Inaugural address

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Communication Pathology: Yesterday and Today for Tomorrow

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1. INTRODUCTION

Communication is the foundation of human dignity, freedom and agency, is intrinsic to individual personhood and therefore needs to be viewed as a human necessity and moral right (Catt, 2000:138). Speech-language therapists and audiologists share a deep common bond in our belief that the ability to communicate is a basic human right and something that is inextricably linked to our humaneness (D'Antonio, 2008).

It is estimated that 10% of the approximately 47 million South Africans present with ***communication disorders.*** These 4.7 million individuals and their families are currently served by only 1,984 registered audiologists and speech-language therapists (HPCSA, 2008), confirming a vast imbalance between demand and the services provided. Difficulties in communication may lead to developmental, personal, social, academic and vocational consequences. Audiology and Speech-Language Therapy services should therefore be accessible and attainable for all, which necessitates and justifies the training of audiologists and speech-language therapists at the University of Pretoria.

The ***discipline of communication sciences and disorders*** is the study of normal and abnormal communication across the person's lifespan and is remarkably diverse. Historically, the discipline developed mainly in Europe and Great Britain from the work of theorists and practitioners across several disciplines during the early to mid 1800s, mainly in medicine, psychology, linguistics, phonetics, acoustics, elocution, education and physiology. This was followed by developments in the USA in the late 1800s (Lubinski & Golper, 2007:6, 11). Research in these sciences underlying human communication provided strong scientific underpinnings for the discipline but also led to a struggle for scientific identity owing to the interdisciplinary nature of the subject matter of human communication. Within this formative era the common historical roots of the relatively young professions which evolved from the discipline, namely Speech-Language Pathology and Audiology, were laid. During the early 1900s, these two professions emerged from a variety of disciplines (Finn, Bothe & Bramlett, 2005:172; Lubinski & Golper, 2007:21) as hybrid and distinct, yet integrally related professions which are professionally autonomous. Yet in South Africa this trend towards two independent professions has only recently emerged due to traditional training in both professions simultaneously.

Audiologists are professionals engaged in independent practice to promote healthy hearing, communication competency and quality of life for persons of all ages. This is achieved through prevention, identification, assessment, diagnosis and management of organic disorders of the auditory and balance system, functional hearing disorders, auditory processing disorders and developed or acquired speech and language disorders caused by hearing loss.

On the other hand Speech-Language Therapists are health care and educational professionals who practise autonomously but often in collaboration with other professionals, in the promotion of normal communication and the prevention, assessment, diagnosis, and management of developmental and acquired disorders of speech, voice, language, cognitive aspects of communication and disorders of feeding and swallowing (HPCSA, 2008, Lubinksi & Golper, 2007:27, 40).

Development in the University of Pretoria department since its establishment in the late 1950s has been dynamic and in line with international trends. The department has a proud history of evidencing growth and adaptation in curriculum content, clinical practice, research and community engagement. Currently, however, new and diverse challenges necessitate renewed critical self-evaluation in order to embrace the future and retain our edge in contributing to the development of the discipline and professions in South Africa. The question posed is: How has the department changed and whether these past changes were sufficient to prepare for the future? The answer necessitates reflecting on the past and envisioning the future.

2. REFLECTING ON YESTERDAY: TRADITION OF RESPONSIVENESS TO CHANGE

The past history of the department clearly indicates a commitment to the development of both the discipline and the two professions. Professor Pierre de Villiers Pienaar, the father of Speech-Language Pathology and Audiology in South Africa, introduced the discipline of communication sciences and disorders to South Africa during the 1930s. The first training programme for speech-language therapists was introduced by Prof Pienaar at the University of the Witwatersrand in 1937. The need for training Afrikaans speaking professionals was, however, recognized and in 1959 the Department of Speech Science and Speech Pathology was established at the University of Pretoria. In 1960 twelve students and 2 staff members commenced training under the leadership of Prof Pienaar, who retired in 1970 (Uys, 1999).

The first example of responsible change undertaken by the department is evident very early in its history. Prof Pienaar, with his broad world view and extensive, practically all embracing knowledge of related disciplines, realized that speech-language pathology alone was not sufficient to meet the communicative needs of the population. He advocated for and introduced audiology to the teaching curriculum by appointing Prof Izak Hay in 1961, who instituted training in audiology in 1962. This led to the renaming of the department in 1969 to the Department of Speech Science, Speech Therapy and Audiology (Uys, 1999).

Exciting changes continued under the leadership of Prof Hay from 1970 to 1992. In order to address the increasing needs of children with language and hearing disorders through clinical training and research, a nursery group, Kommunika, was established in the department in 1981. The name of the department, once again, was altered, to the Department of Speech Pathology

and Audiology in 1983. This reflected the fact that Speech Science was no longer considered to be essential as a main subject for the degree and that greater emphasis was being placed on theories of language and their implications for the assessment and intervention for individuals with communication disorders. In 1976 student selection was initiated to ensure quality training in order to serve the community better.

During this period a need was identified to determine whether the training programme was meeting the requirements of the population being serviced. Uys and Hugo (Uys, 1993:7) were tasked with conducting a situational and needs analysis in 1989. Based on their findings obtained from a large scale survey, they proposed a new model for professional training in the South African context which propagated a multi level service delivery model in which different types of inputs in a variety of contexts aim at meeting the needs of the community. As a result, a new curriculum was introduced in 1991 which not only included the requirement of a compulsory African language but also a new subject, namely Human Communication Pathology, which addressed issues relevant to both Audiology and Speech-Language Pathology. The name of the degree was also changed to reflect the new qualification, namely B. Communication Pathology.

An active drive to recruit African students to the programme was launched to address the need for service delivery in African languages. These changes reflect a proactive stance towards the transformation required as a result of the political changes in 1994 (Uys, 1993; 1999). In response to a new emerging field in Speech-Language Pathology and related disciplines, the Centre for Augmentative and Alternative Communication (CAAC) was established in 1990, and subsequent growth led to it becoming an independent autonomous centre within the University in 1994, whilst the curriculum content continues to enrich the current programme.

During her headship from 1992 to 1997 Prof Isabel Uys encouraged extensive and deep self-evaluation in her inaugural address in 1993 and made a call for the department to shape its own future (Uys, 1993:5). Another change to the name of the department, the third in 32 years, reflected the shift of emphasis in the field, in the curriculum and international trends; it was renamed the Department of Communication Pathology. Under the leadership of Prof Uys, the department moved closer to university structures, systems and standards to make a meaningful contribution within the broader tertiary system.

During the 1990s the department responded proactively to the expanding subject fields within the discipline and in the process distinguished itself from other training programmes in South Africa. In audiology, the advent of cochlear implants as an option in the rehabilitation of persons with profound hearing loss meant that a new, exciting and expanded role for audiologists evolved. The assessment and management of clients with cochlear implants necessitates a multidisciplinary team approach. In 1991 Prof J G Swart, the previous head of the Department of Ear, Nose and Throat Surgery, established the Pretoria Cochlear Implant Programme in close collaboration with the department, which to date, is the only cochlear implant team within an

audiology and speech-language pathology training programme.

Early communication intervention, a specialist area comprising a family-centred, team approach to infants and young children at risk for, or who present with, communication disorders or feeding/swallowing impairments, and their families, led to the institution first of the Clinic for High Risk Babies (PPS CHRIB) in 1991 and later of the Centre for Early Intervention in Communication Pathology (CEICP) in 1992. This centre is the only one of its kind in Africa, again illustrating the leadership of the department on a national and continental level in teaching, research and community engagement.

Prof Uys's successor, Prof Rene Hugo, in her term of office from 1997 to 2003, made a call in her inaugural lecture to Africanize the educational programmes, research and community service in order to ensure relevancy and accountability to the community served by the professions (Hugo, 1998). Changes in the curriculum structure were necessitated due to organizational specifications and three packages in Speech-Language Pathology, in Audiology and in Speech-Language Pathology and Audiology were offered on an undergraduate level, reflecting the development of the professions. This change would be important in future curricular development since the structure for separate degrees in the two professions had been created.

In response to technological developments and international research trends the Laboratory for Instrumental Communication (LIC) Research was founded. Its aim was to create an opportunity for the study of normal and abnormal speech and voice production with the aid of technological, quantifying techniques and to apply these techniques for teaching, clinical and research purposes.

The quota of student numbers was increased to meet the increasing demands for services in the country and to contribute to the growth of the Faculty of Humanities. As attention remained focussed on client needs the department responded to an identified local need and instituted a new postgraduate qualification, the Advanced Diploma in Hearing Aid Acoustics, during 1999 in order to qualify Hearing Aid Acousticians. The aim was to ensure quality control of a profession that, historically, had been poorly regulated and to address the needs of the hearing impaired population in South Africa (Swanepoel, 2004: 264).

During my term as head since 2003, continued self-reflection in the department has led to collective engagement by the staff in the process of continually improving our department and training programme to meet the future. During the annual planning meeting in 2005 the mission and vision of the department were reflected on, revised and realigned with the mission and vision of the University of Pretoria.

In compliance with the policies of the HPCSA and the HEQC the department and educational programmes were evaluated during 2006. The Professional Board for Speech, Language and Hearing Professions, of the HPCSA, accredited the speech-language pathology curriculum and required additional

clinical training in certain areas prior to accrediting the audiology curriculum. The Advanced Diploma for Hearing Aid Acoustics was accredited by the Professional Board in 2007. The external review panel commended the department for its excellent quality of training, its staff and student complement, research profile and community engagement activities. They strongly recommended that the training model of a single qualification which included both professions be reviewed with the aim of instituting single profession training in the future. These evaluations served to validate and position the department within the local and international arenas.

In 2007 the value system within of the department was redefined and curriculum planning was based on these core values. Information technology in the form of ClickUP was recommended as the best practice for all undergraduate modules, which met with student approval. The focus of 2008 has fallen on the scholarship of teaching and learning with an emphasis on assessment in preparation for the new curriculum of 2009. International collaboration was strengthened through the appointment of two professors extraordinary, namely Prof J Hall from the USA and Prof B Vinck from Belgium, which also improved the department's stature.

In conclusion, this historical overview clearly indicates that all heads of department and their teams were sensitive to changes which presented opportunities for growth and responded to these in a responsible fashion, which led to the continued development of the department and distinguished it as a leader in the field, providing a sound foundation for future endeavours.

3. TODAY – THE CHALLENGE OF CHANGE

The department has a vested interest in preparing the professionals of tomorrow to be better and ready to meet the challenges of a demanding society. In striving to provide audiology and speech-language therapy students with relevant and high quality education, both on undergraduate and postgraduate level, the constantly evolving local and global context in which they function needs to be considered together with the evolving discipline and professions.

The question arises whether current changes are different from those of the past and indeed pose new challenges which yet again require innovative adaptations. We need to be aware of the danger of assuming that state-of-the-art knowledge alone represents the solutions to these challenges since the future of the discipline and the professions depend on the extent to which we can improve what we do in teaching, training and research rather than maintaining the status quo.

Currently the preparation of future professionals is confronted by a multitude of changes in the tertiary education system, the profession, technology and globalisation, all of which translate into an exciting mix of new challenges to and opportunities for teaching and learning, research and community engagement.

Tertiary Education

The scenario of tertiary education has altered significantly, and never more so than in the past decade. Multilevel changes have emerged in the scholarship of teaching and learning, generational student issues and professional education demands.

According to the University of Pretoria's Strategic Plan 2007-2011, *Innovation Generation: Creating the Future* (www.up.ac.za), the primary goal is to become an internationally recognized South African teaching and research university. The Institutional Teaching and Learning Plan (ITLP) for Undergraduate and Continuing Education was developed with the purpose of providing institutional guidance regarding teaching and learning, as well as indicators for monitoring progress in achieving institutional teaching and learning targets and a guideline for external evaluations.

Scholarship of Teaching and Learning (SoTL) has also gained momentum in the discipline and requires educators to advance beyond curriculum content and teaching methods, to engage in the more general scholarly inquiry regarding student learning. In line with the University of Pretoria's ITLP and the accreditation standards and requirements laid down by Professional Board of Speech, Language and Hearing Professions, a learner-centred approach needs to be followed; learner-centred teaching techniques need to be applied, including formative and summative assessments. Increased efficiency and relevancy of educational preparation is called for to address the challenges in increasing the accessibility, affordability and accountability of educating future audiologists and speech-language therapists.

This *challenges* audiologists and speech-language therapists engaged in the education of future professionals to re-engineer their teaching and learning practices (Kent-Walsh & Schwartz, 2006) so as to provide high quality and relevant education, and to engage in innovative pedagogical approaches, as well as to add a new dimension to their research activities. The department needs to continue to provide a teaching and learning environment that fosters critical thinking, research and inquiry throughout academic and clinical experiences in order to instil the principles of life-long learning.

Today's ***students in audiology and speech-language pathology*** are different from their predecessors and from any generation that has preceded them. Today's generation, born after 1981, have been labelled millennials or Generation Y. They are truly reflective of the fast-changing world in which they have been raised. Their lives are ruled by technology from communication to entertainment to education (McCarthy, 2006:79). Their concerns are different from those of their predecessors, for example, rising student loan indebtedness and the growing imbalance between debt/income ratios upon graduation (Novak, 2006:7).

According to Chester (2002, in Mc Carthy, 2006:79), Generation Y students are comfortable with technology, are impatient, display shorter attention

spans, have a low threshold for boredom, are adaptable, question everything, require regular reinforcement and are more independent, resourceful and peer-dependent than previous generations. However, students from disadvantaged backgrounds may not all have enjoyed similar exposure to technology, a gap which needs to be accommodated in the teaching of learning methods.

A concerted effort is being made to alter the current student demographics of the department because the multilingual and multicultural needs of the South African population who require audiology and speech language services are not currently being met due to the limited number of African professionals.

Today's students are increasingly diverse and language and cultural differences necessitate changes regarding the language of teaching, speaking and writing styles of both lecturers and students.

The changes in the student complement oblige educators to explore different and innovative strategies which address students in terms of that which they easily recognize and comprehend. The *challenge* is to consider the unique characteristics of this new generation of students and integrate them into curricular and clinical education models, while also altering traditional teaching and learning and supervision strategies to accommodate the needs of today's student.

Increasing student diversity and greater emphasis on group learning compels staff to develop new skills and values that will verify and encourage diversity. A challenge posed to marketing and recruitment is the lack of visibility of the professions, especially in rural communities.

Although tertiary institutions enjoy academic freedom, the training of audiologists and speech-language therapists is subject to ***regulations regarding the professional registration of students and undergraduate curricula.*** Recent national governance has instituted change. Section 16 (1) of the Health Professions Amendment Act 29 of 2007 stipulates that training programmes need to be accredited by the professional board concerned as regards offering appropriate education and training for the specific qualification purposes.

Programme accreditation is performed by the Professional Board of Speech, Language and Hearing Professions, HPCSA, on a cyclical basis to ensure that a programme meets the prescribed education and training requirements. The intention of accreditation is to promote excellence in educational preparation while assuring the public that graduates of accredited programmes are educated in a core set of knowledge and skills required for independent professional practice.
The professional board is established as a Standards Generating Body in terms of SAQA legislation and has formulated unit standards, exit level outcomes and associated assessment criteria. Training is on level 7 of the National Qualification Framework (NQF). In addition, the HPCSA is established as an ETQA whose responsibility is to not only ensure appropriate

standards of training but also to make sure that the public is adequately protected from practitioners who might not possess the requisite theoretical and practical grounding.

Training programmes are *challenged* to provide evidence of compliance with the set course of study, training and assessment methodologies required of a student before such qualification is granted and to furnish proof of compliance with set standards of education and training required of students. Non-compliance may attract criminal sanctions in terms of Section 16(5) of the Health Professions Amendment Act, 2007 (Mkhize, 2008).

Today's audiologists and speech-language therapists are working in fast paced environments with expanding populations which, two decades ago, we knew little about and were marginally involved with (Golper, 2007). For instance there is an increase in the number of individuals of all ages infected with HIV and AIDS who present a range of communication disorders that require intervention on multiple levels, for example, from hearing testing to palliative care focussed on the treatment of feeding and swallowing disorders. Clients living in poverty with increased risk factors for communication disorders require services in PHC clinics. Multilingual learners with English as Additional Language (EAL) present with language issues in the classroom that affect their literacy and numeracy development, which need to be addressed in order to enable these children to develop to their full potential to eventually make meaningful contributions to society and the economy. Further examples of new and expanding populations requiring audiology and speech-language therapy services include medically fragile infants and children, individuals with autism spectrum disorders, with cochlear implants, with auditory processing disorders and with traumatic brain injury which require additional clinical skills, for example, collaborating with traditional healers, working with interpreters to serve multilingual populations and different models of service delivery so as to reach vulnerable and disadvantaged communities in South Africa (Moodley, Louw & Hugo, 2000).

Compulsory community service for audiologists and speech-language therapists was introduced by the Department of Health in 2003, which necessitated training programmes to adapt training to adequately prepare new graduates for this new work context. Within the public health sector services now need to be delivered from primary to tertiary levels in a variety of contexts from, for example, Primary Health Care Clinics to tertiary training hospitals. Professional roles now also include the promotion of normal communication and prevention of communication disorders. The responsiveness of the professions to the needs of the South African population and new contexts of service delivery necessitated that the ***scope of practice expand***.

Professional practice requirements and expectations continue to evolve and increase. For instance, during 2008 the scope of practice of audiology has expanded to include the diagnosis of balance and vestibular disorders and cerumen management. The scope of practice of speech-language therapy has also expanded in past years to include e.g. neonatal early intervention

and the assessment and management of feeding and swallowing disorders over the lifespan, without eliminating current and past areas of practice.

The *challenge* posed by the regulatory body and expanding scope of practice is to adapt the curricula and approaches to teaching and learning in response to the full scope of practice and new accreditation standards in order to guarantee high quality and relevant education in preparing new professionals.

Mandatory continuing professional development for registration with the HPCSA by audiologists and speech-language therapists began in 2007. Continuing education ensures that professionals are able to maintain their currency and continue to uphold the standards acceptable to the profession. Continuing education is, however, necessary regardless of the mandatory requirement in order for one to practise in an ethically sound and accountable manner. The ITLP of the University of Pretoria also includes the provision of institutional guidance regarding academic aspects of Continuing Education since creating flexible life-long learning opportunities constitutes part of the mission of the University of Pretoria (www.up.ac.za).

The *challenges* of providing Continuing Education are to expand teaching and learning activities so as to meet the needs of professionals and to conduct these activities from a community-engagement perspective. Given the increasing demand for scientifically based evidence as regards clinical methods, the challenge faced by future continuing education concerns how to provide practising professionals with hands on experience in solving their individual clinical questions, by locating evidence and evaluating and interpreting the information in order to be able to deliver evidence-based services.

The University of Pretoria boasts a proud record of community service and ***community engagement*** is now included in its strategic plan. The Department of Communication Pathology records a long tradition of ongoing community projects and support groups to promote and develop the social responsibility of audiology and speech-language therapy students and to benefit communities. Projects are aimed at providing assessment and intervention services to individuals with communication disorders and their families and training of others for example teachers. In 2006 an academic service-learning module was offered for the first time. It was developed to be fully compliant with the service-learning criteria in terms of equal emphasis being placed on service provision in audiology and speech-language pathology, formal opportunities for theoretical reflection on learning experiences and an increased sense of social responsibility. The *challenge* is to remain current regarding developments in academic-service learning and to make a meaningful contribution to local communities and the university at large.

Increasing demand for scientifically based professional practice

The practice of Speech-Language Therapy and Audiology has traditionally been described as both an art and a science. While there always needs to be a sound scientific foundation underpinning what clinicians do, applications require as much art as science. The art refers to the clinician's intuitive sensitive, caring attitude and experience which is integrated in the application of theoretical, scientific knowledge within clinical settings. Experienced clinicians become the artists who need to share their techniques with others.

Evidence-Based Practice (EBP) has become a critical tenet of audiology and speech-language therapy in the new millennium. Professionals are increasingly being held responsible for the evidence base that supports their practice. EBP calls for the making of informed clinical decisions about the care of clients based on the best, most current, high quality research evidence integrated with practitioner expertise and client preferences and values (ASHA, 2005). Adopting EBP is an ethical and professional responsibility in selecting proven approaches and ensuring that these are the most relevant to the client and context.

EBP acknowledges the art of the professions, namely the experiences, values and preferences of both clinicians and clients. Clinicians however, need to become systematic in collecting and publishing evidence to demonstrate that the art and experience that they are using really are effective in assessing and treating all types of individuals who receive speech, language and hearing services.

In the fields of audiology and speech-language pathology most of the evidence for specific evaluation and treatment techniques is based on clinical experience, expert opinions, case reports and consensus conference reports rather than on scientific experimentation. Treatment and evaluation research is, however, limited and as yet there are no deep pools of well designed randomized control studies and quasi-experimental studies to guide clinicians in taking every clinical decision. In South Africa an even greater caveat exists since research evidence tends to be based on minority populations such as Caucasian, middle-class, monolingual speakers: this is of limited relevance to the practice of the professions within the contextual reality of South Africa which is characterized by poverty, inequalities of health care services and access thereto, and the burden of disease such as HIV/AIDS and tuberculosis.

EBP poses *challenges* to both teaching and learning and research. Students need to be guided in adopting an EBP approach to developing their clinical skills in audiology and speech-language therapy because clinical expertise is required to integrate best evidence and client preferences so as to select assessment and treatment methods. Continued professional development plays a vital role in helping professionals gain skills to identify, and critically evaluate, the quality of research and to assess the impact of this information on actual practice.

The South African context offers ideal opportunities for research to inform clinical practice regarding models of service delivery, communication

disorders with high prevalence rates, multilingualism and diversity. Local treatment research needs to be conducted and disseminated in order to provide high level evidence of therapeutic effectiveness. The department and postgraduate students are tasked with the professional responsibility of undertaking research that is locally relevant and internationally acceptable as regards providing evidence for the purpose of guiding practice in South Africa. Postgraduate students need sufficient depth of skill in methodologies (e.g. a mixed methods approach) and breadth of methodological skill to contribute to future treatment research that will address the complex and pressing needs that define clinical practice (Justice, 2008:i). Advancement of the discipline of communication sciences and disorders depends on the generation, dissemination and translation of research into clinical practice.

Advances in technology

Changes in technology affect not only the delivery of teaching and learning but also the skills required by audiology and speech-language therapy students for professional practice. The unique characteristics and learning style preferences of Generation Y students, who are strongly influenced by technology, oblige educators to explore different and innovative teaching methods (McCarthy, 2006:84). Teaching and learning activities in the department already make use of Power Point, DVDs, instructional CDs and laboratories for simulated clinical practicals. Web based teaching is used for distance education and to supplement classroom teaching, such as the Click UP system already mentioned. This was devised by the Department of Education Innovation, University of Pretoria: on the Web, learning material is provided electronically and communication regarding the module occurs, for example, reminders, feedback from lecturers and due dates for assignments.

Technology has enabled audiologists and speech-language therapists to deliver more efficient services. The development and expansion of audiology has been closely linked with the tremendous gains made in technological innovation over the past few decades. As the rapidly expanding body of hearing science increasingly embraces the potential of technological advances, audiologists see new and improved electro-acoustic and electro-physiologic techniques which allow more precise, accurate and perhaps also more comprehensive, detection and diagnosis of hearing loss and balance disorders. Advances in technology are not only leading to better identification and more diagnostic specificity but are also making an impact on the intervention options available for people across the age range, from infants to the geriatric. Digital hearing aids provide state-of-the-art processing and amplification in real-time according to the exact characteristics of an individual's residual hearing abilities, in order to provide optimal hearing even in less than ideal listening environments. For those individuals with a total or profound hearing loss the option of a cochlear implant is also available. This device, widely believed to be the most successful biomedical engineering breakthrough to date, is surgically implanted and electrically stimulates the auditory nerve, which may provide functional hearing for these deaf individuals.

Another exciting field in which technology is impacting not only on identification, diagnosis and intervention but on the manner in which services are delivered is the expanding field of e-health or telehealth. Portable telemedical solutions with automated audiometry, remote hearing aid fitments, remote support and sun powered hearing aids are only a few of the combined solutions which hold significant promise for a whole new way of delivering services to areas where audiological services are not available. This field is vast, with 90% of the hearing impaired persons in the world residing in developing countries where most of the time no or very few hearing healthcare services are accessible.

Technological developments have also impacted on training in speech language pathology where the speech-language therapists participate as team members in procedures such as Flexible Endoscopic Evaluation of Swallowing (FEES®) as a method of assessing swallowing, flexible fibre optic nasopharyngoscopy as a method for assessing velophrynageal functioning in individuals with resonance disorders such as cleft palate, and spectrographic analyses for the assessment of individuals with voice disorders. The use of telepractice in speech-language therapy is also being developed for the assessment and treatment of a variety of disorders such as voice, fluency and neurological disorders and with the aim of providing information and counselling to clients and families, in different settings such as schools and homes.

These current technological changes pose multilevel *challenges.* In order for students to be trained to the full scope of practice, state of the art equipment must be acquired which has cost implications, and clinical sites for training need to be negotiated with hospitals and teams. Lecturers require continuing professional development to update their skills prior to using, instructing and training students in the use of new equipment. We also need to be flexible in adopting and embracing rapidly changing technology in support of teaching and learning and research. Collaboration with new partners needs to be developed to support the use of technology. The said professions must use and share these developments for collaboration within the continent of Africa.

We need to be aware of and formulate strategies to deal with the negatives associated with new technologies, for example, the ethical responsibilities seeming from using technology such as confidentiality, user competence, calibration, the protection of intellectual property, use of the cyber proliferation of non-peer reviewed information and constantly evolving incompatibilities between computer hardware/software (Novak, 2006).

Globalization

It is important for tertiary education institutions to consider the constantly evolving global context in which students function. Covey's (2004) description of global "seismic shifts" is relevant to the impact of globalization on the professions of audiology and speech-language therapy in South Africa. Globalisation entails a rapid increase in economic, technological and cultural exchange, flowing from economically and technologically dominant nations to

those less dominant (De Villiers, 2005:56). Its benefits and negative consequences are numerous. It is regarded as offering developing nations an opportunity to escape from a cycle of under-development, poverty, inadequate access to health care and burden of disease. However, many of the underlying principles of globalisation are contradictory to traditional values. Globalisation is associated with cultural diffusion and multiculturalism and emphasises individual autonomy in contrast to the traditional African world-view, *Ubuntu*, which acknowledges the value of collective unity and group solidarity. Globalisation could aggravate the marginalization of vulnerable communities in Africa (De Villiers, 2005:60).

Healthcare professionals such as audiologists and speech-language therapists are well positioned to ensure that the benefits of globalisation reach the communities in which they serve. One way in which this goal can be realized is by fulfilling the professional function of advocacy through identifying community needs, mobilizing stakeholders and influencing policy makers that will support foreign investment, economic growth, social stability and improved health. Traditional communities utilise traditional healers for healthcare. Audiologists and speech-language therapists working in Primary Healthcare could campaign for the establishment of technology and facilities required by, for example, personal health information systems and telepractice, through collaborating with traditional healers and religious leaders to contribute towards ensuring that the health-related benefits of globalisation reach the community. They may also assume the role of protectors to safeguard communities against inferior programmes, faculties and equipment (De Villiers, 2005:62). I maintain that audiologists and speech-language therapists need to provide a voice for these vulnerable populations who cannot speak for themselves.

Another important global development is the introduction of the International Classification of Function (ICF) by the World Health Organization (WHO, 2001). This multipurpose health classification system provides a standard language and framework for the description of functioning and health. It has been adopted by 191 countries as a tool for promoting a more universal response to people who experience activity limitations and participatory restrictions.

Adopting the ICF (WHO, 2001) requires a shift from the medical model to a social model that emphasizes human functioning. The medical paradigm with its experimental, positivist approach to collecting evidence in order to guide practice focuses on the cure of a disorder. However, in many aspects of intervention, especially in Speech-Language Pathology, the medical disorder approach is problematic since intervention which focuses on the disorder alone ignores the other dimensions of disability, for example, activity and participation limitations. This will have a limited impact on the individual's daily functioning and effect little change in their lives. Audiology, although it has a closer link to the medical approach, could also benefit from a broader approach (Hartley, 2007:8). Uys and Hugo (1997:24) concur that a paradigm shift from disorder-orientation to function-orientation is necessary to meet the demands of Africa.

On implementing the ICF (WHO, 2001), the effectiveness of interventions should improve since the focus falls on the ability of clients to function optimally within their natural environments.

Globalization also leads to increased scientific and professional linkages and networking. International collaborative research can impact significantly on local research and practice, based on advancements in the global knowledge base of the professions.

In this respect there is great potential for globalization of our professions and training programmes. Both training and practice need to respond to the *challenges* posed by it. Students need to be instructed regarding the phenomenon of globalisation and be prepared to manage its influences at a local level. It is proposed that critical social theory is followed as a conceptual framework by the discipline of communication sciences and disorders. Such a theory holds that the social includes historical and collective experiences that shape current relationships, that knowledge is not value-free, that social institutions affect the daily lives of groups of people and that the truth is multi-dimensional. Adopting critical social theory concepts will allow students to acquire a global perspective from which to address communication development and disorders and should bring about additions to curriculum content, the pedagogical process and research agendas and thereby result in related competencies (Hyter, 2008).

The critical paradigm will serve as a suitable educational foundation as its fundamental interest lies in social transformation toward a better, more just society. Curricula need to present the social issues and realities of the real world in which they will work while students need to be encouraged to critically evaluate and reflect on, for example, inequalities in service delivery in order to construct meaning, for a better understanding of the contextual issues arising (De Villiers, 2005:64).

The ICF framework (WHO, 2001) needs to be adopted in teaching and learning to ensure that training within a social model to the full scope of practice occurs. Since globalisation is characterized by information overload, students also need to be equipped with information management skills and the ability to initiate change in order to manage the influences of globalisation at a community level. Future professionals need to be educated regarding the benefits of international, collaborative research projects and emphasis should be placed on research ethics in participating and conducting research across countries and cultures.

The discomfort of supporting the current curriculum whilst acknowledging the challenges that need to be met in the preparation of future professionals has led to cognitive dissonance. Research has shown that cognitive dissonance can be relieved by developing rationalizations, either to change or not to change (Golper, 2007). According to Uys (1993:7) the challenge of change is not necessarily the acceptance of new ideas but the ability and willingness to escape from the old ones.

4. TODAY AND TOMORROW: CONTEXTUALIZING CHANGE

Developments in the fields of Early Communication Intervention and Craniofacial Disorders exemplify the current management of the changes and challenges described above and illustrate our role within the African and international context.

The department has a key role to play within Africa and internationally in the future development of treatment for individuals with craniofacial disorders and those who require early communication intervention within developing contexts. Principles applied locally may serve to inform service delivery in Africa and abroad. In certain regions of developed countries client demands outweigh the number of professionals who have specialized in ECI and craniofacial disorders and lessons learned in South Africa may be applied there as well.

Although the principles of ECI were adhered to in developing the field of ECI in the department, in terms of the South African population and context an adaptation of international models was required so as to render services culturally appropriate, locally relevant, accountable and sustainable (Fair & Louw, 1999). A family-centred approach is followed in assessment and intervention with infants and young children. The process of ECI recommended for South Africa is based on the Developmental Systems Model proposed by Guralnick (2005) which provides a framework for best practice while allowing for adaptations to the local and other developing contexts.

Traditional models of direct service delivery were reviewed and expanded to match local resources and to meet local needs (Louw, Shibambu & Roemer, 2006:47). Such alternatives include the utilization of the primary healthcare system for ECI, promoting normal communication development, emphasizing prevention and also training caregivers, which suggest widespread possibilities for application in other developing African countries.

The development of a research base in ECI by conducting studies on, for example, the characteristics of the population requiring ECI, service delivery models, and assessment protocols, can inform the development of ECI in developing countries, as is currently the case in Mauritius, with research being carried out on the development of a communication assessment protocol for young children with cleft lip and/or palate.

The development of the field was supported through collaborating with internationally renowned research fellows such as Professors Rossetti, Shprintzen and Owens from the USA and Prof Mc Conkey from the UK who have visited the department and contributed to research, teaching and the clinical skills of under- and postgraduate students, staff and practitioners. This collaborative model could be employed to develop ECI in other developing countries as well.

By engaging in the scholarship of teaching and learning, a theoretical and clinical training model for ECI was developed which also served to guide the teaching and learning practice in ECI at other South African training institutions, and could be replicated in other developing countries.

Service delivery is based on research and informed clinical training. Services provided in the Clinic for High Risk Babies (CHRIB), and in hospitals and communities, have benefited infants and young children and their families across the board, to the advantage of the South African society and economy at large. Belli, Bustreo and Preker (2005:777) argue that investing in child health is a sound economic decision for governments to make since it results in better educated and more productive adults. Addressing communication disorders in childhood is more important than at any other age as these are likely to permanently impair an individual throughout life.

By enthusiastic collaboration and combining resources within the continent of Africa, local expertise can position the department within the larger African context. The challenge of expanding geographical boundaries can be illustrated by examples from the field of Craniofacial Disorders, and specifically cleft lip and palate which is a specialist area in the department for which it relies on its collaboration with the Facial Deformities Clinic (FDC), Department of Oral and Maxillo Facial Surgery, University of Pretoria.

It is estimated that cleft lip and palate (CLP) is the most common congenital anomaly, occurring with a ratio of 1:725 in the White and 1:2380 in the Black South African population. A cleft lip and palate has a pervasive effect on feeding, communication, social development and family functioning. Children with CLP often struggle with debilitating speech impairments. Only 25% of children with repaired CLP are expected to develop normal communication without speech-language therapy. Multidisciplinary cleft care is well established in South Africa.

Internationally, speech-language services are concentrated in the developed world whilst 80% of the world's population live in developing countries (Sell 2008:180). South Africa is the only African country which provides extensive training in audiology and speech-language therapy on the continent. Some African countries such as Ethiopia operate newly established training programmes while others, for example, Kenya, Nigeria, Mozambique, Swaziland, Ghana and Uganda, contain a limited number of audiologists and speech-language therapists providing services to an overwhelming number of clients. These therapists are mostly generalists, with few who have specialized in cleft palate care. Little networking between audiologists and speech-language therapists in Africa has occurred to date. In other African countries such as Rwanda the profession is unknown and therapists are not available. The roles of audiologists and speech-language therapists regarding interdisciplinary cleft teams are not well understood in most African countries.

An estimated 13 000 infants are born in Africa each year with CLP. As suggested, cleft care on the continent to date has been limited in availability

and riddled with many challenges. In fact, it is a common fact that cleft lip and palate is a low priority among healthcare providers in Africa. Cleft care in most African countries has mainly been provided by volunteers supported by non-governmental aid organizations; to date cleft care providers in Africa face myriad challenges, which differ from country to country, but are uniquely different from those in developed countries. For instance there is a lack of incidence and prevalence data due to poorly maintained birth and death registers which complicates healthcare planning; myths and superstitions regarding clefts abound; cleft care services are difficult to access, are fragmented and cases of older children and adults with unrepaired clefts are common; while there are no parent support organizations or advocacy groups for CLP. There are, however, a multitude of opportunities to address these barriers such as committed professionals working as cleft care providers in Africa, which leads to a need for networking and collaborating, the need for a CLP organization and for outcomes based research.

It therefore stands to reason that this field of expertise within the department needs to be shared in order to improve cleft care on the continent, in keeping with the ethos of *African solutions for African challenges by African cleft care providers* (D'Antonio et al, 2007).

The Smile Train initiative of Cleft Care in Africa provided the opportunity to make a contribution. This project facilitates the development of African solutions for the challenges of cleft care faced on the continent by African cleft care providers, by means of training surgeons and other professionals involved in cleft care. Sharing knowledge and expertise on speech-language therapy occurred during the 2006 and 2007 Pan African Congress on Cleft Lip and Palate (PACCLIP) in Nigeria attended by participants from 20 African countries. Based on experiences gained from the South African Cleft Lip and Palate Society (SACLPS) a contribution was made to the establishment of the Pan African Association for Cleft Lip and Palate (PAACLIP), a historical African event. Harnessing the social capital of Africa will allow for rapid increases in cleft care across the continent. Furthermore, during the Seattle Kumasi Team Cleft Care in Africa project in 2008, suggestions were made regarding alternative models of service delivery in the absence of speech-language therapist teams in Ghana and owing to the limited number of therapists in Nigeria and Ethiopia. A new body of knowledge was collated and capacity building was carried out with benefits to all participating countries. Africa is poised to do some unique and great things in cleft care (D'Antonio et al.,2007). According to Swanepoel, Hugo and Louw (2005:19) "*It is up to the developing world to start where it can;for the developed world to help where it can, so that together we may ensure the best outcomes for infants ..[with cleft lip and palate] as widely as we can."*

5. TOMORROW: CELEBRATING CHANGE: INTRODUCING A NEW CURRICULUM

The distinguished history of the department attests to its continuous evolution. Earlier, the question was posed as to whether the changes identified were not

merely a revisiting of past themes within a changing environment. This is refuted by the challenges of change which led to the groundbreaking decision to depart from the traditional model of training in which audiology and speech-language therapy were merely components of a single combined training programme, and to establish a new training model in which audiology and speech-language therapy are offered as two separate professional degrees. The department made the choice according to Ralph Waldo Emerson's statement: *Do not go where the path may lead. Go instead where there is no path and leave a trail.*

In making the choice to change, the department is now faced with the task of realizing the opportunities presented by the given changes and challenges in terms of negotiating the dynamic tensions between the discipline, the two professions, policies, regulations and practice. Lessons from the past inform and impact on the negotiation process. The critical challenge is how to capitalize on our current knowledge and structures and mobilize our collective resources within and outside of the department in order to provide cohesion to the changes suggested above. Meeting this challenge will ensure better outcomes for our students and guarantee that the department continues its meaningful and important contribution to both the discipline and the professions.

This break with tradition is the most significant change in the department's history to date and it is appropriate that the commemoration of the department's 50th anniversary in 2009 will be marked by the implementation of a new curriculum.

The decision taken by the Department of Communication Pathology was an informed process and did not merely follow an emerging trend. In 2005 a decision was taken to explore the notion of profession specific training by actively engaging in information gathering, consultation with stakeholders, critical self-reflection, feedback from programme evaluations by the Professional Board of Speech, Language and Hearing Professions, the HPCSA as well as an External Review of the department and debate throughout 2006. This decision has, however, met with resistance from the National Department of Health, a major employer of and important stakeholder in the professions of audiology and speech-language therapy. The department has expressed concern that single qualification training is focussed on specialized services and perceives the affordability of a single qualification professional to be problematic and consequently the department currently prefers graduates with a dual training in both community service and full time posts. A process of negotiation is called for which involves a range of stakeholders such as regulatory bodies, training institutions, members of the professions and clients address and resolve this paradox to ensure that quality services, which are responsive to local needs, reach a broader range of clients.

This review in 2006 by world renowned experts in Audiology and Speech-Language Pathology commended the department on the standard and quality of training but recommended that change to profession specific training be

investigated in order to address local needs, the expanding scope of practice and to align with international training models.

The challenges identified in the 1990s clearly mapped the road ahead for training in South Africa. The professions of audiology and speech-language therapy have been transformed during the past fifteen years in response to changes in the socio-political arena and governance. Attempts were made to redress the imbalances in service delivery, introduce new models of service delivery, adapt training programmes to meet the needs of the South African population at large and to increase the local relevance of research. The community-based service delivery model gained ground. These changes were reflected in training programmes as well.

In spite of transformation attempts to date, audiology and speech-language therapy services are still not reaching those who are in the greatest need. The majority of professionals remain White and Indian. With limited African language skills, a dearth of African professionals continues. Services are mainly centre based, in the private sector, with vacancies in the public health sector a cause for concern and services in public schools correspondingly limited.

The new millennium brought South African realities to light which played a major role in the decision to train the two professions separately.

The needs of the South African population, such as the overwhelming burden of infectious disease, for example, HIV/AIDS, late identification of hearing loss, risk factors such as the high prevalence of premature and low birth weight infants, access to and availability of services, the multilingual and multicultural nature of the population, necessitate a broad base in generalist training in order to address these needs in an accountable manner.

We now need to serve a wider population, on different levels in health care, and provide different services in broader contexts than in the past. Training therefore needs to equip students to function effectively within the spectrum of developing and in multilingual and multicultural contexts, which necessitates adapting traditional approaches to service delivery. Required clinical skills range from, inter alia, participating in multidisciplinary health promotion programmes to performing high level, and often technologically based, profession specific assessments. Training two professions within one programme is insufficient to train generalist audiologists and speech-language therapists for providing accountable services in South Africa. It is envisaged that profession specific training will better equip students to respond to the realities of the South African context.

Future profession specific training will address the gaps in the existing curriculum regarding, for example, insufficient time for the development of new clinical skills as diverse as, for instance, the fitting of digital hearing aids to the management of children with paediatric dysphagia; limited time for students to engage meaningfully with curricular content to foster critical thinking and inquiry; limited opportunities to include new scientific information

from the proliferation of publications in curricula; and sufficient coverage of the professional functions of promotion and prevention.

The decision to train the two professions separately was taken on 31 October 2006. This decision was informed and justified from a multi-perspective view. The challenges posed by the changes of today, as discussed earlier, were addressed in the decision making process and curriculum planning.

The underlying tenet of the curriculum change is to allow for adequate opportunities to train audiologists and speech-language therapists to the full scope of practice, and to enable students to meet exit level outcomes in order to practice efficiently and independently so as to meet the needs of the South African population with communication disorders. The new curriculum is based on the strengths of the existing curriculum and allows for the inclusion of new developments in the field with more time to address complex issues. The emphasis will fall on excellent generalist training to provide a range of services within either audiology or speech-language pathology to the diverse populations in different settings in South Africa. This will also contribute to the development of Audiology as a profession in South Africa and to the recognition of the profession as a fully autonomous one.

We do, however, need to be cautious of over emphasising applied knowledge to the detriment of creative thinking and innovative research within the new curriculum.

What makes the new curricula so attractive is the opportunity for teaching and learning experiences to be informed by both everyday and less frequent clinical issues and problems that practitioners experience in the South African context. The new curricula will be locally relevant and in line with international developments within the fields, which resonates well with the university's mission to be locally relevant and internationally competitive. This model of training may also serve as a model for other African countries embarking on professional training, and the department could play a key role in the development of both the discipline and the professions on the African continent. Interest in our training model has already been expressed by countries such as Swaziland, Malawi and Ghana.

The curriculum change is in line with the departmental mission (2005) which includes providing excellent professional teaching and learning, and with the vision that the department will distinguish itself as a centre of excellence in teaching and learning and research in communication sciences and disorders. The first graduates of the new curriculum in 2012 will attest to the success thereof and necessitate a new cycle of critical self-reflection in the departmental tradition.

6. CONCLUSION

The students and staff of the department are its biggest asset. Both the under - and postgraduate students do the department proud. They are all-round achievers, committed to learning, professional in their clinical training and dedicated to their future professions. The department currently produces the

highest numbers of graduates in South Africa, approximately 21% of the 150 students who graduate in this country annually, and will continue to do so using the new curriculum. Students live up to their expectations and apart from performing well academically with a throughput average of 95-98% per year, as can be expected from students who have been carefully selected, they participate and annually excel in a range of extra curricular activities such as chairing the SRC, serving on house and residence committees, membership of orchestras, choirs, dance groups, youth groups, drama groups, sport teams and even excelling at ballroom dancing. The postgraduate training programme in audiology and speech-language pathology is strong for example in 2007 six of the ten candidates graduated with distinction. Their research endeavours make an important contribution to the development of the discipline.

Graduate tracking indicates that alumni contribute to their profession of choice on a national and international level in positions such as heads of departments in South Africa, lecturers in Australia and New Zealand, responsible posts in the health sectors both nationally and in the United Kingdom. Alumni have also distinguished themselves in private practice and made important clinical contributions to the discipline.

The staff members are excellently qualified and are committed to their profession and to training future professionals, enthusiastically contributing meaningfully to the discipline, professions and the university. The research output of the department as a whole is above average and has shown remarkable growth over the last five years. Staff participate actively in conferences and task and consensus groups. A number of them are recognized leaders in their fields of expertise internationally. This attests to their capabilities and standing in both academically and professionally in the international arena. They also boast an active record of serving membership in a range of professional associations such as the Professional Board of Speech, Language and Hearing Professions, HPCSA, SASLHA, SAAA, SACLPS and SHAA. They contribute to the University of Pretoria by serving on the community engagement, research ethics, postgraduate and research committees of the Faculty of Humanities. The department's whole is indeed greater than the sum of its parts.

Heading a department with a proud tradition, exemplary predecessors and multitalented staff and students is a major responsibility which necessitates the upholding of standards and guiding the department into a new and exciting future. I am committed to continue doing this, playing a visionary and motivational leadership role through a participatory management approach.

Based on our past and our present, our future is predestined. Departmental structures, skills, dedication, inspiration, the highest standard of accreditation and ethical decision making will equip and empower us to achieve future imperatives in teaching and learning, research and service delivery.

The high demand for our graduates as we face the current and future reality of inadequate numbers of audiologists and speech-language therapists to

serve the growing population with communication disorders in South Africa provides us with a niche for training future professionals. It remains our responsibility to train the audiologists and speech-language therapists of tomorrow in a manner which will enable them to ultimately contribute to the quality of life of individuals who are communicatively impaired and their significant others.

The future belongs to those who see the possibilities before they are obvious to others. (Evans, 2007).

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