social Services (09). Entry requirement is a National Diploma or first degree:

Medical Orthotics/ Prosthetics, or its equivalent.

In addition to the current competencies of practitioners, the degree adds the following exit level outcomes (SAQA, 2002):

- Exit level outcome 1

Apply advanced techniques to assess (a), measure (b), design (c), manufacture (d), maintain (e) and fit (f) specialised orthosis/prosthesis and educate (g) the patients/clients.

- Exit level outcome 2

Establish and manage a laboratory.

- Exit level outcome 3

Apply basic research skills.

- Exit level outcome 4

Communicate effectively with patients, employees and other medical professionals.

An integrated assessment approach applies to the B.Tech Medical Orthotics and Prosthetics course, where continuous evaluation and formative assessments are done based on the following:

- Case studies of relevant situations
- Several written tests per module per year
- Laboratory work
- Two practical tests per year
- The design and submission of a comprehensive management programme
- A case study analysis
- A seminar based on current research in the form of a colloquium
- A research project of limited scope (mini thesis)

Summative assessment consists of:

- Colloquia in the area of specialisation
- One written examination per module

- One practical examination per module
- A portfolio of models and practical work

Peter and James were the first learners who were selected to form part of the pilot group. They both complied with the entry requirements for the B.Tech learning programme. Their particular selection for the pilot group was based on the principle of train-the-trainer in that they are lecturers and course coordinators in the Department of Orthotics/Prosthetics.

Narrator: It seems that the principles inherent in the B.Tech programme include life-long learning, responsibility, and collaboration. Additional values seem to be the continuous re-evaluation of knowledge and the co-construction of new knowledge and processes in a multidisciplinary approach to learning.

O/P: The B.Tech programme is aligned with the institutional mission and plan of Tshwane University of Technology. It encompasses the philosophy of transmitting applied technology to learners based on recent research findings. This philosophy stimulates self-study in students, which implies that learning becomes a life-long process. Teaching and research are important practices in the profession of Orthotics and Prosthetics, thus promoting a philosophy that is inherent in career-orientated learning (SAQA, 2002).

Professionals from different disciplines (such as orthopaedic surgeons, psychologists, medical practitioners, pharmacists and researchers) were contracted to present the specified learning outcomes. In consultation with the two learners, these professionals form a panel that co-constructs knowledge within the B.Tech Medical Orthotics and Prosthetics course. Continuous re-evaluation of knowledge and the co-creation of new knowledge and processes take place where all members are equal partners in the meeting point between the different

disciplines. This process creates transparency in the teaching and learning environment.

Narrator: The process of collaboration and reflection throughout the presentation of the B.Tech Medical Orthotics and Prosthetics programme creates a narrative thread for future developments in the profession and for new stories of teaching and learning to evolve.

(Fade lights)

Curtain

Act I

Scene Three

(Draw curtain, lights on)

Scene

Orthotics/Prosthetics dreams about its future

Time

Future intentions

Narrator: All these developments are very interesting and it is encouraging to hear about the development in the field, but what about the future?

O/P: The Professional Board for Medical Orthotics and Prosthetics, the Health Professions Council of South Africa and the South African Orthotic and Prosthetic Association (SAOPA) will be regulating the number of students who are annually trained as professionals. From the approximate 20 National Diploma: Medical Orthotics and Prosthetics (ISPO Category II) students who qualify on an annual basis, and from the total of 69 orthotic and prosthetic practices currently registered in southern Africa (<http://www.saopa.co.za>), it is envisaged that 10 students will be selected on an annual basis for the

B.Tech: Medical Orthotics and Prosthetics (ISPO Category I) course (Tshwane University of Technology, 2002). The two newly registered orthotic and prosthetic Meisters will lead the future training of the B.Tech Medical Orthotics and Prosthetics course in southern Africa, in consultation with the rest of the multidisciplinary team of professional trainers/lecturers. The application for further learning programmes in M.Tech and D.Tech Medical Orthotics and Prosthetics is already in process.

Narrator: In reflecting on the future of the orthotist and prosthetist profession, it is necessary to take cognisance of the past. The role of the orthotists/prosthetist in the rehabilitation team can be compared to the role of a goalkeeper in a soccer team (Oates, 2003).

O/P: Imagine a soccer team of small children in their first year at school. The goalkeeper would have been the least athletic, most uncoordinated child; one who could not be placed anywhere else on the field. If the soccer team were one player short, they would play without the goalkeeper. The early orthotist/prosthetists were selected from the least educated and were only brought onto the rehabilitation team to fill in the last stage of rehabilitation. Tradesmen such as blacksmiths were used in this role. They would have had good hand skills but no formal education, and would have been relatively ignorant of the roles of the other team members. They were also often not even asked to play and when they were, they were forced to do as they were told or were kicked off the team, just like the uncoordinated child in the soccer team.

As the children in the soccer team grew up, so did the role of the goalkeeper. Some of these previously uncoordinated goalkeepers would have developed physically, gained some special skills and possibly pulled off some good saves. The same can be said for the orthotist/prosthetists of the past. Some would have taken a special

interest in the field and made an effort to learn more about the function of the team as a whole and how other team members' actions affect the potential rehabilitation of their patient. However, the misconception still remained that if something went wrong, it was the orthotist/prosthetists' fault as they were the last in line of contact.

The football team is now at the level of a teenage team. Some goalkeepers have turned into genuinely useful and valued members of the team. They are competent in their own ability and know enough about the game to make beneficial comments on other aspects of play. There are, however, still those that are only able to do what they are told and are content to function at that level. Similarly, orthotist/prosthetists in South Africa are in a transition phase where some carry their weight on the rehabilitation team and have gained enough knowledge about the roles of the other team members that they can refer a patient back to one of the members for necessary further treatment. In so doing they have gained the respect of the other team members, which reinforces their role as key members of the team.

Into the future it will be necessary to consider the role of the goalkeeper in a higher league soccer team. In a high school or university first team the choice of a goalkeeper is as important as the centre forward, as there is now a realisation that the team cannot function to its full potential without the contribution of all its members. So too, the role of orthotist/prosthetists in the rehabilitation team should be considered to be as vital as that of any other member.

To venture further into the future, the role of a goalkeeper in an international team is an appropriate metaphor. Goalkeepers in an international soccer team have excellent knowledge of the game as a whole. They are able to observe the game as it is played before them and offer advice on why certain events unfolded as they did during the

game. They can do all this while still fulfilling their own specialised role in the team. The orthotist/prosthetists of the future should develop a wide knowledge of the game of rehabilitation that encompasses the special skills of all the team members. This must be done without losing focus on their specialist role. Just as a goalkeeper can captain an international team, so may an orthotist/prosthetist head a rehabilitation team of other health professionals. However, this may only be achieved by earning the respect of the other team members through gaining knowledge of their fields and excelling in their own. Thus, the future role of orthotist/prosthetists both nationally and internationally should not only be to continue to make a contribution to the rehabilitation team, but to cement their position in the team and make themselves the first choice when the team is selected.

One might argue that this metaphor does not so much describe the future role of orthotist/prosthetists as their goal. However, if the goal and role are separated the nature of the rehabilitation game will change to a point where one of the other team members could fill the orthotist/prosthetist's role. Already in some U.S. states, podiatrists are doing work of such a broad scope that one could call them below-the-knee orthopods (Oates, 2003). Although other healthcare professionals have encroached on the traditional domain of orthotist/prosthetists, if the latter are able to enforce their role as mentioned, they are likely to survive and thrive. Future prosthetists may well find themselves doing amputation and rehabilitation surgery!

Narrator's commentary on Act I: *In creative writing, the character that is pursuing the goal is known as the protagonist or 'first actor'. The first actor, Orthotics/Prosthetics, is in pursuit of a specific goal – to elevate the profession of orthotics and prosthetics in accordance with international standards with the purpose of repositioning itself as a key member in the multidisciplinary rehabilitation team. As the protagonist, Orthotics/Prosthetics faces the challenges of disability in developing countries and the*

limited number of trained professionals (antagonists) that are attempting to prevent the attainment of the goal. Through the following complicating actions, Orthotics/Prosthetics takes agency in repositioning itself and shaping its future.

- **Complicating Action**

The establishment of international education accreditation and the introduction of an ISPO categorisation system for orthotists and prosthetists signified important advancements in the orthotist/prosthetist profession. The ISPO's recognition of the need for training Category I professionals in developing countries, and the recognition of prior learning through the amendment of the rules for registration as a medical orthotists and prosthetist by the South African Medical and Dental Council had a profound effect on the career advancement opportunities of orthotists and prosthetists in southern Africa. Two leading world institutions, the University of Strathclyde (Scotland) and BUFA (Germany) set a standard for education on which the development of a B.Tech Medical Orthotics and Prosthetics learning programme in southern Africa was benchmarked. Training of Category I professionals in southern Africa on B.Tech level is the first step towards the development of postgraduate training, and is the forerunner of further courses on M.Tech and D.Tech level in orthotics and prosthetics. The acquisition of knowledge and skills on B.Tech level contributes to the development of a professional identity in orthotics and prosthetics and reinforces the importance of the role of the orthotist/ prosthetist on the rehabilitation team.

Two themes run through the story of orthotics and prosthetics: the need for international recognition and the role of knowledge in contributing to the development of a professional identity.

- **Resolution**

The ISPO's recognition of the need for training Category I professionals in developing countries and the approval of a new learning programme in B.Tech Medical Orthotics and Prosthetics by the Council on Higher Education has elevated the profession of orthotics and prosthetics to international standards. In offering the B.Tech qualification, Tshwane University of Technology acts as a higher education leader in

the orthotist/prosthetist field in southern Africa. The acquisition of knowledge and skills assists the orthotist/prosthetist to earn the respect of other professionals on the multidisciplinary team. The B.Tech learning programme acts as a change agent in future plans to develop learning programmes on M.Tech and D.Tech level.

(Fade lights)

Curtain

End of Act I

Act II: Psychology

Scene One

Scene

Narrative beginnings of the history of psychology in South Africa

Time

Past experiences

Abstract

The development of psychology in South Africa parallels the discipline's international history. In the 1920s psychology was established as a separate discipline in South Africa, but it was only after the Second World War that psychology experienced a time of exponential growth and rapid professionalism. Although psychology initially negotiated a position of scientific neutrality, the emergence of critical psychology in the 1980s drew attention to psychology's political unconscious. Critical psychology succeeded in creating spaces for itself in institutional settings in the 1980s and early 1990s. The coming of democracy to South Africa in 1994 shaped the transformation of psychology as a discipline. The 'turn to discourse' in European social psychology informed present trends of driving towards higher standards of professionalism through restructuring within the profession.

(Draw curtain, lights on)

The Narrator introduces the second actor, Psychology, to the audience.

Narrator: *(Orientating the audience)*

Before you and I can attempt to reflect on the experiences of developing an Applied Psychology II module for the B.Tech Medical Orthotics and Prosthetics learning programme, it is necessary to take cognisance of the public narratives that dominated the development of psychology in South Africa and informed the development of the Applied Psychology II module.

Psychology:

The development of psychology in South Africa followed a path that closely paralleled the discipline's international history. Various psychological tools and technologies, mostly dominated by American and European intellectual and methodological trends, were enthusiastically imported and adapted by South African psychologists with the establishment of psychology as a separate discipline in the 1920s (Louw & Foster, 1991). The impetus for the development of psychology derived from the popularity of the medical model and its new focus on mental deficiency or disorder. During this time South Africa was characterised by intense class ordering, 'race-thinking' (informed by social Darwinism) and concerns about a potential class alignment between emerging black and white proletariat in the cities (Foster, 1993). The era after the Second World War marked a time of exponential growth and rapid professionalism of psychology as a discipline nationally and internationally. With the formation of a professional body of psychology in South Africa in 1948, the focus of the discipline and practice expanded from intelligence testing, education and industry to the establishment of a therapeutic industry (Louw, 2002).

Terre Blanche (2004, p.3) posits that "the major achievement of the psychology mainstream in South Africa was...to hide politics". Psychology was able to do this by playing the politics of scientific neutrality and neutral professionalism:

The ideological structure of South African psychology promoted certain themes, which supplied warrants for ignoring race. Specifically by adopting the medical model and by understanding their practice as value-free science, psychologists could 'legitimately' ignore issues of race (Durrheim & Mokeki, 1997, p.211).

South African psychologists sought to add local colour to the discipline through the development of local psychometric tests and theories (e.g., Taylor, 1994), as well as debates about 'relevance' (e.g., Dawes, 1986; Nell, 1990).

Narrator: It seems as though the establishment of psychology as a profession in South Africa has been largely influenced by international trends, specifically the medical model and modernistic approach to research and practice. However, your reference to the scientific neutrality of psychology has left me with a question. Is it possible for a discipline, such as psychology, to be totally objective or neutral in its approach to understand the intricacies of human experience?

Psychology: At this point, you may have become aware of the dyadic tension between the medical model and a modernistic approach in psychology versus an alternative, critical model that challenged the scientific neutrality of psychology. Critical psychology is one such movement that challenged psychology to work towards emancipation and social justice.

Narrator: I am curious to know more about critical psychology. Where did it emanate from and what does critical psychology stand for?

Psychology: Critical psychology is a movement that challenges psychology to work towards emancipation and social justice, and that opposes the uses of psychology to perpetuate oppression and injustice (Parker, 1999a).

Austin and Prilleltensky (2001) posit that it is a meta-discipline in that it enables the discipline of psychology to critically evaluate its moral and political implications. The diverse origins of critical theory can be traced to the first generation of Frankfurt school theorists (Horkheimer, Adorno, Marcuse, Lowenthal, Pollock, and Fromm) who were critical of the denial of subjectivity found in positivism and sought to establish a social science that went beyond the positivist tradition (Geuss, 1981).

The second generation of critical theorists included Habermas, who identified three interests served by knowledge seeking: (a) technical control, (b) interpretive understanding, and (c) emancipatory interest (Sullivan, 1984). According to Geuss (1981), the emancipatory nature of knowledge, as identified by Habermas, is also inherent in critical/reflective theory. Klaus Holzkamp is known as the founder of German critical psychology that sought to improve psychology by developing an alternative ontological and epistemological foundation (Tolman & Maiers, 1991). Latin American psychologist Martin-Baro (1994) proposed a psychology that openly concerned itself with ending oppression and promoting emancipation. The advent of postmodernism introduced a critical analysis of the way power is used in the process of developing theories (Teo, 1998), whilst concepts of post-structuralism were used to discuss how psychology's insistence on the split between individual and society has contributed to perpetuating oppression rather than promoting emancipation (Henriques, Hollway, Urwin, Venn & Walkerdine, 1984). Community psychology developed in response to the growing sense of disempowerment and alienation, and in doing so set the stage for contemporary critical psychology to emerge.

Feminist psychology, recognised as another origin of critical psychology, critiqued mainstream psychology's exclusion of women as psychological subjects and creators of psychological knowledge (Wilkinson, 1997). Dei's (1996) anti-racism theory "explicitly names

the issues of race and social difference as issues of power and equity rather than as matters of cultural and ethnic variety” (p.25).

Narrator: My own journey as a narrator has taken me on many paths through the land of psychology. Meeting Social Constructionism (chapter 2) challenged me to take a critical stance towards my taken-for-granted ways of understanding the world. This personal experience informed my choice to give authority to the voice of critical psychology as a meta-discipline and umbrella term within psychology. It was important, however, that I also realised that critical psychology represented but one voice in psychology and that many other voices also existed. It is important to acknowledge the contribution of other movements, such as the psychoanalytic, cognitive behavioural, social, phenomenological and humanistic approaches (to name but a few) to psychology; however, against the backdrop of my own theoretical framework of social constructionism, I am curious to know more about the positioning of critical psychology in the South African context.

Psychology: During the early 1980s critical psychology emerged in the process of exposing the political unconscious of psychological science and practice. Foucault (1979) addressed the complexes of power-knowledge that linked psychological technologies to the regulation of subjectivities and bodies through government. Once the ideological architecture of scientific and applied psychology had been revealed, the process of reconfiguring psychology as a socially relevant and progressive practice along new epistemological, theoretical and methodological lines could begin.

Although attempts at the ‘rehabilitation’ of psychology (by providing a theoretical rationale and practical guidance for actual political struggles) were met with resistance, critical psychology did succeed in creating spaces for itself within higher education institutions. Terre Blanche (2004) states:

Among these emerging institutional spaces counted: psychology departments such as those at Rhodes University and the University of Cape Town, that started offering courses and modules in critical psychology; progressive lecturers in these and other departments who incorporated critical theory into their teaching or training in various areas of academic and applied psychology; the formation of anti-apartheid groupings like the Organisation for Appropriate Social Services in South Africa (OASSSA), Psychologists Against Apartheid and the South African Health and Social Services Organisation (SAHSSO); the establishment of the alternative academic journal PINS; and a number of critically orientated conferences, such as those hosted by OASSSA annually in the late 1980's (p.6).

The 1980s and early 1990s was a time of rapid development of alternative bodies of theoretical tools, knowledge and practices in South African critical psychology. Other approaches that were added to Marxism or historical materialism included critiques inspired by Black Consciousness, feminism, Foucauldian discourse analysis, postmodernism, post-structuralism, Lacanian psychoanalysis and postcolonial theory (Terre Blanche, 2004). The journal *Psychology in Society* (PINS) repositioned itself in the international community of critical psychology through regular contributions by prominent critical scholars such as Ian Parker and Erica Burman. In South Africa, an increasing number of black psychologists responded to 'white' critical psychology by devoting projects to the analysis of black identity and the reconstruction of that identity in the context of political struggle and racial empowerment (Biko, 1989; Manganyi, 1991).

Narrator: I wonder if the coming of democracy to South Africa in 1994 has not somehow prepared South Africa politically to accept a critical voice?

Psychology: Well, with the democratic government elected in 1994, transformation in the psychology discipline was evident when the Psychological Association of South Africa (PASA) was disbanded and a more inclusive body, the Psychological Society of South Africa (PsySSA) was founded. The psychology discipline was characterised by an eagerness to rejoin the Euro-American-dominated international mainstream, as well as a pattern of racial reconciliation and redress (Terre Blanche, 2004).

(Fade lights)

Curtain

Act II

Scene Two

(Draw curtain, lights on)

Scene

Repositioning Psychology in a 'new South Africa'

Time

Present experiences

Narrator: *(Orientating the audience)*

Can you elucidate on the process through which a voice was given to previously 'marginalised voices' within psychology in the new democratic South African context?

Psychology: Critical psychology has negotiated a more prominent position for itself in academia that manifests in different forms, including critical conferences, books, articles and university courses. The PsySSA 2000 conference had a theme 'What is critical in critical psychology?' and the Institute for Therapeutic Development (ITD) hosted conferences in South Africa on discourse analysis, narrative therapy

and social constructionism in 2002 (presented by David Epston) and 2003 (presented by Michael White). A large number of universities are introducing theories that developed in the post-structuralist period in psychology, such as narrative therapy, critical psychology and social constructionism, in their postgraduate training for counselling and clinical psychologists. Critically-orientated books that are published in South African psychology include Ratele and Duncan's (2003) social psychology text and Hook's (2004) South African *Introduction to Critical Psychology*. The South African Journal of Psychology (SAJP) and Psychology in Society (PINS) has had a series of special editions focussing on issues such as gender, postmodernism, black scholarship, the HIV/AIDS epidemic and the Truth and Reconciliation Commission (TRC) (Terre Blanche, 2004).

These developments in South African psychology are inspired by the 'turn to discourse' and the rise of discourse analysis and similar approaches in European social psychology. Interwoven with other forms of critical psychology, feminist theory and practice, and authors such as Potgieter and De la Rey (1997), have helped to ensure that the politics of gender remains at the forefront of local psychology (Terre Blanche, 2004). The common element in all these movements is a critical stance towards taken-for-granted knowledge and an attempt to uncover the hierarchies of power in the production of what is perceived as scientific knowledge and truth.

Narrator:

As the audience, you might pose the same question to me: what is critical in critical psychology? Perhaps the answer lies in the position that psychology has negotiated for itself. Psychology has moved from an authoritative position of 'absolute scientific truths' to negotiating an alternative position of 'reflective practitioner', in which the focus is on the social construction of realities. However, this process of repositioning brings with it a new dyadic tension between the authorities of a so-called non-authoritarian, social

constructionist/postmodern position and a silencing of previously authoritarian, modernistic voices within psychology. Repositioning within the professional body of psychology is also evident.

Psychology: The drive towards higher standards of professionalism is taking on various forms. For example, to align the discipline of psychology with other South African health professions, newly-qualified clinical psychologists are now required to undertake a year of community service. A continuing professional development (CPD) programme has also recently been implemented, obliging practitioners to earn a certain number of credits through accredited educational activities on an annual basis (although the logistics of implementing such a process has resulted in postponement). The psychology clinic on the Phelophepa train is only one of many examples of the visible impact that the mandatory community service has on South African psychological practice (Hargoon, 2003).

(Fade lights)

Curtain

Act II

Scene Three

(Draw curtain, lights on)

Scene

Envisaging Psychology's future

Time

Future intentions

Narrator: The future of academic psychology in South Africa may bring a historical shift where critical ideas and practices are mainstreamed for the first time. The 10th anniversary congress of PsySSA (2004)

adopted the theme ‘Democratising the Psyche,’ providing an opportunity for critical reflection on psychology’s place in South African society. Social psychology’s interaction with other disciplines might also flourish in the future. Just as the discipline of psychology has been socially constructed, deconstructed and reconstructed in the South African history, the future of psychology will be in a constant state of flux, being influenced by the dominant discourses or alternative voices of the time.

Psychology: Harper (2004) suggests some ways of introducing ideas from social constructionist and critical psychology into a generic mainstream training context for clinical psychology training.

Narrator: Harper’s (2004) proposal for clinical reflective practice sounds really exciting. Can you tell me more?

Psychology: Harper (2004) believes that “critical teaching needs to be tactical and flexible and my own [Harper’s] viewpoint is to expose trainees to critical ideas and practice with a view to them forming their own views on what kind of clinical psychologist they want to be” (p.3). In creating a context where trainees can learn to develop their practice whilst also enabling them to deconstruct notions of ‘expert knowledge’, models which are more consistent with critical and social constructionist approaches have emerged to link theory and practice. This includes the reflective-practitioner model (as illustrated in figure 2) (Clegg, 1998; Walsh & Scaife, 1998). Thus, trainees are encouraged to reflect on their work from a number of perspectives, from thinking about the influence of personal experience to interpreting their work in accordance with relevant theory or empirical work. The reflective-practitioner model draws on similar philosophies of learning to those described by Kolb, Rubin and McIntyre (1974) and Anderson (1992):

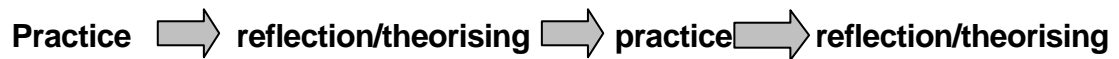


Figure 2 The reflective-practitioner model

In developing 'knowledge of practice' (Hoshmand & Polkinghorne, 1992), trainees can make use of Mason's (1993) concept of safe uncertainty. Embracing uncertainty can be accomplished through exercises where trainees are invited to examine the effects of expert knowledge models in their professional life since they often find themselves in real life situations that are more complicated than the expert solutions they are taught (Spellman & Harper, 1996). Harper (2004) suggests that "this approach can be helpful in learning 'not knowing' approaches to therapy which avoid premature certainty and value respectfulness and curiosity" (p.6).

The use of indigenous knowledge can contribute to the development of a critical practitioner identity as a psychologist. A social constructionist perspective may also encourage a stance as a critical practitioner, in that it allows trainees to use other theories in a pragmatic and flexible manner, rather than seeing the theories or formulations which flow from them as being true in some foundationalist sense (Dallos & Draper, 2000). Harper (2004) also supports the value of applying pragmatic criteria to professional intervention:

The value of a formulation of a client's difficulties and of professional interventions need to be judged not by some abstract notion of 'truth' but by more pragmatic criteria of whether an approach 'fits' for a client or is going to be useful (p.7).

The aim of Harper's model is "not to produce social constructionist

psychologists, but, rather, practitioners who, regardless of orientation and client group will work collaboratively, on what consumers define as their goals, with respect, openness and flexibility” (Harper, 2004, p.7). In avoiding the fostering of an overly pragmatic approach (Willig, 1997), it is important to discuss the ethical and political consequences of choices that the practitioner might make (Harper, 2004).

Narrator: In critical psychology’s efforts to promote emancipation and resist oppression, the application of praxis through Harper’s model can attain a balance between (a) academic and grounded input, (b) understanding and action, (c) processes and outcomes, and (d) differing and unequal voices. Praxis, as referred to in Harper’s model, involves the integration of, and constant engagement with, reflection, research and action (Austin & Prilleltensky, 2001). Perhaps in doing so, the future intentions of psychology might seem less radical than they originally appeared to be.

Narrator’s commentary on Act II: *In Act Two the dyadic tension between the medical model/modernist approach and the critical voice/postmodern approach plays out. The following complicating actions summarise Psychology’s attempt to take agency in repositioning itself.*

- ***Complicating Action***

The impetus for the development of psychology came from the rise of the medical model, during which time South Africa was characterised by intense class ordering. The Second World War instigated a time of exponential growth and rapid professionalism in the discipline. In 1948 a professional body for psychology was established in South Africa. Psychology’s position of scientific neutrality was challenged through the emergence of critical psychology in the early 1980s. Critical psychology succeeded in creating spaces for itself within higher education institutions through developing alternative theoretical tools, knowledge and practices. The coming of democracy to South Africa in 1994 had a profound effect on the discipline. A more inclusive body, the Psychology Society of South Africa (PsySSA) was founded and the

discipline was characterised by an eagerness to rejoin the Euro-American-dominated international mainstream. The ‘turn to discourse’ in European social psychology informed the more prominent position that psychology has negotiated for itself in South African academia. Present trends reflect a drive towards higher standards of professionalism through various forms of restructuring within the profession. The future of academic psychology in South Africa may bring a historical shift where critical ideas and practices can be mainstreamed for the first time and where social psychology might interact more with other disciplines.

- **Resolution**

Psychology has managed to move from an authoritative position of ‘absolute scientific truths’ to negotiating an alternative position of ‘reflective practitioner’, in which the focus is on the social construction of realities. This has been brought about by critical psychology as change agent. However, critical psychology merely represents one of many voices within psychology. Burr (1998) describes social constructionism as “a theoretical orientation, which to a greater or lesser degree underpins all of these newer approaches, which are currently offering radical and critical alternatives in psychology and social psychology, as well as in other disciplines in the social sciences” (p.1). The process of repositioning brings with it a new dyadic tension between the authorities of a so-called non-authoritarian, social constructionist/postmodernist position and the silencing of previously authoritarian, modernist voices in psychology. There is also a tension in South Africa between the need for indigenous knowledge systems and influences from the European and American traditions in psychology.

(Fade lights)

Curtain

End of Act II

Act III: Higher Education

Scene One

Scene

Teaching and learning in higher education in South Africa

Time

Past experiences

Abstract

In reaction to the traditional transmission view of teaching and learning, Dewey (1938), Rogers (1969), Habermas (1971), Mezirow (1981) and Young (1990) introduced an alternative approach, which involves core themes of change, experience, reflection, collaboration and constructivism. In applying reflection to health practices, reflection-before-action (Greenwood, 1998), reflection-in-action (Schön, 1987) and reflection-on-action (Boud, Keogh & Walker, 1985) is proposed. In addition, a systemic approach to learning considers the interaction between the environment and the individual in understanding the learning process, as introduced by Vygotsky's (cited in Brown & Palinscar, 1989) zone of proximal development, Bandura's (1977) social learning theory and Piaget's (cited in Tennant, 1988) stages of cognitive development. A teaching-learning framework provides a holistic view of the process of creating meaning and assumes that facilitating responsible, self-directed learning is a collaborative process. Knowledge is thus socially co-constructed in a collaborative community of critical inquiry and responsibility is shared (Garrison & Archer, 2000).

Legislation and other developments in South Africa since 1994 have contributed to the pressure on institutions of higher education to become instruments of economic empowerment and transformation with the aim of achieving equity. With the establishment of the National Qualifications Framework (NQF), the underlying philosophy of outcomes-based education (OBE) aims to develop learners into individuals who can apply knowledge to practical problems, work in teams, communicate well and use information technology effectively. The future of higher education involves continuous developments aiming at establishing and sustaining a community of inquiry, interpretation and collaborative co-construction of meaning. Positioning assessment practices as an integral part of learning and developing e-learning practices are at the forefront of future narratives on teaching and learning.

(Draw curtain, lights on)

The Narrator introduces the third actor, Higher Education, to the audience.

Narrator: *(Orientating the audience)*

Given the complexities and number of changes in the higher education system, the aim of Act Three is to elucidate the contexts in which these narratives unfold. The public narratives that concern us include theories of learning and their implications for higher education; the relationship between learning and knowledge construction; and the implications of legislation and other developments for higher education in South Africa. How did the nature of knowing unfold over time in the higher education context?

H/E:

The changing nature of knowing (and by implication teaching) can be divided into three distinct eras characterised by a specific ontological perspective: pre-modern, modern, and postmodern (Sexton, 1997). The pre-modern era emphasised dualism, idealism, and rationalism. The modern era stressed empiricism, logical positivism, scientific methodology, the identification of objective truths, and validity (Raskin, 2002). In the modern era scientific knowledge was assumed to be a mirror image of objective reality. Education, from a modernistic perspective, thus entailed a “transmission” view of teaching (i.e., the belief that teachers transmit knowledge to students) and the “absorbtionist” view of learning (i.e., the belief that students learn by absorbing new information) (Prawat, 1989). This model followed a traditional deficit approach and the instructional design approach to teaching in higher education, where both teachers and students played relatively passive roles (Albee, 1980; Jonassen, 1991; Smith & Brown, 1995). There was little need for students to develop critical thinking skills in a deficit model, since they were expected to simply reproduce the information that had been dispensed in the lecture.

Narrator:

How was the deficit model of teaching and learning in higher education challenged with the transition from a modern to a postmodern era?

H/E: Garrison and Archer (2000) believe that individuals and organisations have become fixated on the challenge of accessing and assessing information due to its dramatic proliferation in recent decades. However, information is merely raw material – only when interconnections are made among facts, ideas and experience is knowledge constructed (Garrison & Archer, 2000). The deficit model has been criticised by Duffy and Jonassen (cited in Vermunt, 1998) who state that

...learning is not a passive, knowledge-consuming and externally directed process, but an active, constructive, and self-directed process in which the learner builds up internal knowledge representations that form a personal interpretation of his or her learning experiences. These representations constantly change on the basis of the meanings people attach to their experiences (p.150).

Sexton (1997) labels the third era as postmodern constructivist, and depicts it as accentuating the creation rather than the discovery of personal and social realities and knowledge frameworks. The introduction of a constructivist, resource, or strengths model focuses on the social, inter-subjective nature of knowledge construction and serves as an alternative to the deficit model (Becvar & Becvar, 1996). Chiari and Nuzzo (1996) suggest that psychological constructivism concerns the ordering and organisation of a world constituted by the person's experience (epistemological constructivism), or that it hinges on distinctions in language that constitute the generation and validation of all reality (hermeneutic constructivism).

Narrator: The foundational ideas and concepts of Dewey, Rogers, Habermas, Mezirow and Young shaped educational thought and practice and their work has much relevance for higher education today. Perhaps Dewey can elucidate more on his theory of progressive education?

H/E: *(the John Dewey persona)*

Dewey (1938) discarded dualism in all forms and introduced a progressive education as a reaction to the authoritarian approach of traditional education. Being a proponent of pragmatism and progressive thought, Dewey emphasised the centrality of human experience in constructing knowledge with the underlying philosophy that education is a life-long process. In the learning process teacher and student share a collaborative relationship and “the activities in which all participate is the chief carrier of control” (Dewey, 1938, p.56). This implies that all individuals in the learning process share control. In order to create worthwhile educational experiences, Dewey (1938) suggests two intercepting principles. First, that the teacher’s role is to judge the direction of an experience to ensure continuous reconstruction. Second, that interaction is essential to manage the educational transaction between the individual’s internal conditions and the social world. Through the process of reflective thinking meaning is constructed.

Narrator:

Dewey’s educational philosophy has much relevance for higher education today as it promotes life-long learning. Garrison and Archer (2000) highlight the essential themes that are integral to Dewey’s philosophy: “Dewey’s ideas are essentially about experience and reflective thought with regard to having students collaboratively generate ideas and reconstruct experience, thereby confirming meaning for themselves” (p.23).

H/E: *(the Carl Rogers persona)*

Another theorist who made a significant contribution to progressive ideas, not only in psychology but also in higher education, is Carl Rogers. Similar to Rogers’ (1969) views of psychotherapy as being client-centred and essentially non-directive, his views of education were learner-centred and non-directive. Rogers (1969)

summarises the aim of education as follows:

The only man who is educated is the man who has earned how to learn; the man who has learned how to adapt and change; the man who has realized that no knowledge is secure, that only the process of seeking knowledge gives a basis for security (p.104).

Rogers emphasises the provision of freedom for creative learning in which teaching is replaced by facilitation. In creating a psychological climate of learning, Rogers believed that students would be encouraged to assume responsibility for constructing meaning.

Narrator: Rogers wrote little about the cognitive or intellectual aspects of learning in educating the whole person. Rather, his most valuable contribution to higher education is his concept of facilitating a community of learners through establishing mutually respectful and trusting relationships. Such a relationship emphasises self-directedness and promotes the notion of learning how to learn (Garrison & Archer, 2000).

H/E: *(the Jurgen Habermas persona)*
Although Jurgen Habermas (1971) is a philosopher and social scientist, his ideas on how knowledge is constructed and validated can be transferred to the higher education context. Jurgen Habermas (1971) has been called a critical constructivist because of his critical theory in which he is less concerned with accepted knowledge than with the process of knowledge creation. Habermas (cited in Garrison & Archer, 2000) provides an inclusive theory in which there are three knowledge constitutive interests (technical, practical and emancipatory) and corresponding methods of validating knowledge (positive, interpretive and critical). From this perspective, no single source or methodology is appropriate or

adequate to account for all forms of human knowledge; therefore education is not a prescribed end state, but is rather constructed through interactions between teacher and students (Garrison & Archer, 2000).

Narrator: Habermas (1974) argues for open communication (emancipation) in which rational consensus or meaning making can be reached. Ewert's (1991) review of Habermas's critical social science concludes that he has influenced educational thought and practice. Habermas's theory is tolerant of diversity and contemptuous of the certainty of ideology (Garrison & Archer, 2000).

H/E: *(Young persona, following in the footsteps of Habermas)*
Informed by the ideas of Habermas, Young (1990) developed a critical theory of education in response to the educational dilemma that he identified in which the teacher attempts to teach a prescribed curriculum that is supposedly (according to society) in the student's best interest. In developing their critical capacities, students are assisted to reconstruct parts of their life-world through "communicative, problem-solving learning" (Young, 1990, p.71).

Narrator: Young's critical theory of education is an expansion of Dewey's problem-solving method of pedagogy and is consistent with Habermas's critical judgement of ideas to create inter-subjective understanding. Could you now introduce the concept of reflection to the audience?

H/E: Following the critical ideas of Habermas, Mezirow (1981) positions self-directed learning (consistent with Habermas' emancipatory self-reflection) as a central goal and method of transformative learning for adults in higher education. Mezirow (1991) defines reflection as involving
the critique of assumptions about the content or process of

problem solving. The critique of premises or presuppositions pertains to problem posing as distinct from problem solving. Problem posing involves making a taken-for-granted situation problematic, raising questions regarding its validity (p.105).

Reflection is further divided into three categories of content, process and premise reflection. Mezirow (1991) defines content reflection as reflecting on what we perceive, think, feel or act upon, whereas process reflection refers to the manner in which we think. Premise reflection is regarded as a higher level of reflection and “involves us becoming aware of *why* we perceive, think, feel or act as we do” (Mezirow, 1991, p.108).

Narrator: Let us reflect on the application of reflection in the health sciences.

H/E: In applying reflection to health practices, Schön (1987) argues for an alternative approach to the logical positivist position in which practice is often taught as clearly defined procedures with artificial problems that are well-defined and have identifiable correct answers. Knowing-in-action, as an alternative approach, involves the process by which professionals display an unconscious routine of judgement, without deeply reflecting on the underlying criteria of decisions reached or procedures followed (Schön, 1983). However, reflection-in-action involves practitioners reflecting on their knowing-in-practice and reflecting upon past activities. Schön’s model is criticised by Greenwood (1998) who notes Schön’s failure to recognise the importance of reflection-before-action; and Boud, Keogh and Walker (1985) who emphasise preparation for experience as well as the re-evaluation of the experience. Kember et al. (2001) introduced the development of reflective teaching and learning in the health professions, proposing that “many students find the task of applying theory

taught in the classroom to the reality of professional practice extremely difficult until they develop the ability to reflect on the relationship between the two” (p.vii).

Narrator: Understanding how learning and knowledge construction takes place, we can use the behaviourist, cognitive and systemic approaches to learning as a guideline.

H/E: In addition to the foundational perspectives on higher education, a number of theories exist with regard to learning and the construction of knowledge. Garrison and Archer (2000) identify three general perspectives of learning theories. The first perspective, the behaviourist tradition, posits a traditional teacher-centred approach to learning in which the teacher has full responsibility for designing and orchestrating observable learning outcomes, and controls the behaviour of students. The second perspective has its roots in Gestalt psychology. Cognitive learning theories position the learner as an active processor of information and problem solving through a process of making cognitive connections. Lachman, Lachman and Butterfield (1979, p.99) describe cognitive psychology through the analogy of a computer whereby individuals are programmed to recode and remember information in a certain way, transform their internal knowledge states and make decisions accordingly, which then results in a behavioural output.

Criticising cognitive learning theory for its deterministic structuring of input for a prescribed output, the third perspective, the systemic approach to learning, considers the interaction between the environment and the individual in understanding the learning process (Garrison & Archer, 2000). Emphasising the social origins of knowledge and visualising a process in which a mature thinker engages in inner dialogue, Vygotsky (cited in Brown & Palinscar,

1989) developed the concept of a zone of proximal development. The zone of proximal development is described as “an interactive system that recognises and builds upon different perspectives and levels of understanding” (Garrison & Archer, 2000, p.47). In this sociocultural context, the teaching-learning transaction between collaborative communities of learners can widen the zone. Bandura’s (1977) social learning theory represents an integration of behaviourism and cognitivism. Bandura (1977) believes that the reciprocal interaction between behaviour and the environment may result in self-regulatory processes in which people use symbols as a means of reflective thought to guide their future actions and to deal with the environment. Understanding that learning develops through stages and that individuals play an active role in constructing knowledge, Piaget laid a foundation for understanding adult learning (Tennant, 1988).

Narrator: What is the implication of these concepts of learning and knowledge construction for South African higher education?

H/E: Before the 1980s South African higher education institutions were split along the line of race and language. The differences in the roles of institutions became evident as universities aimed to produce absolute scientific truths and the non-university sector aimed to apply this knowledge to practical problems (Bunting, 2002). Further divisions concerned the funding allocated to various higher education institutions, and the degree of autonomy enjoyed by some. For example, historically white, English-speaking universities achieved more freedom from state interference (Bunting, 2002). Racial barriers between neighbouring institutions resulted in duplication of learning programmes. The throughput rate of 13.3 per cent for a three-year degree curriculum (as opposed to the expected 33 per cent throughput) and the 17 per cent average dropout rate for all years of study, were attributed to

problems inherited from the Apartheid era (Department of Education 1994 -1998). Many institutions positioned themselves as producers of disinterested scientific knowledge and maintained unchanged curricula for decades, applying teaching methods that relied on high-achieving students from homogenous linguistic and cultural backgrounds (Gravett & Geysler, 2004).

Narrator: It seems as though many tensions existed amongst divisions in higher education in South Africa. Tensions between a deficit and a strengths model of learning and knowledge construction emerged in the face of divisions in higher education institutions along the lines of race, language and degree of autonomy. Furthermore, it seems that institutions with more power posed a threat to knowledge construction in maintaining an unchanged curriculum. I wonder how these meta-narratives are maintained or, alternatively, how they are challenged?

H/E: With the democratic government elected in 1994 (to follow in Scene Two), tensions amongst divisions in higher education would be dominated by transformation.

(Fade lights)

Curtain

Act III

Scene Two

(Draw curtain, lights on)

Scene

The Higher Education scene is transformed by changing the décor to a new brand image of an 'entrepreneurial institution'. Actor changes into modern robes.

Time

Present experiences

Narrator: With the newly elected democratic government taking power in 1994, new legislation was enacted in an effort to eradicate the imbalances of Apartheid and to transform higher education to achieve equity (Gravett & Geysler, 2004). How did this transformation unfold in the higher education context?

H/E: Developments at a global economic level resulted in a repositioning of higher education institutions as instruments for economic development to teach vocationally-oriented programmes across traditional subject boundaries. Participation in the new global economy involves producing more graduates, but also more of the right sort of graduates. The South African government aims to reduce the 49 per cent of the total student headcount enrolled in the humanities to 40 per cent, and increase the 25 per cent enrolled in science and the 26 per cent enrolled in commerce to 30 per cent in each (Ministry of Education, 2001). Further transformation involves educational institutions funding their own activities and developing brand images as entrepreneurial institutions.

Narrator: In an attempt to meet some of the challenges at both local and global levels, Higher Education creates a 'SAQA persona' and 'NQF persona'.

H/E: (SAQA persona and NQF persona)
The South African Qualifications Act of 1995 established the South African Qualifications Framework (NQF) in an attempt to meet some of the challenges existing at both local and global levels. Gravett and Geysler (2004) describe the NQF as
a structure on which all qualifications, regardless of their origin in 'formal' education or in the workplace or community-based training initiatives, can be registered by

locating them within three 'bands': a General Education and Training Band, a Further Education and Training Band, and a Higher Education and Training Band (p.7).

Narrator: What is the aim and underlying philosophy of the NQF?

H/E: (NQF persona)

The NQF aims to contribute towards the attainment of equity and efficiency in South Africa through standardising quality across levels and within bands; and through contributing to life-long learning, especially where millions of people in South Africa have been denied the right to formal study in childhood and early adulthood (Gravett & Geysler, 2004). An underlying philosophy of the NQF is the introduction of outcomes-based education (OBE) in which educators are required to focus on what learners should be able to do as opposed to what they should know. In South Africa's effort to compete in the drive to reinvent products typical of the new global economy, OBE aims to develop learners into individuals who can apply knowledge to practical problems, work in teams, communicate well and use information technology effectively. Through introducing criterion-referenced assessment, OBE contributes to assessment procedures that are more valid and transparent and assessors who are more accountable than in traditional assessment paradigms.

Narrator: Outcomes-based education sounds like a good philosophy, but I have heard that it has been criticised in academic literature and the press.

H/E: OBE has been criticised in the academic literature and the press because it requires a different approach to teaching from traditional 'content' approaches (Jansen & Christie, 2000). A major obstacle in making OBE work in South Africa is the lack of facilitation skills

among educators, coupled with a lack of support needed to develop these skills (Gravett & Geysler, 2004). The role of the NQF and OBE for higher education involves the facilitation of learning by setting tasks and providing guidance and support to students, as well as considering assessment as an integral part of curriculum design. This implies that assessment strategies and tasks have to be planned and developed at the same time as learning outcomes are developed (Jansen & Christie, 2000). Jansen (1998) objects to the philosophical views of OBE, insofar as it assumes an instrumentalist view of knowledge that trivialises curriculum content.

Narrator: In appeasing the critics of OBE, a less radical version of OBE has been proposed.

H/E: The scepticism with which OBE has been met relates specifically to the emphasis on outcomes to the supposed detriment of academic content. In defending a less radical version of OBE, Mason (1999) proposes that it might be helpful to first understand the concept of knowledge based on Ryle's (1971) distinction between "propositional knowledge, or knowledge *that* (associated with facts or content) and procedural knowledge, or knowledge *how* (associated with skills)" (p.141).

Knowledge can further be classified into a third type of knowledge: dispositional knowledge, or knowledge *to* (associated with attitudes, values or moral dispositions). Life skills education aims to teach values to learners. Mason (1999) argues that propositional, procedural and dispositional forms of knowledge are inextricably linked to each other and that OBE requires a careful balance among the three types of knowledge.

Narrator: In ensuring quality in higher education, yet another persona of

Higher Education, the HEQC is created.

H/E: (the HEQC persona)

The Higher Education Quality Committee (HEQC) was introduced by the higher education sector to assure the quality of its own activities. It is an important step in terms of taking responsibility for the achievement of equity in higher education. The South African government's White Paper on Higher Education of 1997 (cited in Gravett & Geysler, 2004) summarises the transformed higher education system as one that will

- provide equal access and equally fair chances of success to all students
- develop programmes leading to qualifications that will meet the country's employment needs in respect of highly skilled graduates
- promote critical and creative thinking, tolerance and a commitment to the common good through its teaching produce research of an international standard that, at the same time, will be cognisant of African contexts (p.6)

Narrator: A new higher education institution is born!

H/E: In addressing frustrations involved in sizing and shaping the higher education landscape in South Africa to achieve national goals, Minister Kader Asmal launched the National Plan for Higher Education (NPHE) in March 2001. Following the NPHE and with Cabinet's approval, the Minister of Education announced a number of mergers in May 2002 that resulted in the reduction of the number of higher education institutions from 36 to 24. Through the restructuring process, a new type of comprehensive institution emerged that would offer technikon-type programmes alongside a limited number of university-type programmes (Ministry of Education, 2001).

Narrator: How does the restructuring process within higher education impact on the process of elevating the status of orthotist/prosthetist training programmes in South Africa?

H/E: Technikon Pretoria merged with Technikon Northern Gauteng and Technikon North West to create a new higher education institution, Tshwane University of Technology. It is here that the B.Tech Medical Orthotics and Prosthetics course was offered in January 2003. The standards of the University of Technology are in line with international universities of technology and contribute towards improved international recognition.

Narrator: How do the theories of teaching and learning apply to the restructured higher education institution?

H/E: The outcomes-based philosophy of higher education in South Africa flows from the postmodern constructivist era (Mason, 1999). The knowledge co-construction process in higher education is an interactive process of personal meaning making and the social validation of this meaning (Garrison & Archer, 2000). Educating for meaning is a comprehensive experience and Garrison and Archer (2000) argue that “no single theory of learning can fully inform the teaching-learning process” (p.60). Garrison and Archer (2000) propose a teaching-learning framework appropriate for higher education that includes the commonalities of the foundational ideas and concepts of Dewey, Rogers, Habermas, Mezirow and Young.

H/E: *(the Integrated Teaching-Learning persona)*
A teaching-learning framework accepts that knowledge is influenced by experience and recognises the place for personal reflection in the process of constructing knowledge. This is based on the core themes of change, experience, reflection, collaboration

and constructivism, as advocated by Dewey's reconstruction of knowledge based upon experience, Rogers' view of change through facilitating individual freedom and self-awareness, and Habermas' beliefs that change is necessary if individuals are to be emancipated. Collaboration in the educational process provides an opportunity to socially construct meaning and provides the climate for students to take responsibility for their learning (Garrison & Archer, 2000). Garrison and Archer (2000) define constructivism as a process where individuals assume responsibility to construct their own knowledge based upon experience. They posit that education should create the climate and opportunity for communicative action and knowledge construction to take place.

Constructivist learning theoreticians accept that learning comprises the active construction of meaning, as derived from the studies of Vygotsky (cited in Brown & Palinscar, 1989) and Piaget (cited in Tennant, 1988). This is often referred to as individual or radical constructivism. The theories associated with critical thinking and self-directed learning are synergistically connected through the transactional perspective (see figure 3) in which Garrison and Archer provide an explanation of higher-order learning and a mechanism for implementing such learning. The conceptual framework for the transactional perspective is built upon a collaborative constructivist approach to creating meaning, and the need for collaboration to create and confirm knowledge (Garrison & Archer, 2000).

Within the transaction process between learners and facilitator, meaningful and worthwhile personal and public knowledge is constructed and confirmed in a critical community of learners. Garrison and Archer (2000) conclude that

the aim of education is to collaboratively develop the thinking and learning abilities of students in the pursuit of

worthwhile and meaningful knowledge. To achieve such outcomes, students must be encouraged to think critically and to be self-directed in their continuous search for personal meaning and public knowledge (p.14).

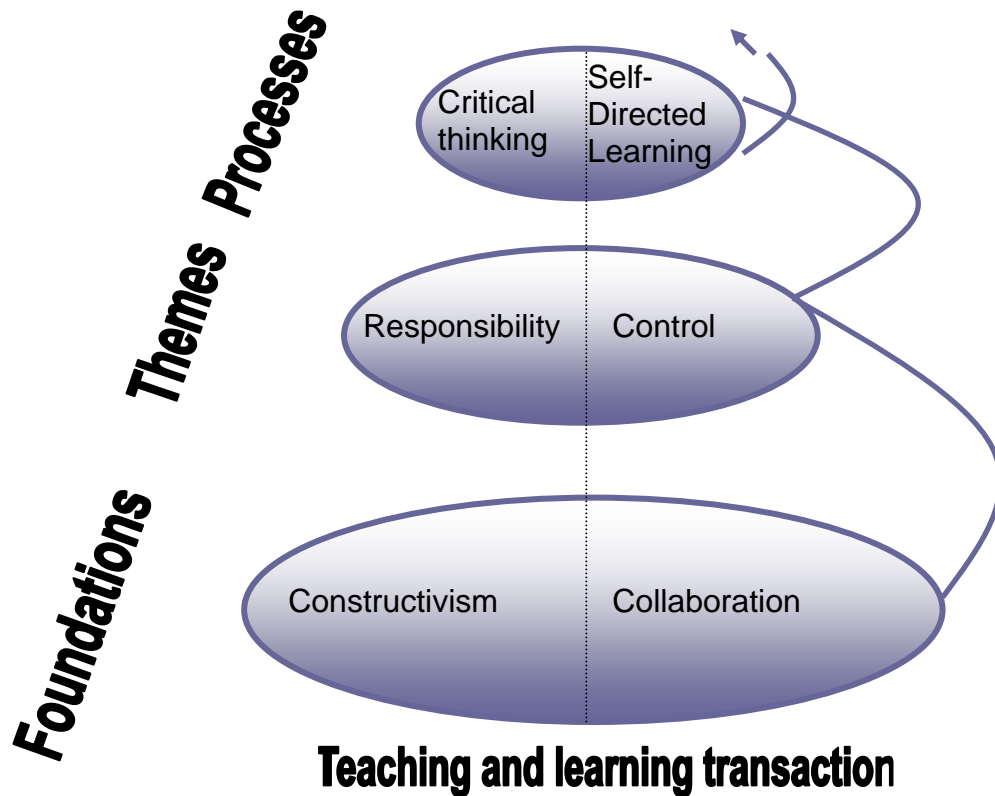


Figure 3 Conceptual framework for the transactional perspective (Garrison & Archer, 2000, p.5)

Narrator:

At this point you, the audience, may well ask me: what is the difference between constructivism, collaborative constructivism and social constructionism? From my understanding, the constructivist assumption is that knowledge is an interpretation of experience. This assumption implies that what an individual can know is both enabled and constrained by prior experiences and interpretations. The constructivist perspective on human understanding is

individualistic, implying that we each live in a world of our own making.

Collaborative constructivism integrates personal reconstruction of experience and social collaboration. Although the social construction of knowledge is congruent with the transactional perspective described by Garrison and Archer (2000), there is one major difference. Constructivists and collaborative constructivists view language as “a reliable and accurate link between the objective and subjective worlds” (Freedman & Combs, 1996, p.28), in contrast to social constructionists who postulate that “knowledge can be viewed as that which is represented in linguistic propositions, and therefore not something people possess somewhere in their heads, but rather something people do together” (Gergen, 1985, p.270). Higher Education would be able to tell you more about the role of collaboration in knowledge co-construction.

H/E: Collaboration in higher education (and in particular within clinical training in psychology) invites the social construction of knowledge to take place. Anderson (2000) describes the knowledge constructing process as follows:

Knowledge is fluid and communal, yet personalized. When we share our knowledge with one another, we cannot know what each brings to the sharing; determine how each will interact with the shared knowledge; nor predict what each will create with it. Whatever the outcome, it will be something different than either started with, something socially constructed (p.1).

In the collaborative learning process, facilitators position themselves as learners too, through respecting, inviting and valuing each voice and being flexible and responsive (Anderson, 2000). Collaboration

does not need to be enforced upon learners; it is a spontaneous process that emerges from the experience itself. Collaborative teaching and learning challenge participants and facilitators to reconstruct how they think about teaching and learning. When facilitators position themselves differently, in other words, as learners too, responsibility is shared. McNamee and Gergen (1999) refer to this shared responsibility as relational responsibility. Relational responsibility can be very rewarding, as Anderson (2000) concludes: “when responsibility is shared – as participants connect, collaborate, and construct with each other – the learning relationship and process are more mutually gratifying and rewarding” (p.5).

(Fade lights)

Curtain

Act III

Scene Three

(Draw curtain, lights on)

Scene

Higher Education dreams about its future

Time

Future intentions

Narrator: Bruner (1990) emphasises that knowledge is not a product, but involves a process of construction. In keeping up to date with developments in the global economy, higher education can never stagnate; on the contrary, new challenges continuously demand new plans and strategies.

H/E: This implies that we constantly need to revisit, rethink and evaluate

the criteria by which we practice teaching: “we need to distinguish clearly between tradition and high standards, and we should not cling to education habits that are often based entirely on tradition” (Gravett & Geysler, 2004, p.23).

Narrator: I share Gravett and Geysler’s (2004) belief that there is likely to be a vast difference between a lecture that emanates from a delivery view of education and one that aims at establishing and sustaining a community of inquiry, interpretation and collaborative co-construction of meaning. Social constructionism forms the basis of collaborative learning, but elements of cooperative learning may also be associated with typical African and South African socio-educational thought, which involves the idea of ubuntu (humanness) and ideas underlying the so-called African Renaissance (Bitzer, 1999; 2001). Higher Education faces a number of challenges in the future, which include the positioning of assessment practices, recognition of prior learning and the so-called second wave of e-learning (Taylor, 2002).

H/E: Repositioning assessment practices from an add-on role to an integral part of learning poses enormous challenges. Challenges facing higher education in the future include the need

- for lecturers to show greater accountability to their communities, learners and the government
- to cater for a diverse student body which brings different life experiences to their studies
- to assess relevant knowledge and generic skills in unfamiliar contexts to produce high-quality graduates who can apply their knowledge and skills in a changing world of work
- to assess the learners’ abilities to integrate knowledge and skills from a range of disciplines

- to ensure that students become life-long learners
- to shift from a content-based to an outcomes-based approach
- to involve a wide range of assessment methods in order to achieve the above (Luckett & Sutherland, 2000, p.99).

In order to be committed to issues of social justice and redress, higher education institutions will need to be responsive to policy imperatives and find a way to engage with the Recognition of Prior Learning (RPL):

If RPL and the challenges it brings to the university is not engaged, and all we do is produce discourses about RPL without developing pedagogy, then RPL will lose its transformative potential (Gravett & Geysler, 2004, p.137).

Another challenge for higher education is the so-called second-wave of e-learning (Taylor, 2002). E-learning assumes that the use of the World Wide Web for learning is not a question of 'if' anymore, but one of 'how should we effectively use the web for learning?' The use of cyberspace for teaching and learning can be applied in three possible ways. First, e-learning can be used to supplement conventional classroom instruction; second, it can be used as a substitute for classroom-based teaching (Saunders & Werner, 2002); and third, e-learning can have blended applications in which learning can employ multiple strategies, methods and delivery systems; and combine the best features of online learning with the best features of classroom instruction (Troha, 2002). In considering e-learning, the following questions should be posed in order to determine whether learners are ready for web-based learning (WBL):

Do they have the necessary skills and competencies to engage in interactive, multimedia-based learning

materials? How will their perceptions of the learning process change – will they believe that the learning facilitator is now more remote and therefore inaccessible, and how will this influence their motivational levels? (Gravett & Geysler, 2004, p.178).

Narrator: I believe that the B.Tech Medical Orthotics and Prosthetics programme lends itself very effectively towards the blended application of e-learning, because learners reside all over Africa and only meet once a month. Learners on B.Tech-level are more mature, have access to online computers and possess the necessary skills and competencies to engage in interactive, multimedia-based learning materials. E-learning can also contribute to continuous communication and collaboration between learners and facilitators. As facilitator, I would like to take up the challenge of designing a web-based platform to enhance the teaching and learning process in the Applied Psychology II module (see addendum).

Narrator's commentary on Act III: *In Act III the dyadic tension between the deficit model and the strengths model in teaching and learning played out. We witnessed the process in which our actor, Higher Education, integrated the personas of Dewey, Rogers, Habermas and Young into an Integrated Teaching-learning persona in an attempt to 'educate for meaning'.*

Further tension between past experiences of divisions in Higher Education and present experiences of transformation also played out. Higher Education in South Africa created the SAQA and NQF persona and adopted a new philosophy (OBE) in an effort to eradicate imbalances. The HEQC persona ensured that quality was maintained within the 'new higher education institution'.

- **Complicating Action**

From a modernist perspective, education entailed a transmission view of teaching in which learners had to absorb disinterested scientific knowledge and both teachers and students played relatively passive roles. Dewy, Rogers, Habermas, Mezirow and Young were proponents of the authoritative approach of traditional education and introduced progressive thoughts on higher education that included the core themes of change, experience, reflection, collaboration and constructivism. Garrison and Archer integrated these core themes of education into a teaching-learning framework that synergistically connects critical thinking and self-directed learning into a transactional perspective in which learners and facilitator collaborate in the creation and confirmation of knowledge. In the process, a community of critical inquiry is established whereby responsibility may be shared and that contributes to a deep approach to learning. In the collaborative learning process, facilitators repositioned themselves as learners and invite the social construction of knowledge.

Divisions in South African higher education along the lines of race, language and differences in the roles of institutions dominated until 1994, when the newly elected democratic government enacted new legislation in an effort to eradicate the imbalances of Apartheid and to transform higher education with the focus to achieve equity. The South African Qualifications Authority (SAQA) introduced the National Qualifications Framework (NQF) and outcomes-based education (OBE) in an effort to make higher education accountable. This also rendered institutions subject to market forces, and they were required to reposition themselves as institutions of economic empowerment. The introduction of the Higher Education Quality Committee (HEQC) signifies an important step in assuring quality in higher education and in terms of taking responsibility for the achievement of equity in higher education.

- **Resolution**

The restructuring process of South African higher education resulted in the emergence of a new type of comprehensive institution that offers technikon-type programmes alongside a limited number of university-type programmes to address global economy needs. The achievement of equity in higher education presents

many exciting opportunities in positioning assessment practices as an integral part of learning, and developing e-learning practices to complement classroom teaching and learning.

Collaboration in higher education invites the social construction of knowledge to take place and challenges participants and facilitators to reconstruct how they think about teaching and learning.

(Fade lights)

Curtain

End of Act III

Act IV: The Culmination and Meeting Point

Scene One

Scene

All three actors, Orthotics/Prosthetics, Psychology and Higher Education interact on the stage.

Time

Past experiences

Abstract

The construction of a curriculum for Applied Psychology II reflects the historical shift envisaged for psychology's future where ideas from social constructionism and critical psychology are integrated through praxis into a mainstream learning programme for orthotist/prosthetists.

(Draw curtain, lights on)

Narrator: The impetus for the Culmination came from my meeting with Orthotics/Prosthetics. I was approached by the course coordinators for B.Tech Medical Orthotics and Prosthetics in November 2002 with an invitation to become a facilitator for the

Applied Psychology II module.

Although I had some exposure to lecturing when designing and facilitating life skills workshops to students at Tshwane University of Technology, I needed special permission to be involved with the B.Tech Medical Orthotics and Prosthetics department, because the services rendered by the Directorate for Student Development and Support are categorised as support services and do not form part of the mainstream academic activities. Orthotics/Prosthetics, I am curious to know more about your prior exposure to psychology.

O/P: Orthotics and prosthetics students did a Psychology I course in the second year of the four-year diploma. Students' experiences of psychology during their studies have not been very positive. They felt that the subject was not presented in an applied way and was therefore not very meaningful. However, they believed that there is a need for psychological and helping skills in the orthotics and prosthetics profession (field notes, November 5, 2004).

Narrator: The story of Orthotics/Prosthetics' past experiences of psychology reminded me of my transition from the modern to the postmodern world of psychology, which was instigated by my first meeting with Social Constructionism. What would your expectations be of a psychology module, especially in the light of your previous experience?

O/P: Let me show you an outline of a proposed curriculum for Applied Psychology II, as it was presented for the new instructional B.Tech Medical Orthotics and Prosthetics programme in May 2001.

Table 2 Proposed curriculum for Applied Psychology II

Name of offering: Applied Psychology II	
Level: 4	
Prerequisite offerings: Psychology I	
1	Development theories
2	Trauma
3	Cancer
4	Diabetics
5	Amputations
6	Geriatrics
7	Pediatric client
8	Vascular diseases
9	Spinal injuries
10	Congenital conditions
11	Understand HIV
12	Paraplegic client
13	Quadriplegic client
14	Hemiplegic client
15	Understanding an addict

Narrator: My first impression of the curriculum is that it looks like a list of amputations and medical terminology of which I understand very little. No detailed curriculum exists for the Applied Psychology II module. Listening to your need to facilitate psychology from an applied perspective, I am wondering if it would be possible for me to change some of the curriculum content?

O/P: Yes, you can use the following guidelines to assist you in designing a detailed curriculum:

- You may change 20% of the core curriculum as you deem necessary.

- Psychology should be presented in an applied way and the content should be relevant to the profession of orthotics and prosthetics.
- You should equip the learners with basic helping skills.
- You will have 18 contact hours available and will meet once a month with the learners (the learning programme will be offered in block weeks).
- Although different facilitators will take responsibility for the presentation of Applied Psychology II and Pharmacology II respectively, the final mark for the programme will consist of a combined mark for psychology and pharmacology (field notes, November 5, 2002).

Narrator: “I am very excited to be a part of this process and immediately give Peter and James my commitment to the course” (field notes, November 5, 2002). I consulted with a colleague at the University of Pretoria to provide me with guidelines on how to compile a suitable curriculum for Applied Psychology II, as nothing currently exists. He suggested that I should decide on a specific philosophy in psychology, either a modernist or postmodern paradigm, that I would like to use as a platform on which to base the curriculum.

Psychology I: (*Modernist persona*)

It goes without saying that the Narrator should choose me as the underlying philosophy for the Applied Psychology II module! I am the protagonist that has influenced the medical meta-narrative within psychology, as well as health sciences. I can offer scientific knowledge and processes to treat orthotic/prosthetic patients effectively.

H/E I: (*Deficit persona*)

As an institution of higher education, I can transplant scientific information into the minds of receptive students. Knowledge is power!

Psychology II: (*Postmodern persona*)

I am not against the various modernist schools of psychology, only against their posture of authoritative truth. I propose a 'non-expert' approach that avoids premature certainty and values respectfulness and curiosity. I believe that the challenge in a postmodern educational practice is to value other and different accounts of knowledge. Social constructionism in a postmodern university offers knowledge as a process that is co-constructed in classrooms and not as ready made-up parcels.

H/E II: (*Strengths persona*)

I believe that learners and facilitators should be equal partners who collaborate in the co-construction of knowledge. My argument is this:

The interrelated critiques of rationalism, realism, and foundationalism show that the modern university includes a contest between different theories of rational scholarly agreement. The most distinctively postmodern role in this debate is not to take sides but to question whether theories of agreement are useful and even whether agreement itself is feasible or appropriate objective of higher education (Simpson, 2000, p.159).

Narrator:

I have been listening to all the arguments and believe that the tension between the disability narrative in orthotics/prosthetics and the deficit-teaching model can be limiting to learner's experiences within the psychology module. Social constructionism (postmodern approach) offers me an alternative that honours and privileges personal experience and knowledge. In integrating propositional, procedural and dispositional knowledge in my teaching philosophy, I believe that I can empower learners to take a critical stance

towards taken-for-granted-knowledge and invite orthotist/prosthetists to reflect on the value of professional interventions for a specific client by using pragmatic criteria of whether an approach fits for a client.

(Fade lights)

Curtain

Act IV

Scene Two (Monologue)

(Draw curtain, lights on)

Scene

Narrator shares her philosophy underlying the Applied Psychology II module

Time

Present experiences

Narrator: My passion for psychology and facilitation is the perfect origin story for the current philosophy underlying the Applied Psychology II module. I believe that my own enthusiasm and love for psychology rubs off on my learners and assists them to create their own personal meaning of the value of psychology in their lives – if I don't love psychology, why should I expect the learners to love it? Furthermore, I find the facilitation of skills extremely rewarding – at every opportunity, engaging with learners in the co-construction of knowledge energises and uplifts me. From these intuitive beliefs, I have since developed a larger set of principles and an underlying philosophy to help me make the most of my strengths and the least of my weaknesses.

- Privileging the orthotist/prosthetist
Michael White (1997) refers to “the culture of professional disciplines” in which “the ways of knowing the world that relate to

the more popular and more local discourses of 'lay' communities are marginalized, often categorized as quaint, folk and naïve, and frequently disqualified" (p.11). In the deficit model of teaching, disproportionate privilege is granted to expert knowledge and places me, as a facilitator, in an expert position. Although I believe that there are many good outcomes of the traditional approaches to training, the potential hegemonic exclusion and disqualification of alternatives to these traditions can be limiting to the orthotist/prosthetist-in-training.

The core of my philosophy is the assumption that orthotist/prosthetist trainees have valuable lived experiences, knowledge, skills, and desires that have invited them into this helping field. In their sincere desire to help others and in their experience of practising as orthotists and prosthetists, they probably have special skills in caring for others. I believe that exploring these skills and desire will bring forth and develop confidence in their abilities and experiences of personal agency in their work (Carlson & Erickson, 2001). In creating a context where trainees can learn to develop their practice whilst also enabling them to deconstruct notions of expert knowledge, I introduced the *reflective-practitioner* model (Clegg, 1998; Harper, 2004; Walsh & Scaife, 1998) in the Applied Psychology II module. In this model, orthotists and prosthetists are encouraged to reflect on their work from a number of perspectives, for example, from thinking about the influence of personal experience to interpreting their work in accordance with relevant theory or empirical work.

In developing knowledge of practice (Hoshmand & Polkinghorne, 1992), orthotists and prosthetists are invited to embrace uncertainty (Mason, 1993) through exercises where they can examine the effects of expert knowledge models on their professional life. This is necessary since they often find themselves in real life situations

that are more complicated than the expert solutions they are taught (Spellman & Harper, 1996). The use of indigenous knowledge can contribute to the development of a critical practitioner identity as an orthotist/prosthetist. Orthotists and prosthetists are thus invited to reflect on the value of professional interventions for a specific client by using pragmatic criteria of whether an approach fits for a client, or if it is going to be useful, and not by some abstract notion of truth. In honouring orthotists and prosthetists as experts of their lives, they can also see their patients as experts of their own lives.

- Equal partners

In this philosophy, I have negotiated a position for myself as facilitator and learner through respecting, inviting and valuing each voice and being flexible and responsive (Anderson, 2000). I believe that I have much to learn from orthotist/prosthetists about their profession. The informal seating arrangement (in a circle or groups) encourages interaction amongst learners and between the learners and the facilitator. Collaboration does not need to be enforced upon learners; it is a spontaneous process that emerges out of the experience itself. Collaborative teaching and learning challenge both participants and facilitator to reconstruct how they think about teaching and learning. When facilitators position themselves differently as learners, responsibility is shared.

- Co-constructing knowledge

In encouraging a decentring of the dominant professional accounts of knowledge, and in becoming more familiar with the very personal knowledges that come from the rich history of the orthotist/prosthetist's lived experiences, trainees are encouraged to become reflective practitioners. Participants utilise their previous knowledge constructions, beliefs and attitudes in the knowledge construction process. Learners and facilitator collaboratively co-

construct knowledge, not by judging it against some abstract notion of truth, but through a process of evaluating evidence from a variety of fields and resources and establishing conceptual links to tailor conclusions to the specific needs of an individual patient (Lusardi, Levangie & Fein, 2002). Anderson (2000) describes the knowledge-constructing process as fluid, communal and personalised. She believes that it is not possible to predict the outcome of the knowledge constructing process, as the product will be something that is socially constructed.

- Interdisciplinary perspective

Interdisciplinary education practices encourage orthotist/prosthetists to become collaborative members of the multidisciplinary health team. In addressing the complexity of problems facing health care, practitioners are invited to respect and value contributions from diverse allied health and medical professionals:

The complexity of problems facing health care in the 21st century, are problems which often do not have a single answer, but require a very broad orientation. Health care providers must also listen to and work with each other, recognizing their diverse backgrounds and the multitude of agendas, values and priorities that affect the choices they make (Warren, 1985, p.22).

My objective in constructing the Applied Psychology curriculum was not only to apply psychology to the orthotist/prosthetist profession, but also to facilitate an understanding of psychology in such a way that learners can apply their personal meaning of psychology in a wide variety of life experiences.

- Training/facilitation practices

In an attempt to honour the foundational beliefs and underlying philosophy of the Applied Psychology II module, I found the

training/facilitation practices proposed by Carlson and Erickson (2001) to be useful. Although my intention is not to train orthotists and prosthetists as psychologists or therapists, I believe that they can apply basic principles of helping in their daily relations with their patients. Carlson and Erickson (2001) define experience-privileging practices as a practice to “seek to grant privilege to and honour the personal experiences, desires, motivations, knowledge, and skills of new therapists” (p.207). Through the use of privileging questions, orthotist/prosthetists are encouraged to share experiences from their lives during group discussions in class or in the form of assignments that form part of the process of continuous assessment. Some privileging questions include: What experiences from your life do you think invited you into the field of orthotics and prosthetics? What ways of relating to others have you found to be most helpful? What skills of helping others have you developed in your life? How do you want others to experience themselves when they are in your presence?

The practice of re-membering, as introduced by Myerhoff (1982) and White (1997, 2000), is about helping persons find membership or to experience a return to membership with the significant relationships of their lives. Carlson and Erickson (2001) believe that “because the stories of our lives are lived through relationships, it is important for persons to re-member the relationships that support their preferred ways of being” (p.208). Remembering practices are facilitated during class discussions by posing questions to orthotist/prosthetists such as: Could you share with us a story from your life where you felt particularly cared for? What was this experience like for you? What was it about this experience of being cared for that was most memorable to you? What did this experience teach you about how to care for others? Can you recall someone with whom you had a special caring relationship or who you think you were able to help in a significant way? What was it about that relationship that allowed

caring to take place? From whom do you think these desires to help and care for others came?

Freedman and Combs (1996) aver that stories are not embraced until they have been performed before an audience. As orthotist/prosthetists have experiences in helping relationships that represent their preferred ways of being, they are invited to share these experiences with others; and as others witness these stories, they enter into their stories of themselves as practitioners and persons. Through the practice of communities who are dedicated to honouring and privileging each other's experiences, they also foster "communities of concern" (Carlson & Erickson, 2001, p.208). Participating in a life analysis project invites orthotist/prosthetists to remember some personal life experiences and to reflect on the ways in which their life experiences shaped their professional identity.

Myerhoff (1982) describes the practice of definitional ceremonies as "collective self-definitions specifically intended to proclaim an interpretation to an audience not otherwise available" (p.105). At the end of the academic year, Diplomas of Special Knowledge celebrate the lives of orthotist/prosthetists in a unique way.

A mini-graduation ceremony takes place on the stage in which Orthotics/Prosthetics receives a Diploma of Special Knowledge.

(Fade lights)

Curtain

Act IV

Scene Three

(Draw curtain, lights on)

Scene

Narrator dreams about the future of the Applied Psychology II module

Time

Future intentions

Narrator: Applied Psychology II will continuously develop and grow as social realities change. The invitation to learners and facilitators in the B.Tech Medical Orthotics and Prosthetics course to collaborate in the co-constructing of knowledge informs the direction of new developments. One such development is the inclusion of a personal reflective journal.

O/P: Learners in the B.Tech learning programme found the reflective journal that was introduced as part of the data collection for this study so meaningful, that they proposed that it form part of the formal curriculum for the Applied Psychology II module.

Narrator: Another development is a targeted selection interviewing strategy that I proposed to the Department of Orthotics and Prosthetics in an effort to create a set of standardised criteria to ensure equal access to all prospective B.Tech applicants. Furthermore, the orthotics/prosthetics course coordinators expressed a need to align the Psychology I curriculum for the graduate diploma with the Applied Psychology II curriculum for the B.Tech programme. This creates exciting new ventures for the future!

And so The Meeting Point between Orthotics/Prosthetics, Psychology and Higher Education comes to an end at the Culmination – or is it a new beginning? But a new beginning is another story!

Narrator's commentary on Act IV: *In Act IV tensions between the three actors, Psychology, Orthotics/Prosthetics and Higher Education, played out. Not only did the audience witness tensions amongst the actors, but also tensions within a character, such*

as Psychology's modernist versus postmodernist persona and Higher Education's deficit versus strengths persona.

The Narrator, who also played the role of facilitator for the Applied Psychology II module, listened to the arguments of all three actors but did not position herself as a mediator. She acknowledged the different positions of the actors and integrated ideas of social constructionism, critical psychology and a strengths model of facilitation into the philosophy underlying the Applied Psychology II module.

In Act IV, the Culmination symbolised the social construction of a new system in which the binary oppositions or tensions between modernism/postmodernism, the deficit model/strengths model, and disability/appreciation practices were reconceptualised:

The importance of dissolving these dichotomies, for social constructionism, lies in the possibility of human agency and the re-conceptualisation of the nature of the individual that they bring with them. If agency and structure are part of one inseparable system, then the effectiveness of human agency is just as real as the determining features of social structure (Burr, 1998, p.108).

- **Resolution**

The Narrator (facilitator) took agency in introducing new practices of selection, teaching and learning into the B.Tech learning programme. Furthermore, ideas from social constructionism and critical psychology were introduced into a psychology course for health professionals from an application of praxis perspective. This resulted in a shift in position from scientist-practitioner to reflective-practitioner. Orthotics/Prosthetics and Higher Education welcomed this fresh approach and in the process doorways were created for the future co-construction of knowledge.

(Fade narrator light)

Curtain

End of play

Synthesis

The first part of the following section provides a synthesis of the public narratives that unfolded on the stage. This is followed by an introduction to the narrative themes that emerged from the analysis of the public texts.

The implementation of an Applied Psychology II module signifies the social construction of a new story of teaching and learning in higher education. It is at this point where orthotics/prosthetics, psychology and higher education collaborate. Public narratives on orthotics/prosthetics, psychology and higher education are guided by the core themes of transformation and global reform thinking, initiated during the Second World War and the coming of democracy to South Africa in 1994, in which these three disciplines negotiated an alternative position for themselves. Through the approval and introduction of a new learning programme in B.Tech: Medical Orthotics and Prosthetics at Tshwane University of Technology, orthotist/prosthetists can qualify as Category I professionals and aim at repositioning themselves as key members in the rehabilitation team on a national and international level.

Psychology negotiated an alternative position through the integration of ideas from social constructionism and critical psychology into a mainstream learning programme for orthotists and prosthetists. Higher education institutions in South Africa negotiated a position as institutions of economic empowerment and introduced outcomes-based education (OBE) as an underlying philosophy of teaching and learning. In a community of critical inquiry, orthotist/prosthetists are honoured as experts of their own lives; learners and facilitator collaborate in the co-construction of knowledge and meaning; and a new story of teaching and learning evolves in higher education. However, it is important to acknowledge that other meeting points between the three actors also exist and that this play is merely one construction of such a meeting point.

Narrative Themes

In analysing the public narratives in the meeting point between the three actors, Orthotics/Prosthetics, Psychology and Higher Education, I assigned codes to text, and clustered codes into narrative themes. This was done using the Atlas.ti 5.0 scientific software programme. Through the process of organising narrative codes into families, the following narrative themes crystallised: teaching and learning, co-constructing knowledge, reflection-on-practice, disability and agency. The section that follows describes these themes.

- Teaching and learning

In the narrative of teaching and learning (figure 4), the tension between a deficit model and strengths model plays out. From a deficit perspective, orthotist/prosthetists were selected from the least educated strata such as tradesmen, and only brought into the rehabilitation team to fill in the last stage of rehabilitation. Deficit was also emphasised in the medical narrative in psychology with the focus on mental deficiencies. From a deficit perspective, higher education focussed on the transmission view of teaching and the absorptionist view of learning, in which teachers and learners both played relatively passive roles.

However, Orthotics/Prosthetics, Psychology and Higher Education have challenged the meta-narrative of deficit and in the process a counter-narrative emerged, with the emphasis on a strengths model. Themes of responsibility, critical thinking, continuous reconstruction of experience and life-long learning, which are rooted in an outcomes-based philosophy, dominate the strengths narrative.

In the course of an Applied Psychology II module, facilitation practices that value and appreciate learners' special knowledges and skills invite both learners and facilitator to become equal partners in the teaching-learning transaction and to collaborate in the co-construction of knowledge. The multidisciplinary approach in the B.Tech Medical Orthotics and Prosthetics learning programme invites facilitators from different disciplines

to collaborate in the social construction of knowledge. A counter-narrative of collaboration that emphasises the social construction of knowledge challenges the meta-narrative of learning from a constructivist approach with its emphasis on individualism.

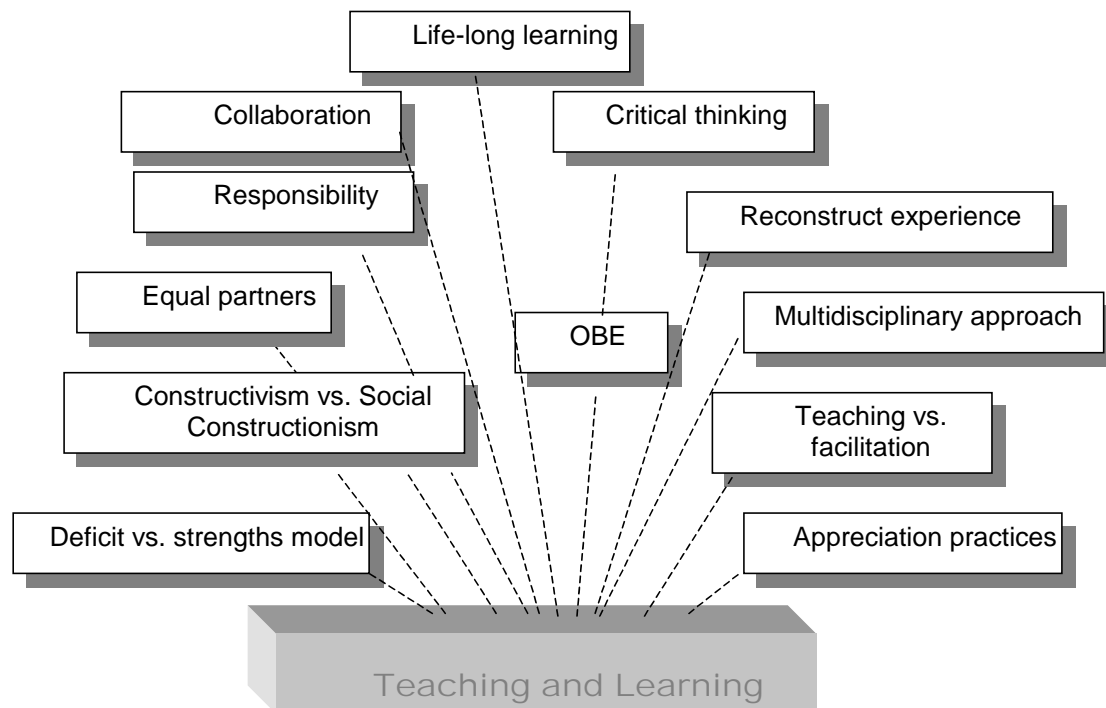


Figure 4 **Network view of teaching and learning**

- Co-constructing knowledge

Co-constructing knowledge is a theme that runs through the narratives of *The Meeting Point* (see figure 5). In the higher education narrative, we may distinguish between information as merely raw material and knowledge as the interconnection between facts, ideas and experience. Collaboration invites the three actors to participate in the co-construction of knowledge. In this process, the personal meaning of knowledge is valued, is as the learners' special knowledge (evident in Psychology's narrative). However, Higher Education advocates a careful balance between propositional, procedural and dispositional knowledge. The social construction of meaningful and worthwhile public

knowledge about facilitation practices for a psychology module for B.Tech Medical Orthotics and Prosthetics takes place in a critical community of inquiry.

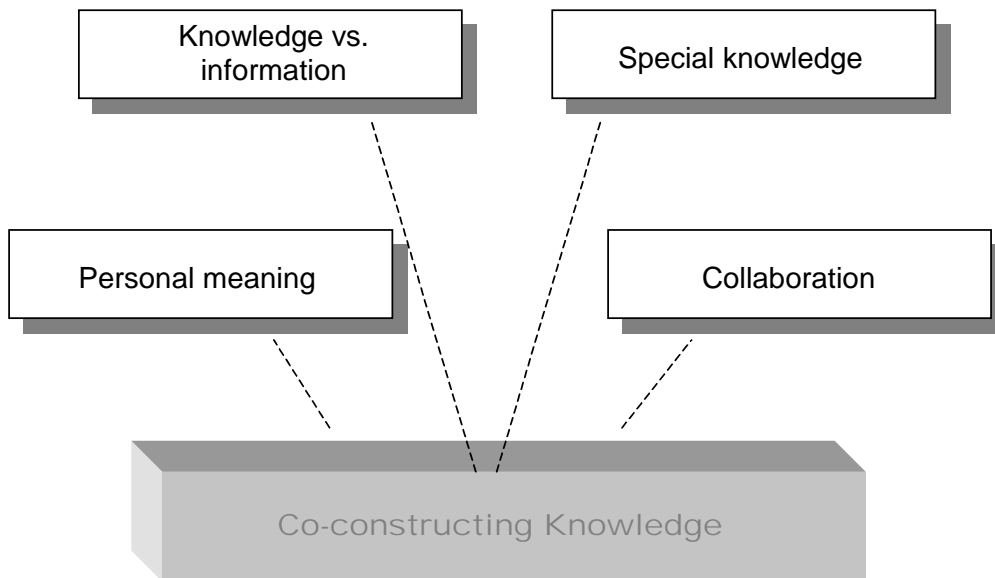


Figure 5 Network view of co-constructing knowledge

- Reflection-on-practice

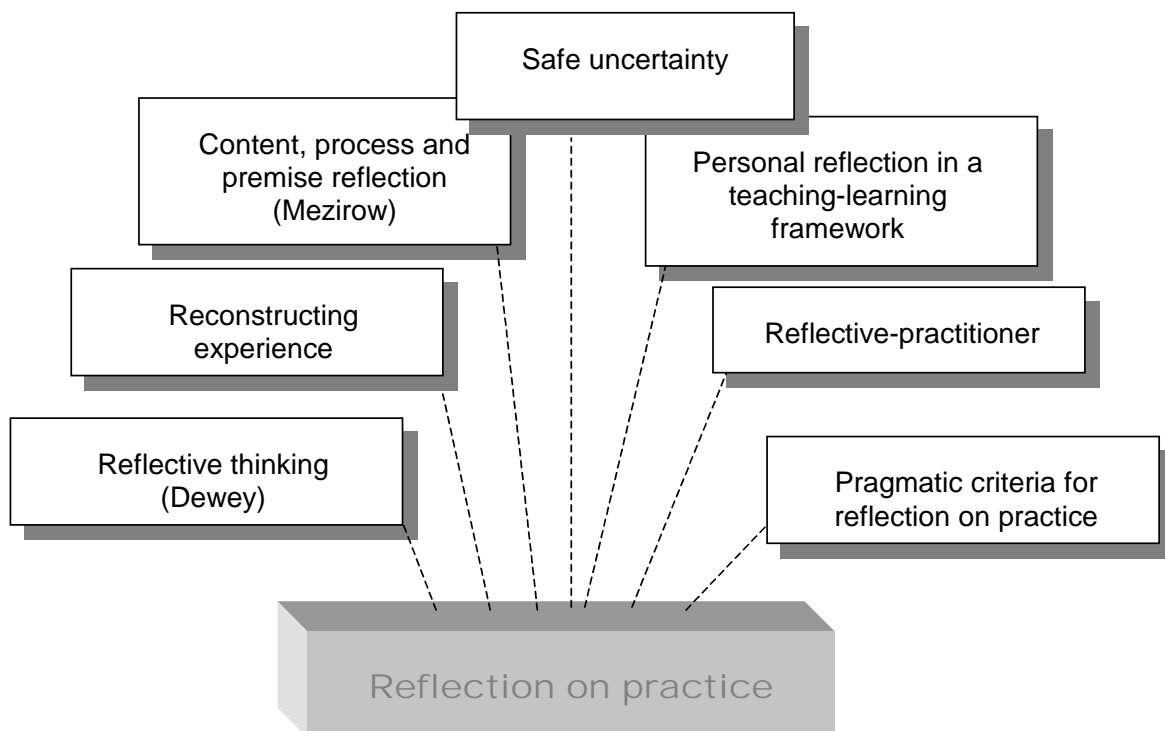


Figure 6 Network view of reflection-on-practice

Dewey (1938) introduced reflective thinking as a means to continuously reconstruct experience. Reflection is also evident in Mezirow's (1991) introduction of content, process and premise reflection. In applying reflection to health practices, reflection-before-action, reflection-in-action and reflection-on-action is proposed in the higher education narrative. Facilitators are also invited to reflect on their practices of teaching and learning. The narrative theme of reflection becomes a meta-narrative during the implementation of the Applied Psychology II module, in which a model of reflective-practitioner is integrated in the underlying teaching philosophy, as opposed to the scientist-practitioner model. From this model, practitioners are encouraged to take a position of safe uncertainty and to reflect on their practice by using pragmatic criteria of whether an approach will fit for a specific client. The introduction of reflective journal writing in the future intentions of the applied psychology module sustains the discourse of reflection-on-practice (see figure 6).

- Disability

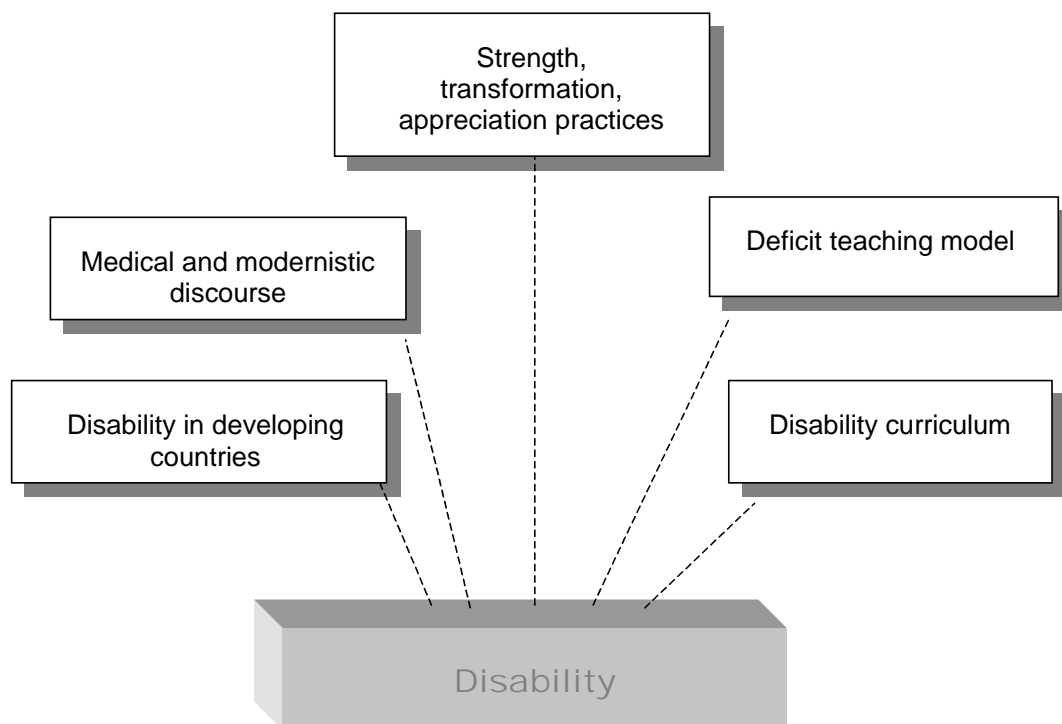


Figure 7 **Network view of disability**

Figure 7 illustrates the voice of disability that is first introduced in the narrative of orthotics/prosthetics. Here, the problems of disability in developing countries are

highlighted, as well as the need for trained professionals to address this need. However, the theme of disability is repeated in the medical and modernist meta-narrative in psychology in which patients are seen to suffer from mental disorders. Reference is even made to the 'rehabilitation efforts' by critical psychology to reveal the political unconscious of modernist psychological science and practice, thus implying an attempt by critical psychology to take a critical look at the denial of subjectivity found in positivism. In constructing a psychology module for the B.Tech Medical Orthotics and Prosthetics programme, we witness our actor's (Orthotics/Prosthetics) efforts to propose a curriculum with the emphasis on amputation, disability and illness. The deficit model of teaching further sustains the disability meta-narrative through emphasising deficits and passivity, in contrast to the counter-narratives of strengths, transformation and appreciation practices.

- Agency

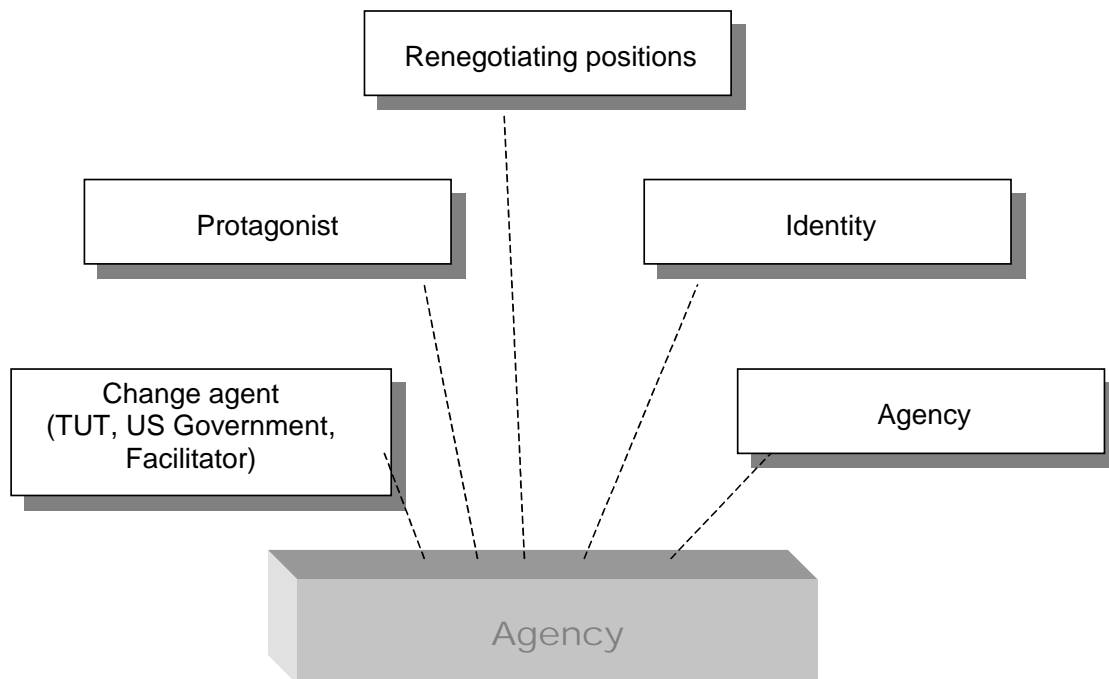


Figure 8 **Network view of agency**

The narrative of agency permeates the story plot of *The Meeting Point* (as illustrated in figure 8). Agency can be located according to two contrasting views: it is either a 'subject position' determined by dominant discourses and meta-narratives, or it

embodies the self-creating (if not self-inventing) actor. From the first perspective (a world-to-subject direction of fit; top-down), the actor's actions are given to the actor by social, historical and biological forces, subjecting the actor and determining its action potential. From the second perspective (a subject-to-world direction of fit; bottom-up), the actor creates itself; it is based on consciousness and free will, is capable of making decisions, and is actively engaged in both world- and self-making, particularly in narrative self-constructions (Bruner, 1990). Actors can use language and grammatical choices to position themselves and others in terms of more or less agency; and they may downplay or foreground characters' involvement in narrated events and sequences (Quigley, 2000).

However, both the top-down and bottom-up directions in the agency debate are problematic for social constructionism:

The top-down view leaves discourse as a side-effect of social structure, and it therefore cannot be the focus for social change. The bottom-up view, worse still, cannot accommodate any kind of social constructionism, since the individual is taken to be logically prior to the social (Burr, 1998, p.96).

Burr (1998) suggests that an alternative to the individual/society dichotomy is rather to think of them as inseparable components of a system. Thus, within the public narratives of *The Meeting Point*, the actors (Orthotics/Prosthetics, Psychology, Higher Education and the Narrator), the social practices in which they engage, the social structure within which they live and the meta-narratives which frame their thought and experience become aspects of a single phenomenon or ecosystem (Burr, 1998).

Within this ecosystem, the act of renegotiating alternative positions contributes to the agency of actors in the story plot. In contexts of self-positioning, the discursive resources or repertoires are not always given, but are rather constructed in a performative fashion. They can also generate counter-narratives (Bruner, 1990). Counter-narratives and constructions arise when people or groups use their capacity for rhetoric and argument to achieve a liberating, legitimating or positive social effect (Burr, 1998). Taking narratives to be situated and performed actions, positioning has a two-way orientation. On the one hand, it orients how characters are situated in

space and time in the story world, positioning the characters vis-à-vis one another as relational story-agents. On the other hand, it simultaneously affects how I, as narrator, design the story in order to define a social location for myself in the act of telling a narrative to you, the audience.

In *The Meeting Point* the agency of the narrator positions Orthotics/Prosthetics as first actor and protagonist in the story plot. However, Orthotics/Prosthetics actively engages in world- and self-making by taking up the challenge of constructing the first B.Tech course in southern Africa. Complicating actions, such as the ISPO's recognition of the need for training of Category I professionals in developing countries, USAID support, and the recognition of prior learning (world-to-subject direction) creates the action potential for Orthotics/Prosthetics to reposition itself as a key member in the rehabilitation team. The two newly registered orthotic and prosthetic Meisters (who are also the participants in this study) act as protagonists for Orthotics/Prosthetics in leading the future training of orthotist/prosthetists in southern Africa, in consultation with the rest of the multidisciplinary team of professional trainers.

Creating a counter-narrative of transformation, as opposed to the meta-narrative of division and a deficit model of teaching and learning, Higher Education actively engages in world- and self-making. With the establishment of SAQA and NQF and the adoption of an outcomes-based philosophy, Higher Education repositions itself as an institution of economic empowerment. The establishment of an integrated teaching-learning framework (as proposed by Garrison and Archer, 2000), challenges facilitator and learners to reconstruct how they think about teaching and learning and to become collaborative agents in the co-construction of knowledge.

With the introduction of postmodernism and critical psychology, Psychology moves from an authoritative position of absolute scientific truth to negotiating an alternative position of a critical stance towards taken-for-granted knowledge. Critical psychology, furthermore, takes agency in creating spaces for itself within institutions, such as higher education, through the development of alternative bodies of theoretical tools, knowledge and practices. Integrating ideas from social

constructionism and critical psychology into mainstream training programmes strengthens the new meta-narrative in psychology.

As narrator and facilitator of the Applied Psychology II module, I took agency in constructing my own philosophy of teaching and learning, which is informed by the public social and cultural discourses relating to ideas of social constructionism, critical psychology and a strengths model of facilitation. In renegotiating a non-expert position for myself as facilitator and inviting learners to collaborate in the co-constructing of knowledge, I actively position myself not only as a facilitator, but also as a learner. The introduction of new selection practices and facilitation practices, such as reflective journal writing and e-learning, are the results of my agency in shaping psychology's future identity in the health sciences.

Reflections

Reflecting on my experience of writing this chapter reminds me of the metaphor of building a puzzle. The story map served as a guideline to assembling each little puzzle piece relating to orthotics/prosthetics, psychology and higher education. The public narratives provide the frame of the puzzle in which the private narratives may unfold at yet another meeting point.

To Follow

In the next chapter, I privilege the voices of the private narratives of learners and facilitator, and share their stories of teaching and learning. The private narratives provide the remaining puzzle pieces with which to complete the picture.