



**THE PROFESSIONAL KNOWLEDGE DEVELOPMENT OF COMMUNITY  
SERVICE AUDIOLOGISTS IN KWAZULU-NATAL- A PHENOMENOGRAPHIC  
STUDY.**

SUBMITTED IN FULFILLMENT OF THE ACADEMIC REQUIREMENTS FOR THE  
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## DECLARATION

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<b>TABLE OF CONTENTS</b>	
<b>DECLARATION</b> .....	ii
<b>ACKNOWLEDGEMENTS</b> .....	iii
<b>LIST OF TABLES</b> .....	vi
<b>LIST OF FIGURES</b> .....	vii
<b>ACRONYMS AND ABBREVIATIONS</b> .....	viii
<b>DEFINITION OF TERMS</b> .....	ix
<b>ABSTRACT</b> .....	x
<b>CHAPTER 1</b> .....	1
<b>BACKGROUND AND ORIENTATION</b> .....	1
<b>1.1 Introduction</b> .....	1
<b>1.2 Study Background</b> .....	1
<b>1.3 Problem statement</b> .....	5
<b>1.4 Rationale for the study</b> .....	6
<b>1.5 Researchers positionality in relation to the research problem</b> .....	7
<b>1.6 Preview of the next chapters</b> .....	8
<b>1.7 Summary of chapter</b> .....	8
<b>CHAPTER 2</b> .....	10
<b>LITERATURE REVIEW</b> .....	10
<b>2.1 Introduction</b> .....	10
<b>2.2 Quality Healthcare and relevant legislature in South Africa</b> .....	10
<b>2.3 Community Service and Knowledge development</b> .....	13
<b>2.3.1 The current gap in literature</b> .....	16
<b>2.4 Professional Knowledge Development and learning</b> .....	17
<b>2.5 Conceptual Framework</b> .....	21
<b>2.6 Summary of chapter</b> .....	23
<b>CHAPTER 3</b> .....	24
<b>METHODS</b> .....	24
<b>3.1 Introduction</b> .....	24
<b>3.2 Research Aims</b> .....	24
<b>3.3 Objectives</b> .....	25
<b>3.4 Study Design</b> .....	25
<b>3.5 Methodological framework</b> .....	25

3.5.1 Phenomenography as means to understanding experiences.....	25
3.5.2 Knowledge and Conceptions within Phenomenography .....	27
3.5.3 History and Purpose of Phenomenography .....	27
3.5.4 Research Paradigm.....	28
3.6 Research Setting .....	29
3.7 Study Population .....	30
3.7.1 Recruitment of participants.....	30
3.7.2 Sampling Method.....	31
3.7.3 Selection Criteria .....	31
3.7.4 Demographic Profile of the Study Participants .....	32
3.8 Data Generation .....	33
3.8.1 Data Generation method and Instrument .....	33
3.8.2 Data Generation Process.....	34
3.9 Pilot Study.....	36
3.9.1 Pilot study outcomes.....	36
3.10 Data Analysis .....	37
3.11 Trustworthiness.....	43
3.12 Ethical Consideration .....	44
3.13 Summary of Chapter .....	45
CHAPTER 4.....	46
RESEARCH FINDINGS.....	46
4.1 Introduction .....	46
4.2 The referential aspect of experiences (meaning of experiences).....	49
4.2.1 Category 1: Transitioning from graduate to professional.....	49
4.3 The structural aspect of experiences (how participants relate to the phenomenon) .....	54
4.3.1 Category 2: Learning in the workplace during CS .....	54
4.3.2 Category 3: Professional development .....	65
4.4 Conclusion.....	73
CHAPTER 5 .....	75
DISCUSSION .....	75
5.1 Introduction .....	75
5.2 Transitioning from graduate to professional.....	75
5.3 Learning in the workplace during CS .....	77

<b>5.4 Professional development .....</b>	<b>80</b>
<b>5.5 Conceptualizing community service: A new conceptual framework .....</b>	<b>83</b>
<b>5.5.1. Reflecting on the use of the theoretical and methodological frameworks.....</b>	<b>83</b>
<b>5.5.2 Conceptualizing a new framework of knowledge development during community service .....</b>	<b>84</b>
<b>5.6 Conclusion.....</b>	<b>85</b>
<b>CHAPTER 6 CONCLUSION.....</b>	<b>87</b>
<b>6.1 Introduction .....</b>	<b>87</b>
<b>6.2 Reflections on the previous Chapters .....</b>	<b>87</b>
<b>6.3 Implications of the study .....</b>	<b>89</b>
<b>6.4 Limitations study.....</b>	<b>90</b>
<b>6.5 Recommendations for future research.....</b>	<b>91</b>
<b>6.6 Conclusion.....</b>	<b>91</b>
<b>References.....</b>	<b>93</b>

## **LIST OF TABLES**

Table 1: Biographical information from participants .....	32
Table 2: Codes obtained from the participants' transcripts.....	39
Table 3: Outcome space presenting ways of experiencing knowledge development during community service.....	47
Table 4: Summary of qualitative differences of emotional changes during CS .....	50
Table 5: Qualitative differences of CSO experienced learning in the workplace.....	55
Table 6: Qualitative differences of the impact of resources in hospital facilities.....	58
Table 7: Qualitative differences in the supervision and support received by CSO .....	61
Table 8: Qualitative differences in the experiences of practical knowledge development during CS.....	65
Table 9: Qualitative differences of the experiences of experiential/tacit knowledge development during CS.....	68
Table 10: Qualitative differences of the experience of theoretical knowledge development during CS .....	70

Table 11: Qualitative differences of the participants’ overall perception of their development throughout their CS year .....	72
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## LIST OF FIGURES

Figure 1: The knowledge-to-action process (Moodie <i>et al.</i> , 2011).....	21
Figure 2: Illustration of various dimensions to an experience (Marton & Booth, 1997).....	26
Figure 3: KwaZulu-Natal Municipalities (Municipalities of South Africa, 2018) .....	30
Figure 4: Placements of CSO Audiologists in the KwaZulu- Natal Province .....	33
Figure 5: Data generation process for the phenomenographic study.....	35
Figure 6: Diagram showing steps of data analysis in Phenomenography (Holmström, 2002; Reed, 2006; Khan, 2014; Rands & Gansemer-Topf, 2016).....	38
Figure 7: Components of an experience .....	42
Figure 8: Hierarchical illustration of the categories of description .....	48
Figure 9: The knowledge-to-action process within community service .....	84

## ACRONYMS AND ABBREVIATIONS

CSP-	Community service programme
CS-	Community service
CSO-	Community service officer
KZN-	KwaZulu-Natal
WBL-	Work-based learning
WIL-	Work-integrated learning
DoH-	Department of Health
PDOH-	Provincial Department of Health
NRP-	The National Rehabilitation Policy
UNCRPD-	United Nations Convention for the Rights of Persons with Disabilities

## DEFINITION OF TERMS

Theoretical knowledge: is the knowledge of why something is done, knowing about something and knowing something that is proven to be true (Boshoff, 2014).

Procedural knowledge: refers to the knowledge of how something is done (Boshoff, 2014).

Tactic knowledge: refers to the knowledge already embedded in the mind from previous experiences and it includes intuition, insight, beliefs and common sense (Boshoff, 2014).

Skill: skills are a part of knowledge which enables the integration between theoretical knowledge, where skill is depicted through competency and proficiency (Eraut, 2000).

Learning: describe learning as a process of knowledge acquisition through study or experience, where individuals can alter their identities, meaning and contexts (Griffiths & Guile, 2011)

Professional knowledge development: is described as a dynamic process which involves deliberate planning, intelligence and reflection that is not sequential Dickson (2007)

## ABSTRACT

The Department of Health implemented the community service programme in the year 2003 in allied health professions. This allowed for service provision in underserved communities while facilitating skills development in new graduates as a work-based programme, preparing community service offices for independent practice. It was, therefore, recognized by the Health Professions Council of South Africa, which certifies all new graduates who complete the programme as independent practitioners. However, due to the possibly of vast differences in experiences among community service officers' experiences, the lack of clarity on the minimum requirement of clinical and professional exposure, and the lack of baseline assessment of competences in completion of the programme, makes the contribution of the programme in developing new graduates largely unknown and somewhat questionable. This has become a problem, necessitating a probe into the impact of qualitative differences in community service experiences, as a means of contributing to the identified knowledge gap.

This research study aimed to explore the qualitatively different ways in which community service officer: Audiologists experience and conceive their development of professional knowledge during their community service year in KZN, South Africa. A qualitative semi-structured interview method was used to collect data from 12 community service officers: Audiologists who were selected through purposive sampling. This was aligned with the principles of phenomenography. Subsequently, qualitative content analysis was conducted with the use of the NVivo software. The variations in the results were hierarchically represented in the form of categories of descriptions and conceptions. The conceptions reflected qualitative differences between the participants' experiences and their perceptions of knowledge development.

The outcome space revealed three categories of description: "Category 1: Transitioning from graduate to professional"; "Category 2: Learning in the workplace during CS" and "Category 3: Professional development". Each category of description revealed qualitative differences in conceptions of the experiences of professional knowledge development among community service officers. The identified qualitative differences were attributed to the variations in work environments, supervision, resource allocations, socialization and infrastructure at their respective placements. The differences among community service officers were reported to

have had an impact on their knowledge development; advantaging some and disadvantaging others.

In conclusion, while the community service programme positively contributed to professional knowledge development regardless of the limitations experienced, this study revealed a dire need to review the current model of the community service programme regarding fixed-placements of community service officers and lack of minimum experiential or learning requirements. The findings of this study served to inform future community service officers, universities, the relevant health professions council and the Department of Health, of room to improve the community service programme in allied health professions.

# CHAPTER 1

## BACKGROUND AND ORIENTATION

### 1.1 Introduction

This chapter introduces the study by providing a detailed background to the research, the rationale of the study and the problem statement. It also includes the researcher's positionality in relation to the study purpose and provides an outline of this research report by previewing the next chapters.

### 1.2 Study Background

In 1938, Professor Pierre de Villiers Pienaar introduced the first Audiology and Speech-Language Therapy training programme in South Africa at the University of Witwatersrand, in Johannesburg. The undergraduate Audiology and Speech-Language Therapy programme was later implemented at the University of Pretoria and has since expanded tremendously within the country (Swanepoel, 2006). Consequently, Audiology has since become independent of Speech-Language Therapy as a four-year undergraduate degree and independent professional qualification recognised by the Health Professions Council of South Africa (HPCSA). As an undergraduate degree, Audiology is currently offered by at least six South African universities as either an Audiology qualification or a dual qualification in Speech-Language Therapy and Audiology (Swanepoel, 2006). This undergraduate degree is further supplemented by one year of community service, post-qualification before graduates can work independently as Audiologist.

The community service programme (CSP) provides a platform to introduce new Audiology graduates into the field of practice, helping them transition from being students into independent practice, through the use of a work-based learning (WBL) approach. Ideally, this new learning environment ought to provide ample learning opportunities with adequate supervision to facilitate the development of professional knowledge in graduates. However, the extent to which graduates participate in their new environment, receive mentorship and supervision, understand the role of community service, and use the CSP as a platform to develop may differ from one community service officer (CSO) to the other. This possible variation presents a concern in the field of Audiology which currently, does not seem to be well represented in published literature. As seen from the paucity of literature on the matter in

chapter 2 of this report, this and other reasons were the impetus of the current study. Thus, these reasons create a necessity for further research into the community service programme (CSP) as a particularly rich platform for work-based learning.

Work-based learning (WBL) is an educational method that fosters learning and knowledge development by facilitating real-life work experiences in the work environment. It serves to build a strong association between the premise of theoretical knowledge, practical experience and reflection (Aarto-Pesonen & Päivi, 2017; Giffin, Neloms, Mitchell & Blumenthal, 2018). The WBL approach is facilitated in the form of on-the-job learning programmes which include, but not limited to; volunteering, community service, apprenticeships, learnerships and job shadowing. This learning approach meaningfully integrates the relationship between experience and scientific knowledge within the process of knowledge development (Griffiths & Guile 2011). Within the South African context, graduates in Audiology are required to enrol for such a developmental programme in the form of compulsory community service (McIntyre & Ataguba, 2014).

The community service programme (CSP) was established by the Department of Health (DoH) to address social injustice and inequality in the healthcare system post-1994 (Bloom & McIntyre, 1998). The first CSP in South Africa was implemented in 2001 as a government strategy to directly infiltrate health service in underserved and underdeveloped areas (Frehywot, Mullan, Payne & Ross, 2010). In addition, it was to provide support to the existing workforce especially in healthcare systems with inadequate primary and essential care (Frehywot *et al.*, 2010). Initially, the programme was introduced in the field of medicine, dentistry and pharmacy, then later, in allied healthcare from 2004 (Harrison, 2009). Since that juncture, the HPCSA requires any person registering for the first time in the fields of either radiography, dietetics, medicine, nursing, occupational therapy, dentistry, physiotherapy and speech, language and hearing therapy (or Audiology), to complete a year of compulsory community service so to qualify for independent practise within their respective profession (HPCSA, 2011).

The CSP was implemented and administrated through government regulations such as the Health Professions Amendment Act 29 of 2007 and the Medical, Dental and Supplementary Health Services Amendment Act 89 of 1997, which will be further discussed in Chapter 2. Also, some of the regulations stipulate that healthcare professionals are required to work within

government facilities during their community service (Frehywot et al., 2010). There are three types of compulsory community service programmes recognized internationally and these include:

1. Condition of service employment
2. Community service with incentives
3. Community service without incentives

The CSP has been implemented globally as a means of providing healthcare to remote, underprivileged areas. Most countries around the world have adopted the compulsory community service with incentives method. According to Frehywot *et al.* (2010), in New Zealand, graduates are required to complete community service as a prerequisite to obtaining a diploma/degree. In Australia, Lesotho, Japan and South Africa, community service is mandatory for one year after graduation to allow graduates to qualify for independent practice thereafter. Community service in Thailand is three years and individuals are offered educational, living and employment provisions in remote areas. In Mozambique, Zambia and Kenya, the government offers living provisions to encourage healthcare professionals to remain in rural placements after community service (Frehywot *et al.*, 2010).

The need to initiate programmes that provide quality services to all people, especially those in underserved areas has become more apparent with the rise in the burden of disease, inaccessible healthcare and resources to remediate it. This is predominantly seen in low and middle-income countries (Olusanya, Neumann & Saunders, 2014). Furthermore, there was a notable shortage of qualified Audiologists to provide hearing and ear-related services such as consultations, assessments, diagnostic information and rehabilitation in remote areas (Fagan, 2012; Olusanya *et al.*, 2014). According to the World Health Organization [WHO] (2013), it was estimated that there was approximately one Audiologist per one million people within the Sub-Saharan African regions. In South Africa, there are currently 2 231 healthcare professionals registered and qualified within the field of Audiology who are expected to serve a population of approximately 57.73 million; in which 1.8 million were experiencing hearing difficulties (STATSSA, 2016a, 2018b; HPCSA, 2018). This makes it difficult for the limited number of Audiologists to reach out to all those in need of Audiology services, hence; the appropriacy of the CSP.

The value of the CSP extends beyond just expanding health care services. It is also used as a tool to encourage development in new graduates by providing an environment where learning through practice is possible (Frehywot *et al.*, 2010). Through the use of work-integrated learning (WIL) approach, tertiary institutions facilitate learning that allows for the combination of work practice within a curriculum, therefore, allowing for the integration of academics and practical experience (Ferns, Campbell & Zegwaard, 2014). This method of learning serves as a foundation for further development within the CSP. However, in the present context, this aspect of professional development within the programme seems to be overshadowed by the current need to provide access to healthcare services.

The amalgamation of knowledge and skills acquired through work-integrated learning and the experiences obtained through work-based learning play a vital role in the development of professional knowledge. By filtering of relevant knowledge from its previously acquired context, using newly acquired knowledge from the environment to understand the new context, identifying relevant knowledge and skills, integrating them within the new context and assimilating them with other forms of knowledge to influence behaviours and attitudes in the new context; professionals actively learn in the workplace (Eraut, 2000). In essence, this process highlights how learning and practice of learnt behaviours contribute to the development of professional knowledge while also emphasizing the vital role learning plays in enhancing thinking capacity and decision-making skills. It also highlights the notion that pre-existing knowledge possessed by the professional can hinder or facilitate further development of knowledge (Boshoff, 2014). Although there is a complex relationship between tertiary institutions, professional knowledge and professional practice, such a relationship is known to create professionals who are adaptable and flexible in the workplace (Eraut, 2000; Dickson, 2007; De Souza Machado, 2011). It is in practice that professionals learn through problem-solving, decision making and interacting with colleagues which ultimately enhancing their knowledge stores (Eraut, 2000).

Frehywot *et al.*, (2010) describes the community service programme as an 'obstacle course' since the graduates experience the working environment for the first time and require continued support and monitoring to be competent professionals. Thus, the CSP serves as a platform to develop professional and profession-related skills, professional knowledge and critical thinking which is imperative for personal and professional development (Reid, 2002). This is especially important because it is primarily the first two to three years after graduation and qualification

that are the most crucial in developing good, specialized practice (Eraut, 1994). Therefore, the objective of this research study is to facilitate a better understanding of the contributions of community service in the development of community service Audiologists' professional knowledge in KwaZulu-Natal.

### **1.3 Problem statement**

The experiences of professional knowledge development in graduates are still an area that is under-researched in health sciences, especially in Audiology. This presents several challenges in critiquing and questioning the current value of community service as a tool to improve access to underserved areas, and most importantly, as a tool to further develop new graduates. Thus, the current study identified challenges, with a specific focus on the critique of the CSP, particularly as a means to help new graduate transition into independent professionals.

The transition from university to the working environment is unique for every individual. Therefore, the experiences of community service (CS) may not be entirely homogenous. However, with the certification of graduates for independent practice at the end of the CSP, it is imperative to have clear minimum requirements to ensure consistency in the quality of graduates produced. Currently, measures to quantify or monitor the effectiveness of the CSP for community service Audiologists (CSOs) and its outcomes in terms of helping new graduates transition into independent professionals are not clearly defined. This lack of clarity seems to present itself in real-life, as well as a void in literature which serves to indicate a need for research addressing this challenge. Furthermore, the current fixed-placements of CSOs in one institution and the extent to which the environment influences the experiences of knowledge development could be a cause for concern. There is a need to understand the differences in knowledge development between CSOs placed at different healthcare institutions and whether their placements pose as a contributing factor for such developmental differences. The paucity of literature regarding the impact of CSO placement is also a challenge that needs attention.

It is necessary to establish the relationship between Audiologists' experiences of undergraduate training, of transitioning into practice, and of further development in the actual working environment (Reid, 2002). Based on my current experiences as a relatively new graduate, there is a notable disconnect between undergraduate training and community service, as community service is currently observed as a method of improving access to services, with limited focus

on its use as a tool to develop the knowledge of new graduates. Consequently, there been limited research that reflects on the development acquired through work-based learning in general (Eraut, 1994), and this seems to be the case even in the recent times. Furthermore, there is little available information about professional knowledge development and the value of continued learning post-qualification (Eraut, 1994). According to De Souza Machado (2011), there is uncertainty around professional knowledge, professional development and the degree to which new graduates are able to competently meet the demands of practice.

Professional knowledge is centred on the use of personal, practical and experiential/tacit knowledge. While tertiary institutions are responsible facilitating the learning and application of theoretical knowledge in graduates, it is unclear what facilitates the professionals' knowledge development; how and why they apply, modify or neglect aspects of their knowledge received during training after they obtain their qualification (Eraut, 1994; De Souza Machado, 2011). In addition, Eraut (1994) states that little is known about the extent to which work-based learning supports the renewal, advancement and growth of individual professionals. Without clarity on these issues, it seems it would be a tremendous challenge to deduce the relevance of such a learning approach and the various programmes that encourage it. This is the current challenge that has been identified as a research problem needing urgent attention within the CSP, specifically, in Audiology. It is thus the purpose of this study to attend to this and other problems aforementioned.

#### **1.4 Rationale for the study**

The knowledge that is mandatory within a profession is provided by tertiary institutions through a detailed curriculum (Eraut, 1994). Therefore, the effectiveness of undergraduate theoretical and practical knowledge largely depends on how and to what extent the graduate uses it post-graduation. While all Audiologists possess an equivalent undergraduate qualification and may have been exposed to similar learning opportunities during their undergraduate training; there is a concern that community service may not offer equal opportunities for further development. This raises particular interest because theoretical knowledge, experiential/tacit knowledge and practical knowledge are fundamental to the development of professional knowledge and ultimately, determine the preparedness and efficacy the professional bring into a consultation post-CS (Eraut, 1994). Therefore, this study was designed to facilitate a better understanding of the experiences of professional knowledge development during community service. It was also designed to explicitly and directly explore

the differences in the developments of CSOs' placed in different healthcare institutions and the related reasons for such differences. Implicitly, the purpose of the study was to question the current role of the CSP in developing competent Audiologists and to critique the effectiveness of CS as a tool that facilitates the transition of new graduates into independent professionals. Thus, the study responded to the great need for research in this area as recognised by Penn, Mupawose and Stein (2009) as a necessity for the growth and flourishing of the profession.

Mji *et al.* (2013) state that without appropriate evaluations, the impact of work-based learning programmes cannot be known and that is, therefore, likely to influence the success or lack thereof of the programme. Furthermore, programme evaluations are central to promoting understanding of practice and maintain the progression and success of the programme (Dall'Alba & Sandberg, 2006; Mji *et al.*, 2013). Feedback from the various professionals can be used to decipher the ranging factors that influence and contribute to professional knowledge development, and possibly pave the way for more efficient and effective ways to further develop new professionals within the field. Both the identified research problems and the study rationale were developed from issues that were of concern to me during my community service year. I, therefore, questioned the current status and value of community service programme based on my CS placement at a healthcare institution in KZN. Furthermore, my positionality in relation to how the CSP catered to my clinical and developmental needs is introduced in detail in the next subsection.

### **1.5 Researchers positionality in relation to the research problem**

I completed my community service in the year 2017 at a rural healthcare facility in the South Coast of KZN. My experience of CS in a well-staffed and adequately resourced district healthcare institution was overall positive. The transition into community service was, at first, difficult due to fear of failure and mostly, the uncertainties of being in a new environment where more independence was expected. I felt insufficiently prepared and lacked the assertiveness necessary at a professional level. My limited time management skills and low confidence made the community service environment overwhelming and contributed a lot to my intermittent burnout. Moving away from home also contributed to feelings of unease and general anxiety about my new environment.

Learning and working under the supervision of two experienced audiologists contributed to my professional and personal development. As a result, I became a more confident and self-assured

within clinical practice and interactions with patients and colleagues throughout my community service. They provided ample developmental opportunities where I learnt to be flexible and to think critically and objectively when treating and managing patients. I gradually needed less support as the year progressed and became more independent. By the end of the year, I had adjusted professionally, clinically, emotionally and socially.

However, I understood that other CSOs may have not had similar experiences to mine. Some CSO Audiologists were placed in facilities with minimal equipment, no supervisors or single-handedly had to start-up Audiology departments. This, and other observations made me question whether there were any minimum competencies or outcomes that had to be met during community service and the possible extent to which such outcomes were met by each community service officer. If not, I questioned whether community service was just another way of having warm-bodied Audiologists to fill up posts and expand access to service or there was more to the programme than clinical service provision. Most importantly, I had interests in the developmental aspect of the programme and the impact it should have on CSOs. This led me to question the influence of fixed-placements of CSOs and its relevance in KZN where there are vastly different developmental opportunities between the different CS sites. This contributed to the research interest addressed by the current study, where I question matters as an insider in the field of Audiology.

### **1.6 Preview of the next chapters**

In addition to this introductory chapter, the next chapter reviews the literature relating to the abovementioned issues. In the third chapter, I share the details of the methodology along with methods that were followed to attend to the research interest and identified problems. Chapter four discusses research findings, leading to the discussion in chapter five and the conclusion in chapter six where I reflect summarise and share recommendations for further research.

### **1.7 Summary of chapter**

The introduction chapter to the study of the professional knowledge development of community service Audiologists in KwaZulu-Natal highlighted an important background to the current study. The context that led to the study rationale was discussed, showing the purpose and the significance of the current study. Specifically, the problem statement, researcher's positionality and other aspects of the background were also discussed in this chapter. The

outline of other chapters was presented with the intention to show how the report is organized as seen fit by the researcher.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter provides a review of literature, including a theoretical background, legislature and previous research related to the focus of the current study. The reviewed literature predominantly focuses on the South African context, but is not exclusive of international literature regarding the dynamics of community service as a means of work-based learning. This chapter also aims to provide an in-depth understanding of the present literature on knowledge, skills and experiences as it relates to professional knowledge development and highlights areas that require research attention. Lastly, based on the discussed literature, a research question is shared towards the end. It is directly aimed at responding to the noticeable void in research regarding community service as a developmental platform for new graduates.

#### **2.2 Quality Healthcare and relevant legislature in South Africa**

In South Africa, there are many regulations, guidelines and policies governing health professionals to ensure the provision of quality service delivery. These provide an outline on healthcare provision and regulate clinical practice among health professionals. For community service officers in particular, the Health Professions Act 56 of 1974, the Medical, Dental and Supplementary Health Services Amendment Act 89 of 1997 and the Health Professions Amendment Act 29 of 2007 were instigated to regulate training of professionals and ensure quality in the care that is provided to patients, particularly in the public health sector.

The Medical, Dental and Supplementary Health Services Amendment Act 89 of 1997 stipulates that new graduates are required to complete a year of compulsory community service before they can be registered as independent healthcare professionals (McIntyre & Ataguba, 2014). The Minister decides on the healthcare institution to be gazetted as placement sites for CSOs and the dates for when the CSP is to commence. Upon completion of the CS year, supervisors or the relevant personnel are required to submit confirmation to the HPCSA and the DoH that the CSO completed their year at a satisfactory level. This is stipulated by the Health Professions Act 56 of 1974 (HPCSA, 2011). The extent to which supervisors and managers adhere to this Act and the components and tools used to measure the level of competency among CSOs is not well documented in literature. Furthermore, there is little information detailing the

standardization of the evaluation procedure and the extent to which the context of CS influences certification for independent practice.

The Health Professions Amendment Act 29 of 2007 is part of the legislature that requires health professionals to register with the Health Professions Council. This Act serves to protect both the patient and the professional by ensuring professional and ethical conduct among healthcare workers and ensures that professionals comply with continuing professional development requirements. There were also non-profit organizations that collaborated in making a difference in terms of service provision for individuals with disabilities by creating policies and guidelines to guide professionals. The National Rehabilitation Policy (NRP) and United Nations Convention for the Rights of Persons with Disabilities (UNCRPD) were established to ensure that individuals with disability receive adequate and equitable healthcare. These policies played a role in promoting access to rehabilitation services and improvement in the quality of life for individuals with disability. The WHO Community Based Rehabilitation (CBR) Guidelines were established to guide rehabilitation professionals and to ensure unbiased, accountable and efficient rehabilitation services (Mji *et al.*, 2013). The foundation of these policies lays in the principles of Primary Health Care (PHC) with the objective of decentralizing, improving and delineating service delivery in the public health sector. It also aimed to create awareness about the relevance of rehabilitation services such as physiotherapy, occupational therapy, audiology or speech and language therapy to name a few, especially in disadvantaged communities (Dayal, 2010; Mji *et al.*, 2013; Ned, Cloete, & Mji, 2017). This paved the way for access to rehabilitation services through CSP placements in underserved areas, therefore, ensuring that such services are provided to all South African citizens (Ned *et al.*, 2017).

In light of the pressures to create a healthcare system that caters to the needs of people with disability, there is a prominent disconnect between the understanding of the need for rehabilitation services and their inclusion into healthcare. At present, certain health services are still not available in rural communities, and the available services tend to be compromised by inadequate resource distribution (Ned *et al.*, 2017). An audit conducted in 2011 in all public health facilities in South Africa found that there was a general lack of provision and access to rehabilitation services (Visser, Bhana & Monticelli, 2012). In the report, it was stated that Audiology services were the most insufficient. These services were only available in 6% of healthcare facilities nationally; of this total, 3% had adequate equipment and 2% of those facilities presented with the necessary infrastructure for the services to be rendered successful.

Only 32% of hospitals offered audiology services with 29% having the required equipment (Visser *et al.*, 2012). Moreover, other studies reflected challenging working conditions for Audiologists. The challenges included: working in healthcare institutions where there is misdistribution of resources, shortage of staff and inadequate management, insufficiency of budget allocated for audiological services, lack of priority given to audiological services, lack of necessary equipment and poor knowledge of the role of audiologists amongst other professionals and the communities (Naidoo, 2006; Pascoe & Norman, 2011 & Mji *et al.*, 2013). The lack of suitable infrastructure and the unavailability or inaccessibility of audiological services impedes on the quality of care provided by the healthcare professionals. Ultimately, this contributes to negative experiences of public healthcare facilities and burnout of existing workforce, which has been a longstanding problem in South Africa (Dussault & Franceschini, 2006; McIntyre & Ataguba, 2014; Rispel, 2016).

The community service allocations to a healthcare system that is under immense strain in an effort to relieve the current workforce and improve service delivery is likely to affect the general development of CSOs. The aforesaid regulations, guidelines and policies assist in the directing and monitoring of the CSP as both a tool for improving access and developing professional knowledge and skills. It is, however, apparent that the drive of the CSP is skewed towards creating access to healthcare services and to cater for the rehabilitative needs of persons with disabilities. This is said because presently, there is limited available detail regarding the process of gazetting healthcare institutions and ensuring whether or not these institutions possess the appropriate infrastructural provisions that could warrant growth of CSOs. Furthermore, the model of allocating CSO placements at fixed sites limits the CSOs' learning to an environment which may hinder or stimulate their development. The variation in placement, environment, resources and mentorship between CSOs' can influence their level of learning and their development as future professionals.

The Department of Health acknowledges that community service has served as a platform that allowed graduates to actively acquire knowledge, develop skills and professional behaviours that foster professional development (DoH, 2007). Conversely, the available policies and guidelines vaguely reflect the degree to which professional development is evaluated, the support that is provided for the educational needs of CSOs and the availability of a set benchmark for minimum development that should be met by CSOs at the end of the CS year. Additionally, the extent to which supervisors and relevant stakeholders ensure that minimum

development has taken place during CS both clinically and professionally is not clearly specified within the regulations. This raises much concern regarding the learning efficacy encouraged by the programme. The value of uniform learning and developmental opportunities cannot be overemphasized because it is the experienced and well-informed professionals who contribute to the improvement of the quality of care received at healthcare facilities (DoH, 2007).

### **2.3 Community Service and Knowledge development**

According to Frehywot *et al.* (2010), graduates in health sciences are assigned placement by the DoH anywhere in the country, particularly in areas which are generally rural and underserved, for a year of community service. The CSP serves to address social injustice and augment healthcare services to people in remote and underserved areas, especially areas that are not highly favoured by healthcare professionals (Frehywot *et al.*, 2010). It acts to bridge the gap between healthcare services and the patient; allowing access to affordable and quality services at community level. It also provides generalized intervention to address issues of burden of disease through advocacy, disease prevention, health promotion and education (Ned *et al.*, 2017). In South Africa, this programme has led to the establishment of rehabilitation departments in underserved facilities, shorter patient waiting times and increase in people accessing healthcare services (Frehywot *et al.*, 2010).

The structure of the CS programme should allow for professional development and the refinement of knowledge and skills (Pascoe & Norman, 2011). However, due to the difference in learning prospects provided by CS placement sites, the transition into the CSP and the level of development may be heterogeneous. Learning through the CSP ideally takes place through practice where CSOs develop their knowledge, gain exposure by problem-solving, decision-making and interacting with colleagues (Eraut, 1994). As a work-based learning programme, CSP should foster skills such as teamwork, communication and confidence which are important for service provision (Reid, 2002). Central to this, is the provision of mentorship and guidance from experienced personnel to help channel the learning and ease graduates into their new role outside of tertiary institutions (Dall'Alba, 2009). Therefore, supervisors and mentors are an important aspect to the learning, especially in ensuring the progression of professional knowledge and augmentation of current understandings of practice in new graduates. By providing an opportunity for feedback and discussions, graduates are able to organize, give meaning and further develop their knowledge attained from experience (Eraut, 1994).

The reviewed literature indicates that in recent years, variation had been noted in the degree of mentorship and supervision received by CSO Audiologists, even though noticeable development was reported the CSOs'. Khan, Knight and Esterhuizen (2009), conducted a study involving 142 rehabilitation therapists doing CS in 2005. The aim of the study was to determine the perceptions of and attitudes towards the compulsory Community Service programme for therapists in KwaZulu-Natal. It was found that most participants felt adequately prepared for CS through tertiary training. However, there were challenges with lack support and mentorship from supervisors during the CS year. Participants felt that CS was a good platform for personal and professional growth and allowed them the opportunity to have a positive contribution in their respective communities. A study by Penn *et al.* (2009) also reported similar results from feedback outcomes of CS including 132 Witwatersrand graduate therapists from 2003- 2008. The study found that Audiologists struggled with issues surrounding poor mentorship, no equipment and insufficient space which lead to limited practice of Audiology. Most of the participants reported concerns about personal safety when going to local clinics, experienced burnout with the heavy workload, and a dire need for support. They reported having to establish their own support structures through informal networks built with other professionals and CSOs. Throughout the year, they learnt to multitask and to take charge and some indicated to have not developed clinically but rather developed on a personal level. Participants also reported difficulties with starting up departments and experienced language and cultural barriers. Towards the end of the year, they felt that CS was a life changing experience, they gained confidence and were well adjusted.

Wranz (2011) conducted a study including 18 Speech-Language and Hearing Therapists (SLHTs) from Stellenbosch University who completed their community service in 2009 in various provinces in South Africa. It was designed to evaluate their perceptions, attitudes and experiences during their CS and the findings revealed that CSOs felt they had adequate knowledge but did not have the skills to cope with CS. Community Service Officer Audiologists had positive attitudes about CS although dealing with uncooperative colleagues and mismanagement were key challenges. The findings from the study reflected that CSO's felt that their knowledge developed throughout CS more than their skills did. This was facilitated by the exposure to different pathologies and cases. The programme helped increase their confidence, skills and knowledge; they viewed it as a great learning and working opportunity.

The literature on the CSP has reflected positive developmental outcomes in graduates where CSO Audiologists reported increased confidence and development both clinically and professionally despite experiencing challenges with resources and support. Studies in other professions such as nursing, occupational therapy and dietetics found similar results. Visser *et al.* (2006) conducted a study involving 90 dietitians from all universities in South Africa who graduated from the dietetics course in 2003. The aim of the study was to discern the experiences, perceptions and attitudes of dietitians during their CS year. It was found that majority of the graduates felt that their CS year was a success as they reported improvement in their basic skills and knowledge. Most importantly, they were grateful of having had an opportunity to make a positive impact in the community.

A study conducted by Govender, Brysiewicz and Bhengu (2015) including 110 nurses which explored the perceptions of nurses during CS reported that although the beginning of CS was stressful and they were overwhelmed by the sudden responsibilities, it was satisfactory to work within the community. The participants reported that the undergraduate programme at university had adequately prepared them to provide the necessary services. They found that support during CS was integral for the development of clinical judgement and skill development and it eased the transition from student to working professional. This is a common finding amongst researchers as similar results were obtained by van Stormbroek and Buchanan (2016) in a study pertaining 240 occupational therapists. The participants indicated that they felt the CS year was a success despite feelings of being challenged and of frustration. Further, a study by Beyers (2013) including professional nurses who were completing their community services year in rural settings in the Western Cape, found that participants had a positive experience; they received the necessary support and orientation from staff members. This facilitated a growth in confidence and learning.

It is natural for professionals to feel apprehensive about community service as it involves a significant change in their personal and professional lives. However, Frehywot *et al.* (2010) associated these feelings to factors such as relocation to a rural facility, costs, transportation, remuneration, equipment and inability to perform procedures learnt in tertiary institutions. According to Sun *et al.* (2008), as much as CS programme is a learning opportunity, the stress CSOs endure during this year in public institutions is underrated. It was found that they experienced frustrations, mood disorders and somatic changes in response to heavy workload,

unavailability of equipment and staff-related problems. Holmström (2002) further states that these types of working conditions have an impact on the quality of service delivery provided.

Wranz (2011) recommended that CSOs' be adequately trained during their undergraduate programme such that they are well prepared for community service. The author further reports that although CSOs' present with reasonable theoretical knowledge, they do not regard their skills as adequate for all the tasks undertaken in CS. Khan (2009) recognized the importance of exposing undergraduates to practical experience in rural or underserved areas such as clinics, centre for healthcare clinics and district hospital. The author reports that such placements help to better equip CSOs' as participants reported that they were only sufficiently trained to work in an ideal environment such as regional or tertiary institutions (Khan, 2009). Graduates must also be equipped with skills and knowledge necessary to work in the rural areas such as management, administration, critical thinking and effective communication using sign language or an indigenous language (Wranz, 2011). This highlights the importance of a curriculum that integrates primary health care in community-based clinics and district hospitals within academics for them to prosper in their year of CS (Reid, 2011). In addition, the integration of all types of knowledge, more especially theoretical, procedural and tacit knowledge forms a rich network for clinical practice (Boshoff, 2014).

From the aforementioned studies, and my own experience of community service, it is clear that the programme is a useful tool and it does, to a certain extent allow for both professional knowledge development and expanding access to health care. This is not only limited to Audiology, but is consistent in other allied healthcare professions as mentioned earlier. However, there are still certain aspects in literature that remain absent, which has resulted in a particularly skewed understanding of community service. The identified gaps in literature are discussed next with the intention to further highlight the intended contribution of the current study.

### **2.3.1 The current gap in literature**

It is apparent that recent literature surrounding community service has not yet detailed the existence of differences in experiences between CSOs. While observable differences may have been evident, literature has also not covered the impact of such differences in the growth and development of community service officers. Furthermore, the existing literature has not shown how CSO competencies during CS are accounted for, should they meet the minimum

requirements to independently practice and provide healthcare services to the public after the CSP. Based on an observation, there is currently a need to recognise and formalize the CSP as a tool to further develop new graduates and not just as a model of service delivery. Therefore, this study aims to address these gaps in literature.

The objective of the CSP was to provide healthcare services to underserved communities while also providing graduates with a platform to further develop their professional skills and knowledge (Reid, 2002). The CSP should, therefore, provide a context that actively caters to the learning needs of graduates while promoting the delivery of quality healthcare services to the public. Failure to provide such a context could lead to adverse outcomes where the development of professional knowledge amongst graduates is impaired. It is equally important for the DoH to make their expectations from CSO's overt. Currently there are ambiguous guidelines for CSO's to follow and limited policy awareness amongst the rehabilitation professionals and personnel responsible for managing community service officers. This results in misapplication of the CSP within healthcare institutions and consequently, affects professional practice as supervisors are not aware of the obligations of CSOs (Frehywot *et al.*, 2010; Ned *et al.*, 2017).

#### **2.4 Professional Knowledge Development and learning**

According to Eraut (2005), professional knowledge development and generalization of this knowledge is a complex process. Professional knowledge has three fundamental components including: firstly, principal science or field which regulates and forms the basis of practice; secondly, the application of science which governs everyday procedures and protocols; and thirdly, the utilization of basic science and applied knowledge in providing services to patients' efficiently which is also determined by skill and attitude of the professional (Schön, 1983). In this way, knowledge carries meaning- through its use and through experience.

De Souza Machado (2011) highlights four important considerations about professional knowledge. Firstly, since knowledge is contextually dependent, it is not spontaneously transferred or acquired as it is easily recognized if associated with familiar contexts. Secondly, if knowledge is used outside its original context, examples and comparisons are required to confirm the knowledge. Thirdly, a context with dominant aspects can restrict knowledge acquisition. Finally, a context can inspire knowledge development; it can influence a variety of ways to relate to knowledge. This highlights that the development of professional knowledge

is largely dependent on context and the degree to which an individual interacts with it (Dall'Alba, 2009). When applying these considerations to the CSP, the need for appropriate educational infrastructures such as resources and supervision for CSOs during their CS year becomes apparent. The ability of CSO Audiologists to attend to cases and deliberate on suitable management and treatment options may be difficult at first as they may experience challenges. These challenges include gaps in theoretical knowledge, insufficient contextual knowledge and limited time to deliberate, hesitation about possible outcomes and may need to frequently consult with more experienced professionals (Eraut, 1994; Eraut, 2000). Therefore, without the appropriate resources and support structures, the novice professional's competence in practice may be adversely affected.

Professional knowledge is acquired and developed over time rather than immediately so to achieve new and unique professional identities (Dickson, 2007; Griffiths & Guile, 2011; Aarto-Pesonen & Tynjälä, 2017). This means that CSOs require time to develop in their professional roles and to overcome challenges such as fear, self-doubt, and fear of being incompetent, and ultimately, develop professional autonomy needed for independent practice (Eraut, 2005). Contrariwise, the placement of CSOs in the respective healthcare institutions is limited to a period of one year. This provides a limited timeframe for CSOS to effectively learn how to provide identification, assessment, diagnosis, treatment and therapy; including taking cognizance of psychosocial aspects of the client (Eraut, 2005). Although these skills are learnt in tertiary institutions, they are further embedded and practiced in CS to allow the professional to efficiently play their role within the healthcare system. Furthermore, the current premise of the CSP (utilizing the model of fixed-placements at various healthcare institutions) further limits the range of exposure to clinical practice in Audiology. This begs the assumption that the variety in contexts of the CSP could impact on the development of CSO Audiologists, resulting in differences in experiences of professional knowledge. This is especially because professional knowledge does not focus on certain aspects of the professional's work but gives attention to the learning process and the functional role of the professional- representing a basis for professional knowing and holistic reflection on professional experience (Råbu & McLeod, 2017).

Active interaction of CSO Audiologists with their work environment and the exposure to new and familiar situations allows for knowledge development to take place. Hence, Dickson (2007) emphasizes the importance of practical experience in the process of professional

knowledge development. In developing this this type of knowledge, it is necessary for an individual to demonstrate what they have learnt, show understanding and skill for them to be deemed knowledgeable because knowledge that has not been proven is not considered as “knowledge”. This does not include the possibility of individuals possessing the knowledge mentally but be unable to practically express it due to limited opportunity and lack of resources. Kelemen (2015) states that without practical exposure, theoretical knowledge remains dormant. It is possible that the availability of resources for audiological practice may not be the same across all healthcare institutions as mentioned in section 2.2, therefore, affecting the effective practice of audiological procedures. This implies that there could be significant differences in the extent to which CSO Audiologists receive opportunities to practice and demonstrate their theoretical knowledge during CS. Ultimately, this raises concerns about the possibility that some CSO Audiologists are awarded the certificate of independent practice without having had exposure to all or most audiological procedures during their CS.

A study conducted by Ng (2011) to develop a constructivist grounded theory of an evolving practitioner, also referred to as Reflection in the Education and Socialization of Practitioners: Novice Development (RESPoND) involved 18 participants including audiology graduates, clinical faculty personnel and clinical supervisors. The study found that graduates initially encountered difficulties with learning of practical knowledge as they had to make adaptations to how they learnt a procedure to suit their supervisor. This created a need for constant clarification and assistance, leading to feelings of nervousness, doubt and distress. Most graduates reported on the importance of learning through experiences as this helped solidify and further develop the concepts learnt. They indicated that facing and overcoming challenges, problem-solving and applying clinical judgement in patient-related cases added meaning to their experiences. The study also found that as new graduates experienced the highs and lows of the working environment, it negatively impacted on their professional identity. Conversely, the same experiences helped strengthen confidence in others. As they developed, their perception of knowledge changed from a fixed-procedural way of thinking to an integrated tacit way of knowing.

The literature reviewed in this research study demonstrates the role work-based learning programmes have played in the development of professional knowledge. Aarto-Pesonen and Päivi (2017) conducted a study designed to conceptualize the professional development of adult learners’ in a work-based teacher qualification programme including 20 adult learners.

The results of this study indicated that learning in the workplace facilitates the transformation of professionals into two dimensions: the vertical and horizontal dimensions. In the horizontal dimension, the categories that were identified were: egocentric learner where the participant's learning is centred on themselves, their goals and concerns; researching professional where their development transition from self-observations to shared peer evaluations and they actively participate in sharing expertise; and expert within society where participants were assertive in their position amongst colleagues, the work environment and the community. In the vertical dimension the categories included: transforming self-image, encouraging professional self-expression and widening agency. This illustrates the complex nature of the professional development process. According to Aarto-Pesonen & Päivi (2017), the development of participants in this study occurred at a rate unique to each individual and the variations assisted in the conclusion that the process of professional growth and learning is continuous. Roth and Jornet (2014) note that learning through experiences, especially in the workplace, modifies graduates in a profound way and also impacts on the quality of experiences to follow. This facilitates the renewal, tailoring and refinement of theoretical knowledge; enabling graduates to develop expertise such that they are able to deal with the dynamics and complexities of professional practice (Dall'Alba & Sandberg, 2006; Griffiths & Guile, 2011).

Smeby's study (2007) provided great insight on the importance of understanding professional knowledge and the learning process in qualitative research. It was found that the quality of theory and practice from tertiary institutions is crucial for the connection between student and knowledge. However, further professional knowledge development depended on how they understand the relevance and practicality of the knowledge. Connecting to knowledge aided in reducing anxiety and the need for constant supervision in practice; this indicated that the students' professional knowledge relates to feelings of preparedness for the work environment (Eraut, 2000). In addition, a systematic review was conducted by Oshvandi *et al.* (2016) analysing eleven studies on the application of Benner's theory of novice to expert in nursing. The study found that there is a need for constant renewal of knowledge. Integrating knowledge acquired from training institutions and that which is acquired through experience aids in improving a professional's competence in practice. This study further highlights the important role WBL programmes play in the development of professional knowledge and also the need to work on addressing any disconnect between knowledge obtained in tertiary institutions and that obtained during CS. Ultimately, the CSP should aim to expedite a balance between theoretical knowledge, procedural knowledge, cultural knowledge from within the profession

and personal knowledge developed from experiences (Eraut, 2005). Although professional knowledge development is unique to every individual, it is continuous and is best learnt in the workplace and through further education (Smeby, 2007). In attempts to understanding and later interpret the knowledge development of community service officers in relation to literature, I adopted a conceptual framework to guide this study’s enquiry. I expand on the use of such a framework in the next section.

## 2.5 Conceptual Framework

According to De Souza Machado (2011), contextual and practical knowledge forms the foundation of professional knowledge, using the constructs of social interactions. The current research study adopted the framework from Moodie *et al.*, (2011) which describes the knowledge-to-action process (Figure 1). This framework was adapted by the author from Graham *et al.* (2006).

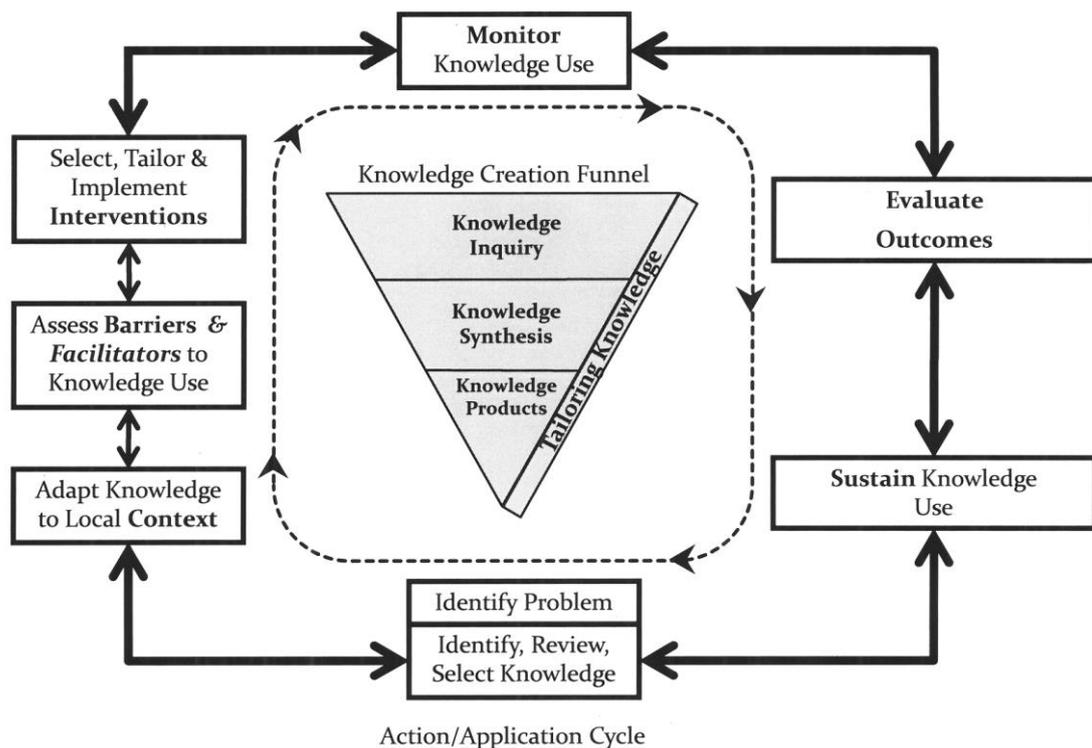


Figure 1: The knowledge-to-action process (Moodie *et al.*, 2011)

Moodie *et al.* (2011) suggests that knowledge acquisition takes place in two processes that are permeable and interchangeable; these processes are the knowledge creation funnel and the action/application cycle. The knowledge creation funnel involves knowledge as a tool used to

influence behaviour and clinical practice such that it promotes knowledge application. The action cycle facilitates the application of knowledge in practice taking into consideration experience, skills, attitudes and resources which influence knowledge use in clinical practice. It involves adapting knowledge to local context, awareness of potential barriers to knowledge use, finding and implementing methods that encourage knowledge use and monitoring it, and developing strategies that will aid in sustaining the knowledge. The two processes assist with the dissemination of knowledge and influences changes in professional behaviour, therefore, acting as a force that directs change in practice (Moodie *et al.*, 2011). The authors also identify that in practice, knowledge can be tailored by professionals based on perceived relevance, practicality and their levels competence/confidence in performing particular procedures (Moodie *et al.*, 2011). This conceptualizes the process of knowledge generation and development in practice through learning, reflection and application in Audiology.

The use of this conceptual framework in the current research study, I acknowledge that the process of learning and professional knowledge development is individualized as previously mentioned in the literature review section. The framework provided a guide to exploring the way in which CSO Audiologist experience learning and development during their CS year. However, a few limitations were noted in the application of this model into the current study and these shortcomings are discussed in section 5.5.1 of this report. Since experience and learning affect the development of knowledge, the knowledge-to-action process guided the researcher in establishing how the CSO Audiologists transitioned from tertiary institutions into the CSP and how the context of the CSP contributed to their overall development. Moreover, this framework in conjunction with the phenomenographic methodological framework detailed in Chapter three facilitated the establishment of qualitative differences in the knowledge development of CSO Audiologists placed at various sites and the possible factors contributing to those differences.

The supervision of graduates, discussions, feedback and outreach programmes form part of knowledge translation strategies. They serve as models aimed at ensuring the use of evidence-based practice that would eventually lead to a change in professional attitude and behaviour (Campbell, Novak, McIntyre & Lord, 2013). The framework also allowed for the analysis of potential factors that encourage or hinder the development of professional knowledge, specific to the CS context. It assisted in tracking development in clinical behaviour, attitude, skill and judgement as CSOs were exposed to a new learning environment. The limitations to the extent

to which the framework was applied were noted in section 5.5.1 of this report. Thus, relevant adaptations to the original model of Knowledge-to-Action Process were made partly as an outcome of the identified limitations.

## **2.6 Summary of chapter**

Healthcare professionals need to be knowledgeable and skilled enough to competently provide quality services to the public (Campbell *et al.*, 2013). Through strategies placed to ensure practical application of theoretical knowledge such as work-integrated learning and work-based learning, graduates are given the basis for their professional roles. The community service program encourages consistent theoretical, practical and tacit knowledge development. However, such developments are dependent on the graduate's ability to honestly self-introspect, level of motivation and personality traits (Kelemen, 2015). Competency and efficiency in the work place does not occur over-night. It is a continuous process of developing technical skills through knowledge integration and learning. This usually takes place within the first few years of being exposed to the working environment (Kelemen, 2015).

While it is possible to have commonalities in knowledge use with universal meaning- for example theoretical knowledge, there could be considerable variations in the way individuals understand such knowledge (Eraut, 2000). Thus, the study responded to the following research question: What are the qualitatively different ways CSO Audiologists experience the development of professional knowledge during their year of community service in KZN South Africa?

## **CHAPTER 3**

### **METHODS**

#### **3.1 Introduction**

This chapter provides a description of the methodology, methodological framework and the methods that were applied in this study. It includes the study aims, objectives, sampling, data collection and data analysis procedures. It also provides a discussion about ethical considerations that were undertaken in the proceedings of this research study and provides details about the trustworthiness of the results obtained.

#### **3.2 Research Aims**

Community service is crucial for the development of professional autonomy and growth of new graduates (van Stormbroek & Buchanan, 2016). However, such growth may be less controlled in comparison to the development within undergraduate training. As a result, the manner in which CSOs develop may be unique with each individual, and differences may thus exist between them. Such differences in the experiences of the CSP and their impact on the development of CSOs need to be better understood, particularly as there seems to be limited clarity on minimum competencies to be acquired by CSOs by end of their CS year. The current study aimed to explore the qualitatively different ways in which CSO Audiologists experience the development of professional knowledge during their year of community service in KZN, South Africa. To achieve this aim, the study served to answer the following sub-questions:

- What are the CSO's experiences of professional knowledge development during their community service year?
- What are the qualitative differences in how Audiologists experience professional knowledge development during the community service year?
- What are the possible existing reasons for the reported qualitative differences in the experiences of knowledge development during CS in Audiology?

### **3.3 Objectives**

- To explore the CSO's experiences of knowledge development during their first year of community service.
- To explore the qualitative differences in how Audiologists experience professional knowledge development during community service.
- To describe the variation in meaning attributed to the experiences of community service by Audiologists in different healthcare institutions
- To explore possible reasons for the reported qualitative differences in the experiences of knowledge development during CS in Audiology.

### **3.4 Study Design**

A research design refers to the conceptual structure in which a research study is conducted (Kothari, 2004). Essentially, it is a method of effectively gathering relevant data with minimal disbursement of resources such as time or money; reducing chances of bias and increases reliability, thus producing efficient and valid information (Kothari, 2004).

A qualitative, exploratory, phenomenography design was applied in this study. Williams (2007) states that a qualitative research approach is holistic, and it provides the researcher with the opportunity to ascertain intricate details about actual experiences. In exploratory research, Strydom (2013) explains that the goal is to gain an understanding of people's relationships, concerns and meaning of their actions. Unstructured or limitedly structured data is collected with the aim of exploring new topics, new problem areas or areas with limited research information. A large data pool is collected to gain comprehensive information about a community, phenomenon or people (Strydom, 2013). Thus, this study design allowed for adequate exploration of the qualitative differences of CSO Audiologists' experiences guided by phenomenography as a methodology and methodological framework.

### **3.5 Methodological framework**

#### **3.5.1 Phenomenography as means to understanding experiences**

Phenomenography is sometimes referred to as a relational approach because it explores the relationship between the phenomenon and the participants. It suggests that knowledge is formulated through an internalized relationship between individuals and the world around them. Ultimately that relationship is simultaneous and inseparable and the exploration of such

a relationship is central to phenomenography (Yates, Partridge & Bruce, 2012). Figure 2 provides a representation of the characteristics of an experience according to the phenomenographic methodology as described by (Marton & Booth, 1997).

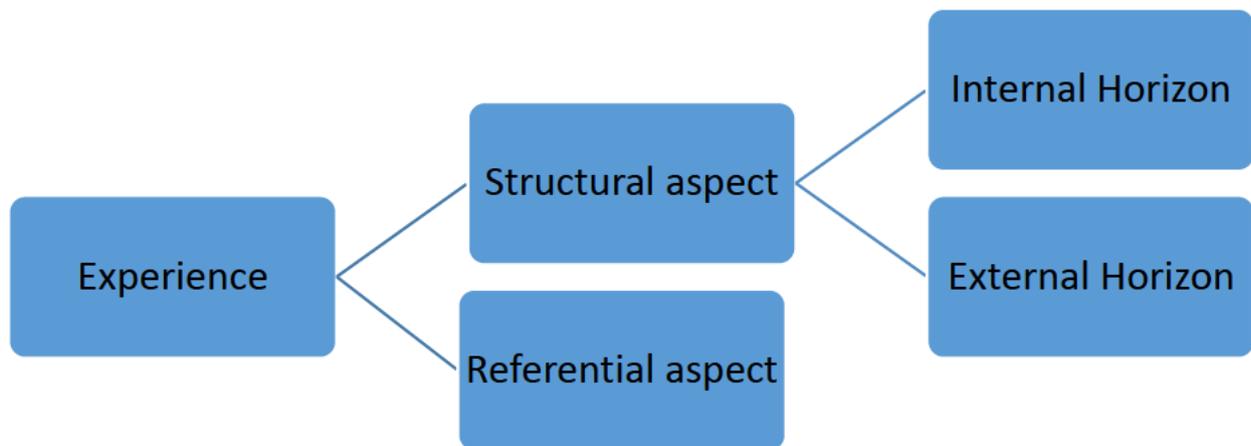


Figure 2: Illustration of various dimensions to an experience (Marton & Booth, 1997).

All conceptions consist of both structural (how) and referential aspects (what) (Barnard, McCosker & Gerber, 1999). Referential aspects refer to the phenomenon being experienced, or the meaning associated to it and structural aspects refer to an action or how the phenomenon and its surrounding parts are related and defined (Barnard *et al.*, 1999; Khan, 2014). The structural aspect is made up of two components, namely, the external horizon which refers to the background and foundation of the experience and the internal horizon which refers to the relationship between the various parts of a phenomenon and its collective whole (Yates *et al.*, 2012).

This framework was adapted for the current research study to allow precise focus on the aim of the research study which is centred on experiences of professional knowledge development during CS. Phenomenographic research aims to produce an outcome space for which the relationships between the various ways a phenomenon can be experience can be outlined. Therefore, this was applied during data interpretation and analysis to identify both the structural aspect and the referential aspect from the outcome space. This is detailed in section 3.9.5.

Ultimately, the purpose was to capture the meaning provided by the analysed transcripts and to demonstrate the qualitative differences in the way participants experienced the phenomenon under study.

Phenomenography has been used extensively in learning and educational research by authors such as Watland (2007), Ireland, Tambyah, Neofa & Terry (2009), Alsop & Tompsett (2006), Rands & Gansemer-Topf (2016) and Khan (2014) to name a few. Educational research has paved the way for other fields to partake in the utilization of this research methodology. In health science, it has been adopted by researchers such as Degen (2010), Hayes, Hult & Dahlgren, (2013), Larsson & Holmström (2007) and Reddy (2010). Although there are limited phenomenographic studies in Audiology, the growth in the understanding of this approach has not gone unnoticed, therefore, this study aims to contribute to current research within the field.

### **3.5.2 Knowledge and Conceptions within Phenomenography**

Phenomenography assumes that a variety of meanings arise from the different ways a phenomenon can be experienced, therefore, creating categories of description that can be hierarchically represented (Åkerlind, 2005). The outcomes of such an approach are directed towards expressing the array of meanings within a particular population sample and each response is construed within a context of other responses in terms of differences and similarities (Åkerlind, 2005). According to Svensson (1997), phenomenography involves both knowledge and conceptions. In terms of Phenomenography, knowledge is described by the understanding and meaning that an individual attains from a phenomenon regardless of the nature of the phenomenon itself. Conceptions are the core form of knowledge, described as the perceptions of reality (Degen, 2010). This means that knowledge is a product of meaning and understanding of entire elements of a phenomenon (Svensson, 1997) and conceptions are central to understanding the essence of knowledge (Degen, 2010). Therefore, knowledge is relatively subjective and this view was accepted within educational and psychological research (Svensson, 1997).

### **3.5.3 History and Purpose of Phenomenography**

The phenomenographic research methodology was first introduced by Ference Marton and colleagues in the 1970's. In 1979, he based this method on the phenomenology approach, however, distinguished it by using a "second-order" perspective and named it

phenomenography (Richardson, 1999). Phenomenography evolved from empirical educational research where new learning ideologies were developed based on the investigations on Swedish learners and their experiences of learning (Ireland *et al.*, 2009). The first series of studies that adopted phenomenography were conducted at the University of Göteborg in Sweden and the findings showed distinctiveness and variation in the students' description of the task; this was the foundation of this approach (Dringenberg *et al.*, 2015). It was only in 1981 that phenomenography was formally introduced and accepted as a research methodology (Marton, 1981; Dringenberg *et al.*, 2015). It has, since then, been used by researchers in Sweden, Australia, Netherlands, Hong Kong and the United Kingdom (Svensson, 1997).

Phenomenography played a role in exploring the different teaching roles and different ways of how students learn (Hayes *et al.*, 2013). Later, Säljö introduced conceptions of learning as part of the approach and these were said to represent a hierarchy of development (Richardson, 1999). The focus of phenomenography was on "nonverbatim" learning, to describe the qualitatively different levels of understanding and learning outcomes; learning is central to this approach as it represents a change in conception (Svensson, 1997; Richardson, 1999). Every phenomenon can be experienced in an infinite number of ways, although the qualitative differences can be limited. The aim of phenomenography is to avail variations in the way individuals describe their experiences rather than to provide descriptions of the phenomenon itself and also study the qualitative variations in the way people understand, experience or conceptualize a particular phenomenon (Åkerlind, 2005; Watland, 2007). Therefore, it suggests that there is a relation between the individual and the phenomenon of interest (Dringenberg *et al.*, 2015). This approach capitalizes on identifying similarities and differences in way a phenomenon is experienced. It is especially useful to recognize these qualitative differences within healthcare research as it can contribute to the improvement of clinical practice, education and development and maintenance of healthcare programmes (Barnard *et al.*, 1999).

#### **3.5.4 Research Paradigm**

The phenomenographic approach is based on non-dualism and the theory that there are various ways to interpret reality; and is in line with the interpretivism paradigm (Richardson, 1999). Marton named this paradigm the constitutional framework which was interested in how different individuals viewed different features of the world (Degen, 2010). This paradigm assumes that as people experience the world, they can make these experiences meaningful and

it primarily focuses on how individuals experience a phenomenon (Watland, 2007). It assumes that experiences are neither objective nor subjective but are merely relational (Trem, 2017).

According to Ireland *et al.*, (2009), it is possible for two individuals exposed to the same phenomenon to experience it differently as they each would derive meaning from those experiences, heavily influenced by one's ontological being. It is such meanings that this study aimed to uncover, pertaining to professional knowledge development in Audiology during community service. Utilization of such a paradigm, the researcher was able to interpret the experiences as shared by the CSO Audiologists. Emphasis was placed on the relationship between a person's experience and the phenomenon by describing the relation within a social context instead of describing the phenomenon directly (Ireland *et al.*, 2009). The aim of the study was not to objectively observe and understand the actual knowledge development but to explore the lived experiences of such development. The phenomenography design was suitable for this purpose and allowed the researcher to go a step further and interpret the differences in the developments in knowledge as experienced by the participants in the KZN province, which was central to the interest of the current study.

### **3.6 Research Setting**

The research setting refers to a social, physical or cultural environment where the research study is conducted. It gives emphasis to the use of the participant's natural setting to ensure applicability the study results (Given, 2008).

This study was conducted in South Africa, within the KwaZulu-Natal province. The KwaZulu-Natal (KZN) was chosen using convenience sampling due to its convenience and practicality for the current study. It allowed for the study to be conducted at relatively low costs and within a shorter space of time, which was crucial to the feasibility of this master's level study.

Community service officer: Audiologists placed at different healthcare facilities within the various districts in KwaZulu- Natal (Figure 3) were considered for the purpose of this study. These districts included: Amajuba District, iLembe District, Ugu District, uMgungundlovu District, uThukela District, Uthugulu District, uMkhanyakude District, uMzinyathi District, Zululand District, Harry Gwala District, King Cetshwayo and eThekweni District. This was done to account for possible variations that could have impacted on how the CSP was experienced.



Figure 3: KwaZulu-Natal Municipalities (Municipalities of South Africa, 2018)

### **3.7 Study Population**

According to (Kothari, 2004), a study population refers to the selection of a few individuals who closely represent the total population such that a miniature cross-section is produced. This is done to minimize the effects of time, cost and effort (Kothari, 2004).

This study targeted 20 Audiologists who had completed their CS in KwaZulu-Natal. These individuals would have obtained a bachelor's degree in Audiology at any university within South Africa in the year 2016; and have completed their community service year in 2017.

#### **3.7.1 Recruitment of participants**

A list of CSO Audiologists 2017 was obtained from the KZN DoH database and there were a total of 28 CSO Audiologist placements in KZN within the various districts. This list included contact information and CS allocations of all graduates who were to conduct their CS year in KZN. All graduates were contacted via telephone to inform them about the research study and the official invitations to participate were emailed to them thereafter. Due to the large number of CSOs, it was anticipated that there would be at least 20 graduates who would volunteer to participate in the study. Trigwell (2000) states that a sample of 15 to 20 participants is recommended in order to obtain adequate data for a phenomenographic study.

### **3.7.2 Sampling Method**

A purposive sampling was used for this research study. Purposive sampling is deliberate such that it allows the researcher the ability to choose suitable participants (Etikan *et al.*, 2016). This enables the researcher to select participants based on the various qualities, knowledge or experience that they might possess; also identifying those with sufficient information about the phenomenon being studied (Etikan *et al.*, 2016). Therefore, CSO Audiologists were selected to be part of this study.

According to Reed (2006) since phenomenography intends to explore variations and qualitative differences, purposive sampling is the recommended sampling technique as it allows the researcher to make selections of cases most appropriate for the study. This sampling method enables the researcher to choose participants who are most likely to demonstrate variations in the way a phenomenon is experienced and produce data that is relevant to the research study (Reed, 2006; Yates *et al.*, 2012).

### **3.7.3 Selection Criteria**

The inclusion criteria consisted of:

- (i) Persons who graduated with a Bachelor's degree in Audiology in 2016 at any university within South Africa because the study aimed to investigate CSO Audiologists' experiences.
- (ii) Audiologists who completed their CS year in 2017- because the study was based on their professional knowledge development. It was crucial to include participants who had just completed their community service as they would most likely have the most recent memories of community service
- (iii) CSO Audiologist who have received placement in KZN due to convenience, time and logistical reasons which include; travelling distance and financial implications

The exclusion criteria included:

- (i) Audiologists who were CSO's before 2017
- (ii) CSO Audiologists who did not give their consent to participate in the study
- (iii) Audiologists who were not located in KZN during the course of the study. This is was due to logistical reasons and budget constrains

### 3.7.4 Demographic Profile of the Study Participants

Out of the 28 CSO Audiologists invited to participate in the study, only 17 graduates responded positively and were willing to participate. However, of the 17 potential participants, 12 were located within the KwaZulu-Natal. The time and venues for the interview sessions were scheduled with the 12 participants who met the inclusion criteria and they were emailed the information document to familiarize themselves with the study content (Appendix E).

Two participants were included in the pilot study and their responses were not excluded from the main study. These participants were included in the study because there were no significant changes to the data generation method that necessitated their exclusion. Therefore, a total of 12 interview transcripts were incorporated in the main study and the participants' biographical information is presented in Table 1. Although this was not the anticipated study population, it was still appropriate for this research methodology because according to Marton and Booth, (1997) and Trigwell (2006) a sample size of 10 to 12 or 10 to 30 participants can be used in a phenomenographic research study.

Table 1: Biographical information from participants

<b>Biographical information</b>	<b>Subheading</b>	<b>Percentages</b>
<b>Gender</b>	Male	16.7 %
	Female	83.3%
<b>Hospital Facility</b>	District hospital	66.7%
	Regional hospital	33.3%
<b>Geographical area</b>	Rural	100%

The 12 participants were representatives of the various districts in the KZN province. These districts include: Amajuba District, iLembe District, Ugu District, uThukela District, Uthugulu District, uMkhanyakude District, uMzinyathi District and Zululand District. The distribution of the participants is illustrated in Figure 4. The inclusion of participants from these districts was accepted by the researcher as a method to maximize variation.

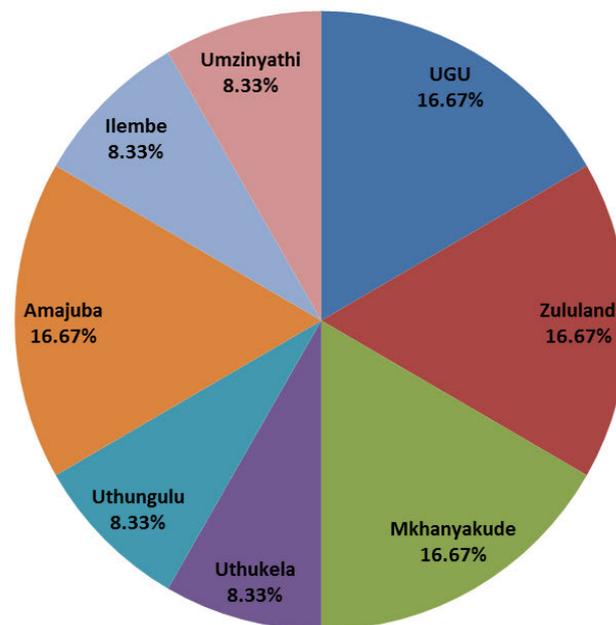


Figure 4: Placements of CSO Audiologists in the KwaZulu- Natal Province.

The researcher ensured that the venues chosen for the interviews were convenient for the participants to travel. In addition, these venues were selected according to their quietness and lack of disturbances so to ensure confidentiality and maximize quality of the voice recordings.

### 3.8 Data Generation

This refers to the process of gathering information for the purpose of the study. This can be done through gathering new data from participants or compiling data which has been researched by someone else (Kothari, 2004).

#### 3.8.1 Data Generation method and Instrument

Reed (2006) states that in a phenomenographic study, data can be generated through interviews or written-text in response to open-ended surveys or reflective statements. The data for this

study was gathered through qualitative semi-structured interviews with each participant. Using semi-structured interviews to gather information aims to explore new topics, new problem areas or areas with limited research information. It also allows for a large data pool to be collected to gain comprehensive information about a community, phenomenon or people (Strydom, 2013). The interview questions were utilized in the pilot study and tailored accordingly prior to their use in main study.

The data generation through a semi-structured interview schedule was selected to enable participants to reflect and elaborate extensively on their experiences. Two types of questions were used: open-ended questions which allowed participants to share personal experiences and what those experiences mean to them and probing questions that enabled participants to reveal new, deeper ways of understanding (Rands & Gansemer-Topf, 2016). The open-ended questions were divided into three sections, i.e. biographical information, experience of community service and, experiences and professional knowledge development respectively. Section 1 included four questions, Section 2 included five questions and Section 3 also included 5 questions (Appendix G). Probing questions were also used to help participants reflect intricately on their experiences. The guiding interview questions were derived by the researcher from extensive review of literature from Åkerlind (2008) and this type of questioning has been used in phenomenographic studies by Larsson & Holmström (2007), Bliuc *et al.* (2012), Holmström (2002), Rands & Gansemer-Topf (2016), Drew, Bailey & Shreeve (2001) and Dall'Alba (1998). In phenomenography, a typical interview is semi-structured with key predetermined open-guiding questions (Reed, 2006). The length of each interview ranged from 25 minutes to 60 minutes. The interviews were all conducted in English as all participants were bilingual with English being the first or second language and also because English is mainly used as a medium of instruction in South African universities. This eliminated the need for extensive translation of interview data, without limiting the quality of data.

### **3.8.2 Data Generation Process**

The data generation process for the current research study followed the process illustrated in Figure 5.

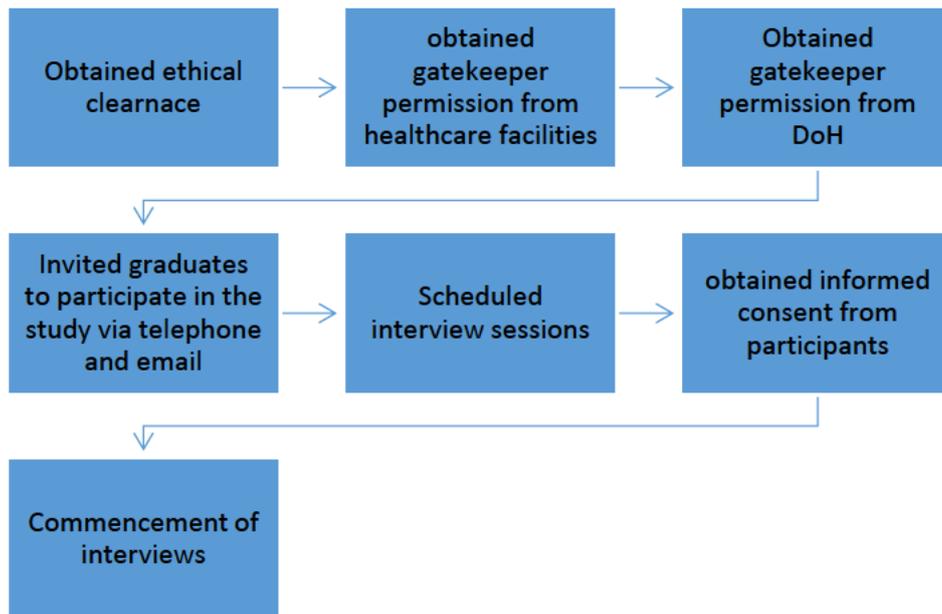


Figure 5: Data generation process for the phenomenographic study.

In preparation for data generation, the researcher applied for ethical clearance at the University of KwaZulu- Natal (UKZN) Humanities and Social Sciences Research Ethics Committee and the application was granted provisional ethical clearance (Appendix A). An email including a copy of the proposal, supporting documents and a copy of the UKZN ethical approval was sent to the Assistant Director of the Disability and Rehabilitation Unit to request for gatekeeper permission. This was to facilitate permission to approach participants who were placed in the various health districts in KZN and approval was granted (Appendix B). The documents of ethical approval received from UKZN Ethics Committee and the Disability and Rehabilitation Programme were uploaded on the online system at <http://nhrd.hst.org.za> to request for gatekeeper permission from the KwaZulu- Natal Department of Health (KZN-DoH). This was to allow the participation of government employees in the study and approval was granted (Appendix C) with reference number KZ-201809- 023. These two documents were submitted to the UKZN Ethics Committee (Appendix D) and full ethical clearance was granted with reference number- HSS/1040/108M. This allowed for the study to commence.

Before the commencement of the interview sessions, the researcher formally introduced herself and the research project. Each participant was given a copy of the information document (Appendix E) and was requested to sign a consent form to participate in the study and for the session to be audio-recorded (Appendix F). A dictaphone was used to record responses during the interview and the researcher ensured that it was working optimally and produced good

sound-quality prior to the interview. During the interview, each participant was asked open-ended and probing questions based on their responses (Appendix G). Hayes *et al.*, (2013) states that an interview style should not be interrogative; it should be friendly and comfortable conversation should be used so to best gather data about the phenomenon. Key points of the interview were noted on a notebook to supplement the audio-recorded aspect of the interview. According to Åkerlind (2005), phenomenographic interviews are generally audio-recorded and transcribed verbatim.

### **3.9 Pilot Study**

The aim of the pilot study was to identify possible limitations that may affect or influence the quality and validity of the results (Blessing & Chakrabarti, 2009). This aspect of the study was conducted in KZN. Two participants who graduated with a Bachelor's degree in Audiology and conducted their CS in KZN during the year 2017 were selected from the CSO placement list for 2017. The participant recruitment process used for the pilot study was the same as that of the main study which is detailed in section 3.6.1. In addition, the data generation tool and the data generation method used in the main study was applied in the pilot study. The same procedure was utilized for the second participant; however, the participant was no longer in KZN and a face-to-face interview could not be possible. Therefore, a telephonic interview was then scheduled. Telephonic interviews are used as a data generation method in qualitative studies, more especially, phenomenography. This is largely because it has been known to create a comfortable environment where participants can openly engage and share personal information (Novick, 2008). However, due to network disconnections and background disturbances, this method of data collection could not be utilized with other potential participants who were not in the KZN province.

The participants were given a feedback form to complete so to assist the researcher with comments and suggestions on how to improve the interview process (Appendix H). The areas that were considered included: clear understanding of questions, length of the interview session and possible improvements that can be made.

#### **3.9.1 Pilot study outcomes**

The participants described the interview session as being practical to conduct with other participants as they did not have any difficulties understanding the questions. They reported that they were comfortable and did not feel interrogated during the interview. They stated that

the length of the interview was sufficient, and one participant mentioned that it was long enough to give in-depth responses but not too long for it to be exhausting. One of the participants suggested providing snacks or beverages during the interviews as comment on general improvements of the interview sessions. Succeeding the pilot study, the participant's comments and suggestions were taken into consideration.

The outcomes of the pilot study informed the researcher on the feasibility of the study and enabled the researcher to make amendments in the main study such that unnecessary expenditure and time-wasting can be minimized.

### **3.10 Data Analysis**

Thomas (2003) states that, an inductive approach is an efficient and effective way to analyse qualitative data. The analysis of qualitative data allows the researcher to make sense of a phenomena studied in a natural setting where people carry with them their meaning of the world (Ospina, 2004).

Literature illustrates variations in analysing phenomenographic data. Yates *et al.*, (2012) explains that in phenomenographic research, there is no single standard data analysis technique although common approaches are evident. In essence, phenomenographic data analysis involves understanding, describing, and comparing different conceptions of the phenomenon of interest (Reed, 2006). The responses were analysed based on phenomenographic principles as indicated in Figure 6.

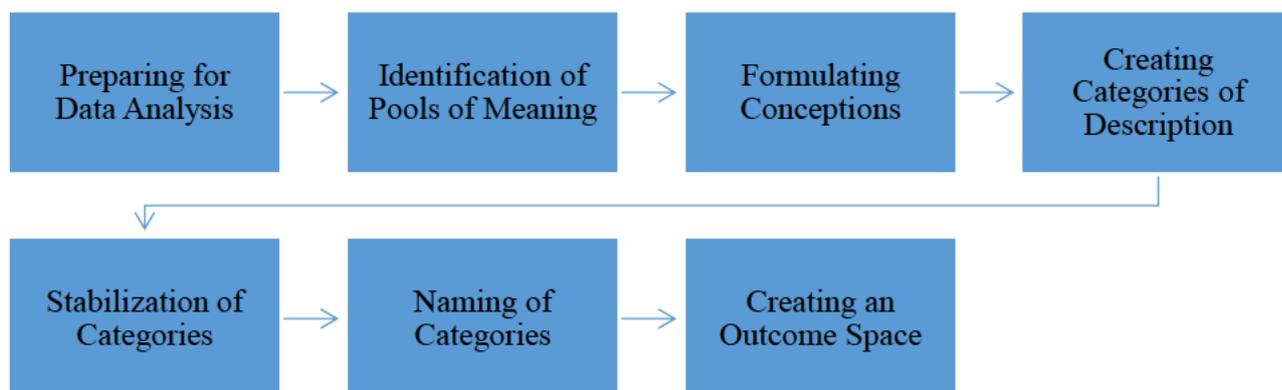


Figure 6: Diagram showing steps of data analysis in Phenomenography according to Reed (2006).

In phenomenography, data analysis follows a qualitative multistep process, although, there is no single method used to analyse data (Yates *et al.*, 2012). Hence, phenomenographers have used varying techniques such as seven steps (Larsson & Holmström, 2007), five steps (González, 2010) and six steps (Åkerlind, 2005) for the purposes of data analysis. In the current study, the data analysis approach stated by Reed (2006) was used as it was simple to comprehend and does not differ greatly from other approaches. Therefore, analysis occurred in the following seven steps as seen in Figure 6 (Reed, 2006):

### **Step one: Preparing for Data Analysis**

Data analysis began with the verbatim transcription of audio-recordings. The primary focus of the transcripts was placed on actual utterances produced by the participants as recommended by Reed (2006). Therefore, prosodic features such as intonation and stress were not the focus in this phenomenographic data analysis. The interview transcripts made it possible to better organize, understand and analyse the data in its written form. Each transcript was given a unique code so to keep the identity of the participants anonymous and maintain confidentiality.

To generally understand the qualitatively different ways CSO Audiologists experienced their year of CS, the researcher thoroughly read through the transcripts of each participant with an open-mind and reflections that seemed important were noted. All utterances, phrases and words

that were frequently repeated and made emphasis to were also labelled. The transcripts were re-read and re-labelled until the researcher was satisfied that no important data was disregarded.

The Nvivo 11 software was used to manage transcripts. Nvivo allows for researchers to efficiently code, visualize and organize textual data, therefore, improving the effectiveness, accuracy and transparency of qualitative studies (Zamawe, 2015). Therefore, it was utilized in this study because of its efficiency in managing qualitative data, its availability to the researcher and the availability of an experienced statistician to aid where required. The participants' transcripts were exported from Microsoft Word documents into the Nvivo 11 software for subsequent coding and data analysis. All 12 transcripts were imported as cases into the software and spelling errors and these were not corrected during this process. The coding of the transcripts was initiated thereafter. Coding is a method of gathering and labelling phrases, sentences or words that reflect a specific topic. Table 2 provides an illustration of such codes. This process enabled the researcher to formulate ideas and identify common codes that contributed to the formulation of themes.

Table 2: Codes obtained from the participants' transcripts

Experience	Personal growth	Emotional changes	Lack of supervision	Appropriate management	Lack of support
Caseload	Adjusting	Learning from hindrances	Knowledge development	Lack of equipment	Supervision and Support
Lack of resources	Confidence in practice	Flexibility	Emotional changes	Listening	Placement
Adaptation	Time management	Barriers	Active engagement	Efficiency	Staff shortage
work environment	Troubleshooting	Clinical judgement	Improved skills	Transitioning	Work environment
Learning	Work ethic	Decision making	Seeking info/probing	Respecting differences	Decision-making

In the Nvivo software, utterances that have been coded are stored as nodes. A node refers to a cluster of references/utterances that represent a particular theme generated through coding. It contains notes, memos or attachments that assist the researcher in the process of data analysis.

### **Step two: Identification of Pools of Meaning**

A pool of meaning is made up of all the various (different or similar) ways a phenomenon can be experienced (Reed, 2006). A pool of meaning was created by dividing the text into excerpts that are related to the same phenomenon that is experienced. The aim was to obtain texts that are relevant to the phenomenon and omit those that were redundant and unnecessary. The data at this stage was no longer analysed according to individual transcripts but in respects to the meaning represented by the data pool as a collective (Reed, 2006). In this study, the pool of meaning was created by underlining, labelling and dividing the text into excerpts of the interviews that were related to the similar experiences of the phenomenon.

### **Step three: Formulating Conceptions**

In phenomenography, conceptions represent the qualitatively different ways people experience a particular phenomenon, thus serving as a fundamental component for description (Reed, 2006). Conceptions assist the researcher in interpreting the relationship between the person and the phenomenon (Ireland *et al.*, 2009). The researcher made notes of emerging ideas and comments from the pool of meaning. These were made to support and keep track of all information generated and to identify main ideas surrounding the pool of meaning. Excerpts were thereafter, organized based on their similarities and differentiated according to their differences. According to Reed (2006), conceptions and categories of descriptions do not signify the same concept; however, conceptions are entities that represent the phenomenon currently under study and are denoted within the categories of description.

### **Step four: Creating Categories of Description**

Creating categories constitute to the arrangement and rearrangement of conceptions according to their similarities and differences then carefully placing them into categories with one distinct core meanings (categories of description). This involved the careful arrangement of the participants' conceptions, narrowing them into categories that were defined according to their meaning. As the categories of description become more explicit, inclusion and exclusion of conceptions into their respective categories becomes less tedious (Reed, 2006). The categories were frequently constructed and deconstructed to form new ones through the progression of

the data analysis process as a means of refining data. Comparisons made between categories were also made to establish set distinctions between categories and to ensure they represented the participants' experiences accurately. The meaning revolved around answering the main research question.

The resultant outcome of phenomenographic data analysis is the establishment of categories of description. Categories of description indicate stability within the experiences of the phenomenon and can be generalized across various situations. Thus, this symbolizes various schools of thought, aiding in understanding how the world is perceived (Marton, 1981).

#### **Step five: Stabilization of Categories**

The conceptions were grouped according to differences and similarities and new categories were created for conceptions which were difficult to place in existing categories. The categories were re-evaluated, and minor changes were made. Change became less apparent as the process continued, all conceptions were categorized and, the system of categories and meaning became stable.

#### **Step six: Naming of Categories**

Following the confirmation of the categories of description, each category was named in accordance with their core feature and key features were highlighted to distinguish between the categories (Khan, 2014). The categories of description were collated to form the outcome space (Reed, 2006).

#### **Step seven: Creating an Outcome Space**

The outcome space mainly represents the interpretation of the data that has undergone construction and deconstruction. All conceptions are represented according to categories of description and the relations between them are displayed (Barnard *et al.*, 1999). An outcome space was discovered from the qualitatively different ways of how CSO Audiologists experienced their development of professional knowledge during their CS year, including the structural themes and structural relationship between them. It also describes the way in which the complex variations in experiences of the phenomenon relate to each other (Yates *et al.*, 2012). The conceptions are placed according to level of complexity; from complex to less complex, so to outline the relations (Dahlin, 1994).

In phenomenography, experiences are dependent on a person's interaction with the world, thus making it relational (Yates *et al.*, 2012). Figure 2, in conjunction with Figure 7 serve to illustrate this.

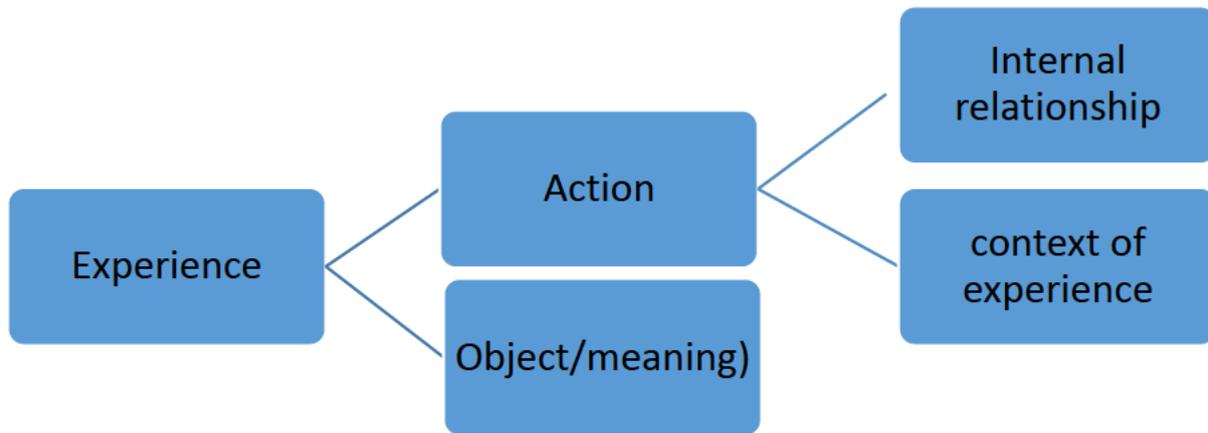


Figure 7: Components of an experience

When discerning the aspects of an experience, it enables the categorization of the participants' experiences into different parts that bring forth focal points of their experience and the relationship between them. For example:

**Interviewer:** *Did you experience any changes in the way you applied knowledge and skills you acquired in university to the work environment?*

**Interviewee (P2):** *Yeah, because in varsity it was more following the rules whereas in comm serve I got to do my own thing and I got to understand how I work and the people that I saw and I developed my own style of doing things*

It can be deduced that from this statement, the participant emphasizes her growth during CS. Components that can be identified from this utterance includes the internal horizon where she progressed from an environment where she had to follow strict rules to understanding her work and patient interactions (act) and finally, the outcome was a developed work style. The external horizon represents the context of the utterance and for this example it can be identified to be the work environment. Both the internal and external horizon form what is called the structural

aspect. From this example, it is evident that the referential aspect (university) was the foundation in which she continued to build on in CS.

Within the categories of description, experiences can be described according to their structure and meaning as there is a close and simultaneous relationship between the two (Reed, 2006). Therefore, the categories of description are represented in relation to the referential and structural aspects.

### **3.11 Trustworthiness**

Trustworthiness refers to the quality of the research. This encompasses credibility, transferability and dependability. Credibility/validity refers to the confidence in the level of truth in the research findings (Anney, 2014). Credibility in phenomenography is commonly regarded as the degree to which the outcome of the study represents the phenomenon under investigation, most importantly that the aims of the research project are reflected efficiently through the research methods (Åkerlind, 2005). The author further states that this can be ensured through communicative validity or pragmatic validity. Pragmatic validity was used for the current study as it is assessed by the insight the research findings provide to the effective functioning of the world (Åkerlind, 2005). The research findings of this study aimed to inform policies, provide understanding and contribute to literature surrounding the CSP and professional knowledge development.

According to Anney (2014), transferability refers to the ability to transfer qualitative research results between contexts with other participants. For the current study, purposive sampling was used to achieve transferability. The participants who were selected for this study were knowledgeable about the phenomenon under study, therefore, generating in-depth research findings. Dependability refers to the degree to which the research findings become stable over a period of time (Anney, 2014). This research study conducted a pilot study where the same data generation method as the main study was used to ensure that results obtained are reliable through the consistent use of method. Furthermore, the transcripts were coded manually and using the Nvivo software on separate occasions to ensure agreement in codes, therefore, ensuring inter-rater reliability.

The researcher relieved herself of possible bias and preconceptions by making her positionality, input into the analysis and assumptions explicit and her relationship with the phenomenon and

field under study known. This facilitated transparency and led to trustworthiness of research findings. In phenomenographic research, the researcher can add extracts from the data collected to aid in understanding of the context and providing sufficient details with regards to methods and procedures conducted to ensure trustworthiness (Rands & Gansemer-Topf, 2016). Furthermore, dependability can be ensured by the researcher making their data analysis explicit, describing the process step by step and giving examples to clarify data interpretation (Åkerlind, 2005). The researcher utilized both these method in the study to ensure trustworthiness.

According to Degen (2010), it is imperative for the research outcomes to be consistent with the data generated. To ensure trustworthiness, the researcher provided data that was rich in descriptions of how the concepts were developed and how the interviews lead to the research findings.

### **3.12 Ethical Consideration**

Leedy and Ormrod (2013), describe ethical and legal consideration as the right to privacy, non-maleficence and honesty amongst professionals. The following were ensured in the current research study as a means to comply with research ethics requirements:

The research proposal was submitted to the School of Health Science Ethics Committee, Assistant Director of the Disability and Rehabilitation Unit and the Department of Health Provincial Government of KwaZulu- Natal to request for gatekeeper permission to conduct the study and ethical approval was granted. Information was shared with participants, stating the purpose and the significance of the study and consent to participate was requested. Participants were given a choice to participate voluntarily or to withdraw from the study at any point should they deem it necessary. Withdrawal and rejecting an invitation to participate came with no obligations or negative consequences. This was to ensure autonomy.

The data gathered was coded and did not include personal information or information about the health facility to protect the identity of participants. All data was password protected to ensure confidentiality. Their private information was not shared with any persons without their consent and unauthorized access to the data was restricted to the researcher and the research supervisor.

### **3.13 Summary of Chapter**

This research study was designed to explore the qualitatively different ways in which CSO Audiologists develop professional knowledge during their CS year in various public healthcare institutions in KZN. A phenomenographic study design was best suited to achieve the study aim and objectives.

## **CHAPTER 4**

### **RESEARCH FINDINGS**

#### **4.1 Introduction**

Following the methodology chapter where the processing and refinement of data is guided by phenomenography, this chapter presents the results that were generated. This chapter aims to present the outcome space, conceptions and the categories of description that emerged during data analysis.

The chapter begins with a description of the outcome space which illustrates the qualitatively different meanings CSO Audiologists attributed to their experiences of professional knowledge during their community service year. The nature of the outcome space and the process of data analysis is outlined in Chapter three. However, in this Chapter, the presentation of the outcome space is followed by a detailed description of categories of description that contributed to it. The outcome space is arranged such that the relationship and background of the conceptions (external horizon), conceptions and their related parts (internal horizon) and the general understanding and experience of this phenomenon (referential aspect) is outlined in Table 3. Each of the identified categories of description includes the qualitatively different conceptions and excerpts from the transcripts as evidence.

Table 3: Outcome space presenting ways of experiencing knowledge development during community service

<b>Aspect</b>		<b>Category</b>	<b>Conceptions</b>
Referential aspect		Category 1: Transitioning from graduate to professional	Conceptions of emotional changes in CS Conceptions of transition and adaptation to the workplace
Structural aspect	External horizon	Category 2: Learning in the workplace during CS	Conceptions of CS work environment Conceptions of the impact of resources in the practice of Audiology Conceptions of supervision and support
	Internal horizon	Category 3: Professional development	Conceptions of experiences of practical knowledge development Conceptions of experiences of experiential knowledge development Conceptions of experiences of theoretical knowledge development Conceptions of experiences of CSO Audiologists' overall development during CS

The outcome space was further represented in a hierarchy, as seen in Figure 8. Conceptions provide both internal structure and structural relationships between categories. Thus, all categories are logically related parts of the phenomenon (Reed, 2006; Akerlind, 2008). A typical progression through the community service programme is the transition from tertiary institution to the workplace (Category 1: Transitioning from graduate to professional), to actual active learning in the workplace (Category 2: Learning in the workplace). Initially, the graduate may start off with less professional knowledge at the beginning of CS but this may change as they engage with the work environment, leading to the development of professional knowledge by the end of the CS year (Category 3: Professional development). The development of professional autonomy and competence in CSO Audiologists emerged from their experience of the CSP. Interplay of their experiences of CS, supported by the structure of their work environment allowed participants to develop as professionals. Much was learned from their interaction with the work environment, colleagues and patients which contributed to their development.



Figure 8: Hierarchical illustration of the categories of description

The participants' collective account of the phenomenon under investigation were presented within categories of descriptions as conceptions. Variation of such conceptions were presented in the outcome space and the hierarchy represents the increased complexity in how the

phenomenon was experienced by participants. The current study explored experiences of professional knowledge development in CSO Audiologists during their CS year; therefore, further development beyond community service was outside the scope of this study.

## **4.2 The referential aspect of experiences (meaning of experiences)**

The referential aspect refers to the meaning attributed to the experience (Reed, 2006). This section of the results describes the meaning that participants attributed to their experience of CS and includes *Category 1: Transitioning from graduate to professional* as a category of description.

### **4.2.1 Category 1: Transitioning from graduate to professional**

The CSP is viewed as a means to provide services to remote, underserved communities; more especially as a means to facilitate skills and knowledge development in new graduates (Frehywot *et al.*, 2010). Participants entered the CS year with pre-conceived ideas about how the year would be. They shared their experiences, highlighting how they felt and transitioned into the work environment. Conceptions that make up this category are reported and further elaborated through the use of excerpts from the transcripts as evidence. The reason for establishing this category of description is that graduates undergo an abrupt transition from students using the WIL approach into community service officers who are expected to take charge and efficiently provide healthcare services under the WBL approach. This category aims at addressing the sub-question: What are the CSO's experiences of knowledge development during their year of community service?

#### **a) Conceptions of emotional changes during CS**

During the course of the year, participants experienced a range of emotional changes. They expressed how the year affected their emotions in response to the following question: "have you noticed any emotional changes you experienced during community service?" The emotional dimension is important and requires continuous attention for the development of an assertive and valued professional identity (Eraut, 2007). Table 4 summarizes the emotional changes experienced by CSO Audiologists during their CS year.

Table 4: Summary of qualitative differences of emotional changes during CS

	Positive Emotional changes	Negative Emotional changes
<b>Examples</b>	<ul style="list-style-type: none"> <li>• Emotional growth</li> <li>• Strength</li> <li>• Satisfaction</li> <li>• Self-motivation</li> </ul>	<ul style="list-style-type: none"> <li>• Stress</li> <li>• Frustration</li> <li>• Anxiety</li> <li>• Exhaustion</li> </ul>

Participants noted a growth in their emotional maturity. These changes were mostly attributed to feelings of being alone with no one to provide emotional support and also having to persevere through the year. This is seen in the excerpts below:

**P10:** *Yeah. I learnt to with some of my sadness by myself. [...] Last year was the first year, I came home and nobody noticed you were sad. [...] So, I think my emotional intelligence, developed 10-fold.*

**P2:** *[...] I guess I could say I grew emotionally as it was a different experience. It was a difference experience from varsity so it taught me to grow emotionally, to be stronger whether it's for patients or for myself in general... yeah. [...] Oh, there were lots of emotions. Frustrations, happiness, satisfaction just growth in general...yeah*

Some participants expressed experiencing emotions such as frustration, stress, exhaustion and nervousness during their CS. Although some of the participants experienced similar emotions, the source of the emotion varied between participants. Some of the conditions that were noted to cause stress included situations outside of work, moving away from home, working with difficult colleagues and tension in the workplace. These are supported in the excerpts below.

**P4:** *Stress, it was something that would happen temporarily. So, if I'm faced with that situation then I would be like stressed, overwhelmed or anxious but then after it's gone, I'm me again. It wasn't something I would say I'm stressed because of work. I think it's also because of the people I was working with. I was working with positive people, we all got along.*

**P12:** *Maybe things got a little bit stressful sometimes and it was a bit hard to cope with things. Also, this is not professional but sometimes people were mean in terms of other departments where sometimes people got unprofessional and a bit hurtful so... sometimes it was emotional.*

**P5:** *I feel as though I was respectful towards my colleagues, I never really fought with them as such. Even with the little disagreement I had, I took it and I, I was angry about it, but I never really took it out on her, I just was there, I did my job and I went home*

**P9:** *[...] I think also for me, because I moved away, I think there was also that underlying. [...] So that was also the emotional thing that I was going through at the time but again that was like come and go you know it wasn't for the full year*

Others experienced both positive and negative emotional changes during their CS. The positive changes were attributed to being comfortable in the work environment, learning in the workplace and being involved with patients. These changes later evolved into complacency and frustrations due to large case load and exhaustion. This is seen following excerpts:

**P11:** *I think it was more of positive, but there were also negatives. Positives, you know I think when you get practically involved with people at that time, you get to learn more. But it can be exhausting [...]*

**P6:** *[...] I think, as I said I was very nervous at first and then you got to a point where you were bit more confident, a bit more relaxed. And then personally I think I experienced a bit of complacency [...].*

This was the first time the participants were exposed to a work-based programme and also being integrated into the work environment. The participants in the study indicated having experienced some form of emotional changes during their exposure to the CSP. It is expected that such changes impact on the CSO Audiologists' experiences of the programme and overall adjustment to their work environment. This is supported by Eraut (2007) as he states that graduates exposed to the working environment for the first time are overwhelmed with sudden increase in expectation, pressure and responsibility such that they are affected physically, emotionally, mentally and socially. Furthermore, it is important to ensure that negative

influences in the programme are mediated so to limit its effect on the professional's motivation, personality, ambition, attitude and metacognition. These are important aspects for the development of the professional's theory and practice (Kelemen, 2015).

#### **b) Conceptions of transition and adaptation to the workplace**

All Audiology graduates from their respective universities are placed by the DoH into healthcare institutions gazetted for CSO placements as per the graduates' application. Thereafter, new graduates go through a transition from tertiary institutions into the workplace and this transition forms an important aspect of their experiences of community service. The participants were asked to reflect on their experiences regarding the changes between CS and undergraduate training. They described university as being an ideal environment which had adequate resources, supervision and support. Variation was noted in the sources of support reported by participants. They reported receiving support from by peers, friends, lecturers and tutors. In the work environment, they mentioned that it was less controlled and there was more pressure to be independent, professional and flexible. This is seen in the following excerpts:

**P3:** *[...] I keep going back to varsity because comm serve is right after varsity so the behaviour in varsity was very relaxed because these people are your peers, we are all students. Even if you had a patient that you were testing there are people here who will help you and not judge you and all that. But then in comm serve year, there are people here who aren't your age, some are older than you are so it was very challenging but then you just learn to be respectful, you learn ways/how to conduct yourself as a professional.*

**P2:** *Yeah, because in varsity it was more following the rules whereas in comm serve I got to do my own thing and I got to understand how I work and the people that I saw who developed my own style of doing things*

**P7:** *In varsity it's a very, I don't want to say perfect environment, but it's more like... More like the ideal environment, a more controlled environment and in comm serve you, it's less of an ideal environment or controlled environment and you have to learn how to work with the not so ideal and how to still offer a good service despite that, yeah.*

Participants had to adjust their expectations and acclimatize to the new environment in order to learn and provide quality services within their respective communities as seen in the next excerpts.

**P1:** *I wouldn't say they are frustrations as such because you know that it is part of the year and eventually you start to work with it as well and you acclimatize to it*

**P12:** *I learnt that you have to adapt whatever the situation. You have to adapt to the situation and basically try to make the best of it. Sometimes, what do I want to say...sometimes you play roles that are bigger than you*

**P4:** *At varsity they have their own environment and how to do things. They have their own setting and the setting of the hospital is different and the people that you deal with are different that I dealt with at the hospital were way too different than the people that we dealt with at the varsity. Even the team, even the, like the whole setting. You have to adapt to setting, to that standard, to the people that you are dealing with. And yeah. There are some things that you have to adjust so that it will fit to everything that you are exposed to, to everything that influences your work at the hospital*

Transitioning knowledge and skills from tertiary institutions into the workplace is a difficult process due to the difference in context, approaches to learning and the culture of the environment (Eraut, 2004a). However, participants felt adequately prepared to transition into the workplace. Although they expressed a marked difference between university and CS, they appreciated the opportunity to become more independent professionals. They reported having learned from challenges and adapted to their new contexts and its ever-changing requirements. They reported that this experience was necessary for their professional development. This is largely because professionals have to actively select and prioritize the knowledge required to fit a particular situation. With enough clinical exposure, they develop their tacit knowledge, allowing them to identify patterns and knowledge the selection process (Eraut, 2004a). Therefore, this contributes to the development of their professional knowledge.

### **4.3 The structural aspect of experiences (how participants relate to the phenomenon)**

In the current study, the structural aspect refers to how participants related to their own experiences of professional knowledge development during CS. The exploration of this aspect allows for clear understanding of how participants found and attributed meaning to their experiences of development of professional knowledge, and how these experiences contributed to their professional development. This section includes- *Category 2: Learning in the workplace during CS* (external horizon) and *Category 3: Professional development* (internal horizon) as categories of descriptions. The external horizon includes the context that surrounds the phenomenon and the internal horizon includes parts of the phenomenon and how they relate to each other (Reed, 2006). Together, both these horizons are referred to as a structure of awareness as it may describes how a person is aware of a position in which they may find themselves (Reed, 2006).

#### **4.3.1 Category 2: Learning in the workplace during CS**

Authors such as Kolb (1984), Dall’Alba and Sandberg (2006), and (Benner, 1982) emphasize the importance of learning through experiences. Similarly, learning is commonly made reference to when talking about professional knowledge as seen in Eraut (2005), Dickson (2007) and De Souza Machado (2011). Essentially, these authors recognize that experience and learning are key factors in the process of professional and knowledge development. This is supported by Bennet *et al.*, (2016) who identifies the method of learning through experiences as integral for professional development and learning. For the development of professional knowledge to take place there must be an opportunity for the individual to actively assume a professional role and engage in professional challenges. It is within such an environment that learning is deepened and professional expertise that outline their role are developed (Schön, 1983; Dall’Alba, 2009). This is because professional knowledge entails knowing, professional autonomy and understanding of practice and professional behaviours (Râbu & McLeod, 2017).

*Category 2: Learning in the workplace during CS* is identified as the external horizon in structural aspect. The conceptions described in this category demonstrate how the experience of CS shaped the participants learning as described in Table 3. This category was identified because CSP serves as a learning platform where CSO Audiologists are able to acquire and develop their knowledge and skills through work-based practices. The context of the work environment is important for nurturing professional knowledge. The circulation of discipline-related knowledge and practice allows for notable development and general transformation of

the professional (Riveros & Viczko, 2012). This category aimed at answering the sub-question: What are there possible reasons that could contribute qualitative differences in the experiences of knowledge development during CS in Audiology?

**a) Conceptions of the work environment**

The CSP is facilitated through mostly rural healthcare facilities. During community service, the CSO Audiologists are expected to adapt to the environment in which they were placed in order to provide quality healthcare services to all people. The work environment provides adequate space for professional socialization. This allows for efficient learning through various forms especially during clinical experience before qualification and during professional practice (Eraut, 1985). Eraut (1985) further reported that there will be work environments which facilitate professional growth and development of new professionals and those that hinder it. The table below summarizes the CSO Audiologists’ experiences of the work environment during their CS year as a reason for their qualitative differences.

Table 5: Qualitative differences of CSO experienced learning in the workplace

	<b>Positive experiences</b>	<b>Negative experiences</b>	<b>Progression of experiences from negative to positive</b>
<b>Examples</b>	<ul style="list-style-type: none"> <li>• Satisfactory physical environment</li> <li>• Active engagement</li> <li>• Socialization</li> </ul>	<ul style="list-style-type: none"> <li>• Unfair treatment</li> <li>• Conflict in the workplace</li> </ul>	<ul style="list-style-type: none"> <li>• Interactions with colleagues</li> </ul>

Participants expressed how they perceived their work environment as positive towards contributing to their learning. They included the availability of a supervisor, feeling welcome in the environment and positive interactions with their colleagues influenced their learning in the workplace. The excerpts below are provided as evidence:

***P1:** Liking having the supervisor and... having the two supervisors was good; again, the team that I was involved with, we were quite close as a group both at work and out of work hours. And I think also the patient load. You just get to see so many different pathologies and so many different cases*

**P11:** *Yeah. Um it... I was definitely a visitor, don't get me wrong, I never felt like I was part of the community um but that just comes with you know being um obviously not from Zululand. Um, but with that being said, it was one of the most gracious and heart-warming welcomes into a different community. [...] Umm and also people were just very welcoming.*

**P5:** *But I thought everyone was quite friendly especially the speech therapists. They were very welcoming [...]. [...] It was a very good environment to work in. all the staff are so friendly*

Other participants described experiences of their work environment as negative. They attributed such experiences to factors such as tension and conflict in the workplace, lack of a healthy working relationship with colleagues, victimization and unfairness.

**P8:** *very tense, very, very tense. Every day, there wasn't a very good vibe between our supervisors and that sort of thing, so it was a very tense environment to work in. I don't think they respected as much and vice versa, so it became an ugly environment to work in*

**P5:** *It had its ups and downs. I was at a point where I couldn't approach the senior audiologist because she was going a bit, how can I say, she was nice at the beginning then she went on maternity leave and when she got back, she started having issues with me for some reason. But then eventually she just stopped for some reason*

**P3** described her experience of her work environment as negative in the beginning and as the year progressed, she perceived it as positive. This was influenced by being new, apprehensive and unfamiliar with the work environment and her colleagues were older than her. As the year proceeded, the participant became accustomed to her surroundings and her colleagues and felt accepted in her work environment. This facilitated the change in her perception and most importantly, she mentioned that people in her environment contributed to her learning:

*Yeah, different people, some are older, some are very serious, some are, so you don't know who's approachable and who's not approachable. Who I can speak to, who I can't*

*... speak to so it was just that? Some people just give you that attitude that “you come here with your student mentality” but then as the year went on, we started getting along and it was positive as time went by. [...] So, it was very positive and very informative as well. [...] So, it was negative at first then went on to be very positive, yes. It was very emotional when I had to leave. It was a very good environment to be in.*

Some participants described difficulties with hospital management where they felt they were not being heard, negative attitudes towards services, Audiology services not being prioritized and limited awareness about Audiology as a profession. They felt like this impacted in limiting the way they practised as CSO Audiologists.

**P7:** *It was often difficult as well. It took time, you needed to do a lot of paperwork and yeah also communicating to, communicating certain challenges to the powers, if I can call them that, was also sometimes challenging and you didn't feel like you were actually heard. [...] Yeah, the attitude towards the Audiologists in general yeah. [...] Yeah and the not always being heard by the professionals and or by management or whatever.*

**P10:** *It was frustrating working in a department that wasn't prioritized, which I understand, there's very limited resources for health in South Africa, so how are you supposed to prioritize, you know, Audiology but that was frustrating. That caused a lot of my stress*

**P9:** *So, the way that Audiology is seen I think as a whole in general in South Africa or even in in public I feel it is not seen as being important that's what I realized. It's not a priority because sometimes, because of the fact of lack of equipment on its own, people now wanting to come and fix equipment that needs to be fix shows there's no priority given to Audiology in public when they should when they should be. Yeah*

**P12:** *I think maybe sometimes, those challenges in the workplace that like with other professionals maybe where you get to see lack of knowledge and lack of recognition for the entire field of audiology might be the only thing that discouraged me because awareness is still an issue even amongst patients, then amongst our fellow colleagues so*

*I think that might have been the only disappointing, discouraging thing that I might have experienced.*

Some participants highlighted lack of personal safety in their work environments. They mentioned issues with threats of violence from patients and inability to partake in recreational activities because of fear of being targeted as seen in these excerpts:

**P4:** *There was one guy who was always promising me a shambok. But not saying it bluntly that I'm going to hit you*

**P10:** *And then I think also you know there were almost told us not to, because I like to run um and I like to run by myself. but nobody let me run by myself because they said that I'll be targeted in the area because I stick out umm because I'm white, you know things like that. So that was a bit challenging.*

The experiences reported by participants varied from positive, negative and others were in-between. They also reported challenges within the work environment and some of these challenges allowed for participants to develop coping mechanisms, self-assurance and a sense of independence in problem-solving and decision-making. When graduates reflect on situations that impacted on their emotions, thoughts and practices, they are able to discover the nature of their own knowledge process and trust in their learning processes (Rutter, 2009).

#### **b) Conceptions of the impact of resources in the practice Audiology**

Audiology is among the professions that depend on the use of calibrated, standard equipment and contextually relevant material to produce reliable screening and diagnostic assessment results. There has been a longstanding issue with the provision of appropriate equipment, infrastructure, and budget allocations for Audiology services. Participants expressed how resources in their respective institutions influenced their experiences of professional knowledge development. Table 6 summarizes the impact resources had on the experiences of CSO Audiologists during their CS year.

Table 6: Qualitative differences of the impact of resources in hospital facilities

	<b>Positive experiences</b>	<b>Negative experiences</b>
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<b>Examples</b>	<ul style="list-style-type: none"> <li>• Adequate resources</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of resources</li> <li>• Challenges with management</li> </ul>
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It was observed that participants reported that they experienced their learning in either well-resourced or an inadequately resourced healthcare institution. There were variations in what participants categorized as resources. Some referred to resources in terms of human/staffing resources, physical equipment and others as financial resources.

Some participants felt that their institutions had adequate resources to facilitate their learning as seen in these excerpts:

**P12:** *Just me. Ok...like I said, it was well resourced. I got the opportunity to use most the theory that I learnt and used it theoretically, practically; I mean, sorry, so yeah.*

**P7:** *[...] did actually have quite good resources in terms of Audiology, we had a big budget for hearing aids and yeah, it was a good experience [...]. Working in a team definitely, I learnt a lot in terms of that. [...] I thought it was very good to do rural despite the minimal resources and we still have enough resources to do a complete hearing test and fit hearing aids except of course in the clinics*

**P1:** *[...] And because it was an MDR hospital, we had, I wouldn't say a very large budget but we had quite a big budget when it came to equipment and hearing aids, so we didn't really have any difficulties when it came to ordering hearing aids and keeping stock of the hearing aids.*

Some participants, however, reported different experiences to the ones discussed above. These CSO Audiologists reported challenges with resources, mostly with equipment and budget for purchasing of hearing aids. They, therefore, attributed their limited knowledge development to the challenges that they had experienced with the resources. In addition, they also included difficulties with broken equipment, inability to access funds for calibration and limited space in clinics. Participants expressed frustration with limited application of the theoretical knowledge they acquired at university, the inability to broaden their knowledge in terms of

objective testing and also being unable to participate in screening programmes as seen in the following excerpts:

**P12:** *Maybe also, I mean there was equipment, but it was quite a struggle to get resources in terms of budget and everything. [...] Like getting hearing aids, where you order hearing aids and they take months to arrive. Things like batteries for hearing aids and what else... yeah mostly hearing aids and paying for calibration, maintaining equipment and everything. That was the biggest struggle, other than that it was pretty much resourced shame.*

**P2:** *in relation to audio, I think it was very challenging because we didn't have equipment, so that was a big challenge for me [...]. No, I'm just saying in that sense it was very difficult because even when we advocated for more equipment, we had the same problem because they always asked why do you need that. They told us about the budget and all that. So yeah in that sense it was challenging. Other than that, socially it was a great environment. The people there were generous; they were easy to work with. Yeah.*

In the reflections given by the participants, it is also apparent that there were variations to how the participants described the inadequacy of equipment. Some of the participants referred to lack of equipment as not having basic audiological equipment to conduct clinical assessments and others referred to not having access to equipment for electrophysiological assessments.

**P10:** *Yeah so, we err had a Kudu wave which was great for MDR TB wards but our audiometer was broken for the whole of my com serve, so that was tricky. Because we're not allowed to use the Kudu wave for outpatients because the Kudu wave was bought for MDR. Equipment was frustrating, basically. [...] Umm, we basically did otoscopy and tymp. That was it. But it ended up being enough because most of our patients were ear infections or like perforations. So, we did a lot of talking, looking, tymping and referring*

**P4:** *But I feel like I really wanted to learn, I really wanted enough exposure to electrophys tests and this whole range of battery that we are exposed to on campus. I think that would be very cool. [...] I felt like to grow as an audiologist, I was interested in those tests and getting enough exposure to them and learning practically do them [...]. [...] I feel like I*

*needed to develop further as an Audiologist only if I had more exposure to more tests yeah*

**P5:** *We didn't have as much equipment, we just had one booth, audio booth, so that did stop my development as, like I couldn't do stuff like bone conduction, speech testing. It really set me back a bit because when we did get the equipment in December, I had to go back to my notes and think; no, you have to do this, no this is how I mask. So yeah it did set me back, like the whole year not doing something, but like you have to do it again.*

### **c) Conceptions of supervision and support**

The concept of support and supervision during CS serves to provide CSOs with the necessary guidance and assistance to enable them to flourish during this year. It enables learning through mentorship from experienced individuals and learning through mistakes. Discussions with supervisors, colleagues and peers who have lived through similar experiences allows for professionals to reflect and promote their own learning (Hedlund, Antonakis & Sternberg, 2002). When asked if they received enough mentorship and supervision throughout the CS year to facilitate their knowledge development, participants expressed their experiences of supervision and support in their respective facilities and how it impacted on their learning. Table 7 summarizes the impact supervision and support had on the experiences by CSO Audiologists during their CS year.

Table 7: Qualitative differences in the supervision and support received by CSO

	<b>Positive Experiences</b>	<b>Negative Experiences</b>
<b>Examples</b>	<ul style="list-style-type: none"> <li>• Supervision</li> <li>• Evaluations</li> <li>• Support from colleagues</li> </ul>	<ul style="list-style-type: none"> <li>• No/limited supervision</li> <li>• Lack support</li> </ul>

Some participants felt they received adequate supervision throughout their CS year, where supervisors encouraged independence, self-confidence and were active agents in the participants' learning.

**P1:** *I had two permanent supervisors with me. For most of the time there were two of us at the clinic at any point. Because the 3<sup>rd</sup> person would have been at a clinic, off sick or at a conference or anything like that. My supervisors were quite strict on me when it came to procedures and getting up to speed with the hospital and how everything worked in the department as quickly as possible. [...] Your supervisors will require, at least that was the case in my hospital, that you practice as an independent practitioner so they are there to help you along the way but they want you to make the decisions yourself, which is good*

**P3:** *Yes. I did receive that from my supervisor. She wasn't monitoring all the time but every time when I wanted help she would come and have a looking the ear, if I wasn't sure about something she'd come and have a look and then explain to me and she'd even try, no not try, she would tell me that "you need to have confidence" because everything you say is correct it's just that you always want to confirm stuff, just trust yourself because what if you're here alone who are you going to ask because there won't be any other Audiologist except for yourself. So yeah, confidence was something that she really, really enforced and yeah, I learnt a lot. She was here all the time.*

However, other participants reported qualitatively different experiences of supervision and support in comparison to others. This was because the participants felt they did not receive enough supervision during their CS year and this adversely affected their development. They reported having to learn to manage Audiology departments by themselves without supervisors, dealing with patients by themselves even though they felt they needed assistance and constantly being overwhelmed by their work environment. In addition, they reported a lack of emotional support from colleagues and supervisors.

**P4:** *It wasn't really enough. I say that because there was no senior Audiologist. I was by myself. And I had to learn most of the things myself and the Audiology side wasn't difficult because I had already been taught everything here on campus but when you get to the hospital, there is a lot of stuff that you have to know that happens at the hospital. And I feel like I used to lag behind on those. Dealing with different departments, ordering hearing aids, who to talk to and if you don't have a supervisor at the hospital, they won't, they are supposed to attend you because they know you don't have a supervisor but they don't give you much attention.*

**P8:** *No, not nearly enough. I think in terms of, my supervisor was very good with admin, so I think in terms of, and I mean it is part of conserve; learning how to do the admin, I don't think you ever really get used to it. It was a lot of admin and so in terms of that, she would teach me how to like fill in the paperwork and that sort of thing but in terms of patient care; it was very much like this is your patient, you decide, you know, you do what you do and I'll do what I do with my patient and that was it. [...] So, definitely I think it hindered my development. I felt like I had to support myself a lot just by reading text books and searching online and finding answers myself or going to speak to doctors. There were 1 or 2 doctors I had very good relationships with, so I'd go and speak to them. But my direct supervisor, yeah, didn't help all that much. [...] I think it could have been better, my supervisor for one was not interested in helping or teaching or advising or supervising*

There were also participants who reported having sufficient support from their supervisors; however, such support lacked consistency. They, therefore, felt they had experienced intermittent levels of support and supervision. This was attributed to supervisors being on leave over long periods and resignations within the CS year. Participants reported feelings of stress, uncertainty and deprivation of an opportunity to ask question and receive guidance when the supervision was not available. One participant stated that this hindered their development significantly.

**P11:** *uhm, more likely of mixed emotions because earlier I had a supervisor and you know in areas where I wasn't sure, I would run to my supervisor all the time. And then as time went on and then I didn't have a supervisor because she was sick and then I got this one incident I got a very stressful patient and then I was very emotional and I couldn't handle it. [...] Not throughout but the time when I received supervision it was enough. My supervisor was there, she was attentive and she was willing to assist in whatever you needed assistance in*

**P5:** *That's a yes and no answer. Because I mean at the beginning of the year yes because I mean one of the Audios was there. I think it was the time where I had no Audio supervision that I struggled a bit. Because there were cases where I didn't know exactly what to do and I had to ask the speech therapists and they didn't know what to do. [...] I like, it was fine. It was okay. Because like if I needed to ask questions or get clarification,*

*like they were more than willing to help me or show me how to do things correctly. it wasn't like, no you have to find your own way. The only problem was when, the supervision when, I didn't have anyone to ask.*

**P2:** *It was to a certain extent. Yeah it was. Because every time I contacted them for something or the other, they would help whether it was audio related or not. So yeah, I think it helped me grow in some way. [...] I think it could be better if there were to hire a permanent audiologist there. It would be much easier on the com serv. It would make it a greater learning experience because we supposed to be learning during comm serve but I think yeah... [...] But I think in that manner, it really, really hindered my learning last year. [...] I learnt to be more independent and I learnt to be more motivated because I didn't have anybody to rely on so I was always trying to push myself to do better and it was negative because I didn't have anybody I could rely on so and whenever I wanted to do something different I didn't have anybody backing me up so I was always just alone.*

A few of the participants expressed having to actively seek-out their supervisor through instant messaging and also telephonically to ask for assistance. This was not ideal as participants had to still manage patients, see to the department and attend community outreach. One of participant reported having to compensate for the lack of supervision with utilizing his theoretical knowledge and prior knowledge obtained in university. The absence of constant support and supervision did pose as a limitation to their learning.

**P12:** *Maybe not enough but I think it was, how can I say, it was satisfactory because the supervisor was gone but she could be reached telephonically if ever I was stuck with something but it was full on supervision sort of thing so. [...] I managed. I got by with the help that she offered when she could and the knowledge and the skill-set I had, I got by. I think the lack of full on supervision. I might have learnt more if I was under the supervision of the person who had more experience in the field, had seen more so I think maybe there I might have been deprived...yes.*

**P4:** *I was in contact with the senior Audiologist via on WhatsApp. If there was something that it was challenging me, trust me that was like 70% of the cases were challenging and I always sent her a WhatsApp like what do I do now.*

This conception highlights how CSO Audiologist struggled with receiving adequate support and supervision during their CS year. This poses a barrier to their learning and thus hindering their professional knowledge development. According to Eraut (1985), the maintenance and dissemination of knowledge and good practice depends on the continued education of professionals who are already in the field. Thus, work-based learning relies on the quality of practice provided. Furthermore, characteristics of good practice may vary over time and the standard of good practice may subsequently deteriorate. This statement highlights that the learning and practice provided to newly qualified graduates in the workplace is largely influenced by their supervisors (mid-career professionals).

### 4.3.2 Category 3: Professional development

Individuals receive theoretical knowledge from institutions of higher learning. This knowledge is then represented and applied in practice as practical knowledge, informing the professional on how to enact their professional role. Through practical experience, expertise become apparent and the knowledge becomes automated hence the development of tacit knowledge. The understanding of this process allows for the exploration of how professionals learn through experiences and therefore, enables the establishment of effective methods that facilitate learning in the workplace (Hedlund *et al.*, 2002). Working in a professional environment opened CSOs' to go through several experiences of the clinical setting, interacting with patients and troubleshooting which may impact on their learning. *Category 3: Professional development* was identified as the internal horizon and was aimed at answering the sub-question: What are the qualitative differences in how Audiologists experienced professional knowledge development during community service?

#### a) Conceptions of experiences of practical knowledge development

A large part of the profession of Audiology is clinical work which involves the consultation, assessment, diagnosis, treatment and management of patients with hearing and ear-related disorders. Table 8 summarizes the CSO Audiologists' experiences of the practical knowledge development during their CS year.

Table 8: Qualitative differences in the experiences of practical knowledge development during CS

	Positive experiences	Negative experiences

<p><b>Examples</b></p>	<ul style="list-style-type: none"> <li>• Time management</li> <li>• Teamwork</li> <li>• Clinical skills</li> </ul>	<ul style="list-style-type: none"> <li>• Skill regression</li> </ul>
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Participants reported development in patient interaction, their clinical skills and professional attributes. Furthermore, they indicated that working with other professionals also facilitated their development.

**P1:** *Huge amounts. I don't even know where to start with that kind of thing. From patient interactions to diagnostic procedures to screening, working with hearing aids, working with babies. I learnt a lot about TB and the MDR program that they are busy running in the country. [...] When you start to implement the testing procedures in practice, the theory that you learnt in varsity starts to sink in.*

**P8:** *So, a lot of wax management, a lot of wax management; there's pretty much every second patient needed wax management, so a lot of that, TB monitoring as well. that was the one thing, you know, was getting better in our Hospital. So, the more we were doing it, the better we were getting at it, the more the doctors were respecting our role and so that was definitely improving. [...] So, learning a lot more about different doctors and field off study was also quite interesting. Within our rehab team we had a very good relationship with our speech therapist and our dietitian, so I learnt a lot from them as well so in terms of growing your perspective of professionals that really great*

**P4:** *Definitely made me to be disciplined, to be more responsible because you know when you are a comm serve, and you don't have someone telling you what to do, when to do it, you have to have discipline, you have to be responsible. Otherwise, who's going to do it? So yeah, I learnt that and I'm glad. Even though it wasn't an ideal situation and I'm kind of glad it happened that way, I learnt a lot from it.*

**P3:** *Yes. Working with different people, working with kids because I think I saw a lot of kids so there were those that were very good kids and there were those that were challenging, very, very challenging. So, I learnt as well how to just play with the child, ease them and then eventually it will work out and sometimes not but I did learn different*

*strategies, different techniques on how to deal with different people so that's one of the things I learnt at comm serve. [...] there were certain aspects that I learnt as we discussed earlier like more of interaction, working with different people, attitudes towards people, how to approach them and stuff. But then technically and result analysis and all that I didn't gain enough practice there so the information I had that time is still the information from varsity.*

**P6:** *Counselling, my counselling skills developed definitely. [...] The other way I developed is also IsiZulu; I can't tell you how much IsiZulu I learnt last year. Like just general conversationally and specific to like instructions, hearing aid orientation, very, very basic tinnitus counselling in IsiZulu. So, all that was a huge development for me. [...] okay so definitely in techniques, for example, how we would do otoscopic on a kid. [...] And you learn how to do, it's very speedy and quickly because this child is wriggling away from you and whatever, and also earmould impression on kiddies that developed for me because gain and they not going to want you to stick something in their ear for a long time and then that also developed. Also, the main thing that, the technique that developed was speech testing.*

However, **P8** expressed that she experienced a decline in her level of practice during CS. She attributed this experience to her work environment, lack of appropriate supervision and stimulation.

*To be quite honest I think my level of practice declined because I got lazy. Like you get lazy because one is actually caring about what you do anyway. there doesn't seem to be like a, you know, and Ethics of being held responsible for anything so you tend to get away with a lots and people get lazy because you work around people who don't really care about what you do so you tend to get lazy.*

The variations in the conceptions of practical knowledge expressed by participants indicate that they were able to carry out clinical procedures on patients despite facing challenges in the work environment. From the transcripts, it is evident that their experience of CS facilitated development of skills acquired in university and allowed for participants to grow their confidence in practice.

**b) Conceptions of experiences of experiential/tacit knowledge development**

In order for a professional to effectively immerse themselves into their role in the workplace, they need to acquire work-related skills and knowledge. Although the process of learning through experience is vague, the development of tacit knowledge has been used to scale the learning (Hedlund *et al.*, 2002). Table 9 summarizes the CSO Audiologists’ experiences of experiential/tacit knowledge development during their CS year.

Table 9: Qualitative differences of the experiences of experiential/tacit knowledge development during CS

	Positive experiences	Negative experiences
<b>Examples</b>	<ul style="list-style-type: none"> <li>• Decision-making</li> <li>• Efficiency</li> <li>• Independence</li> <li>• Clinical judgment</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced work ethic</li> </ul>

Participants expressed that they developed as they repeated procedures and routines such that they became “second nature”. This is what increased their confidence, patient management and critical thinking.

**P1:** *I think it increases your confidence quite a bit and I was quite fortunate that last year to have seen quite a large patient load and it does certainly give you confidence in your testing procedures, more confidence in your ability to diagnose hearing and related disorders. [...] I can’t even compare how I am now when a patient walks in the doors compared to how I was back at varsity. The difference in confidence, the difference in knowledge, the difference in having to make decisions quite quickly on the go... my clinical judgement has improved definitely as well*

**P6:** *Whereas like the first three months or so on campus it’s already stuck in your head. I even started memorizing SRT wordlist like that’s how you know; it just gets stuck in your head. [...] it’s not on purpose, I’m not sitting there like on purpose, it’s like you just develop your professional skills so much because you doing it day in, day out and you’re not seeing one or two patients, you’re seeing at least 3, 4, 5 audiograms a day, so...*

**P8:** *I think just learning to identify different pathologies and that sort of thing, you with experience no matter where you practice, no matter what equipment or teams you have or whatever; your knowledge of diagnosing hearing loss and pathologies and causes and that sort of thing, give the right referrals and all improves with practice. So definitely in terms of that, yes and then definitely with the TB screening, that was a huge improvement on my professional knowledge, I don't think that's nearly covered, being nearly covered enough at varsity level because it is a huge part of comm serves for a lot of us CSOs. So, definitely that improved and yeah, got better with time. [...] It's experience and confidence in your abilities. So, the more patients you see, the more confident you get.*

**P9:** *So, just the way that I did things was more professional, more different because after a while you get used to that atmosphere of doing things in routine. it becomes so quick and, just doing an audiogram is like much quicker; helping a patient out, trying to understand their problems. It's much easier for you to catch on certain things that they say where you could say before you didn't think that could be wrong but now you sorting your mind there that there could be a be a problem just based on their case history. I think in terms of knowledge of different diagnosis, different pathologies that's much better.*

Eraut (2004b) recognizes the development of tacit knowledge as an important foundation for all professional behaviours as it aids in clinical judgement and decision-making. The participants in the current study were able to integrate their practical knowledge and their theoretical knowledge efficiently in order to treat and manage patients appropriately. It is apparent in the research findings that regardless of the varying learning environments that CSO Audiologists were exposed to, they were able to positively experience the development of experiential/tacit knowledge. They were able to learn through challenges, active involvement in discussions and teamwork which enhanced the accumulation of experiences. This facilitates growth in implicit knowledge such that the information is readily available for future use. In addition, the development of tacit knowledge indicates that knowledge has been implicitly processed by the professional (Eraut, 2004b).

**c) Conceptions of experiences of theoretical knowledge development**

The quality of learning that takes place in CS is considerably dependent on the professionals’ continued education as previously mentioned in section 2.2. Spankovich (2003) also recognizes the need to have graduates in the healthcare system with profession-centred expertise to provide quality services to all patients. The concept of continued learning goes beyond attending workshops and courses, it is much broader; encompassing all learning (informal, formal, work-based) that go beyond that of the initial qualification (Eraut, 1985). Table 10 summarizes the CSO Audiologists’ experiences of the theoretical knowledge development during their CS year.

Table 10: Qualitative differences of the experience of theoretical knowledge development during CS

	<b>Positive experiences</b>	<b>Negative experiences</b>
<b>Examples</b>	<ul style="list-style-type: none"> <li>• Self-studying</li> <li>• Workshops</li> <li>• Case presentations</li> <li>• Journal clubs</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate professional development activities</li> </ul>

Participants described being involved in journal clubs, in-service trainings, meetings with other professionals and doing presentations as a method of acquiring new knowledge. Others reported community outreach programmes as being instrumental in their development as they had to research topics to present in the community-based clinics.

***P1:** yes, in your comm serve year, well I know this was the case in my hospital, you’re also required to do a certain amount of CPD developments it’s not necessarily CPD points so it’s not necessarily formal training but your supervisors require you to do a lot of presentations, a lot of in service training where your current knowledge when you leave varsity isn’t adequate and so you’re responsible then to do a lot of research. [...] so, my knowledge really did expand through my comm serve experience*

***P10:** Yeah, we had outpatient days and um they were very dull because we didn’t have equipment, you know, so um, I ended up doing a lot of research, like journals. Our department was good, they encouraged it. So, we had weekly in services and every week, also, you know, audio, speech, physio, OT, so you’d end up having to do one in service a month. So, it sounds a little bit, it ended up being enough work, finding a journal, and*

*like putting it in a PowerPoint and presenting it per month, which was nice.*

Some participants conveyed that they did not experience much acquisition or development of theoretical knowledge during CS. They attributed this to lack of supervision, lack of new information in the work context and inadequate workshop attendance.

**P6:** *I don't think like I learnt new knowledge but I think it reinforced the old theory. So, I think like I knew the basics from campus, I knew for example how to do an otoscopic but I added to that by knowing now how to do an otoscopic on a child. You know so it was that kind of a thing. So, I knew the basics, I don't think those changed because like I know for example Joburg does a different SRT/SDT formula so for example it didn't change my theory in that aspect but it added to my theory, yeah. It's kind of embellished it*

**P12:** *I won't lie. I think because there was no supervisor involved from my side, there was no learning or reading up on anything new in terms of theory so I can't...anything stands out that I can say I learnt. [...] in terms of workshops and CPD courses, it was a very neglected area.*

According to Hedlund *et al.*, (2002), work-based learning is not synonymous with knowledge acquisition. Merely existing within the work environment does not warrant learning to take place and neither does it imply knowledge acquisition. However, individuals can learn through work-based experiences and it is possible for individuals to have variations in learning despite receiving equivalent exposure in the workplace. The value of learning is achieved by those individuals who take part in their own learning and who are not passive to the learning process. These are the individuals who become more successful and efficient professionals (Hedlund *et al.*, 2002; Dall'Alba, 2009).

#### **d) Conceptions of experiences of CSO Audiologists' overall development during CS**

Participants in the current study had to enrol in the programme for a period of one year with a goal to complete the CS programme efficiently with adequate work-based experiences to qualify for independent practice thereafter (HPCSA, 2011). To explore how they perceived

their development during their CS year, the participants were asked to reflect on the question: Do you feel you could have developed any further as a professional during community service? The experiences encountered by the participants throughout the year are summarized in Table 11.

Table 11: Qualitative differences of the participants' overall perception of their development throughout their CS year

Examples	Positive experiences	
	Personal development	Professional development
	<ul style="list-style-type: none"> <li>• Confidence</li> <li>• Stress management</li> </ul>	<ul style="list-style-type: none"> <li>• Skills improvement</li> <li>• Independence</li> <li>• Professionalism</li> </ul>

Participants indicated that they felt a development in skills, confidence, independence and patient interaction. This was because of their work environment, clinical exposure and supervision.

**P1:** *Coming out of varsity its quiet daunting to know that you are going to need to be an independent practitioner so a lot of cases where supervisors aren't in the department, you're having to make those decisions on your own so I think that's quite a big step to make. Going from quite a controlled environment, I mean at varsity you got probably 20 odd senior staff that you could ask if you have any difficulties and I must say that's where my supervisors being quite strict on me was difficult in the beginning but towards the end of the year, definitely now, I am glad that they were like that. That combined with the amount of patients that I saw, the differences in pathologies that I was able to assess. Definitely improved and gave me a huge head-start when it comes to my confidence.*

**P6:** *[...] I felt very excited and confident in my skills and I felt like, when I sat down and actually though, even now thinking about how I was in January 2017 to December 2017; I can tell that there was a difference, yeah. [...] I'm so grateful for comm serve because January 2017 I would not be able to do a job independently, I personally feel I wasn't prepared for the Audiological world, you know. But January 2018, I felt a lot more*

*prepared. So, I just think comm serve is there for a reason, which we didn't know when we first started it but you kind of realize that it's there to like sharpen your skills and hone in your skills and it's good. So, I'm very happy for my year in comm serve*

**P8:** *I think it in a lot of ways. Like, in personal development, in professional development to a certain extent. [...] I think just a lot in my confidence, independence, in handling stressful situations. in varsity I didn't do well with stress I'm pretty sure you remember, I did not do well with stress, but I think also taught me a lot about how to deal with stressful situations and yeah, how to just be stronger as well, as a person. Like you know, it is tough, it's not easy and I think being strong and strong minded gets you through the year, so yeah.*

**P12:** *I think because comm serve is your first work experience, I think you get the experience to establish yourself as a professional and so then it is the foundation for the rest of your career. So, it's from comm serve, I developed into a young professional and ethical practitioner. The one that has a set firm, set of firm beliefs and values that I practice in my practice. [...] Because you get to establish yourself as a working professional. And how you handle yourself and how you handle fellow colleagues and patients so, I think I grew in that aspect. My interaction with patients and fellow colleagues was good and it developed...yes. Professionalism and ethics in my practice*

All the participants in this research study reported that they felt that development did occur during their CS year. Although it is noted that the development may not be in the same areas, they expressed how this experience has shaped them either personally or professionally. Their experience of CS contributed to their professional knowledge development as well as allowed them to take a step towards being competent Audiologists. From the data generated, it is evident that the experience of CS facilitated the development of graduates into independent practitioners.

#### **4.4 Conclusion**

The journey of CSO Audiologists to becoming independent practitioners was not easy. Qualitative differences were noted in the experiences shared by participants and these impacted in their learning and development. The work environment, supervision, resources, infrastructure and the CS placement were identified to have attributed to these qualitative

differences. However, participants expressed a willingness to learn throughout the barriers and hindrances that presented during the year and were able to successfully progress from graduates to Audiologists towards the end of the year 2017.

Professional development reflected how CSO Audiologists utilized their experience of the community service programme to acquire and improve knowledge and skills which are a requirement in everyday practice. From the results, it was apparent that participants were active contributors in their learning and they responded positively to the pressures of their new learning environment.

## **CHAPTER 5**

### **DISCUSSION**

#### **5.1 Introduction**

The discussion chapter responds to the main research question, which is: What are the qualitatively different ways CSO Audiologists experience professional knowledge development during their community service year in KZN, South Africa? The discussion is arranged according to the categories identified and shared in the results chapter, as indicated in Figure 8. These categories are relatively close to both the sub-questions and objectives of the study. However, discussing according to the categories that emerged allows for a discussion that responds to the sub-questions in a more consolidated manner. First, the conceptions and experiences relating to transitioning from university into community service will be discussed, followed by the discussion of learning in the workplace, and lastly the professional development.

#### **5.2 Transitioning from graduate to professional**

When CSO Audiologists enter into the workplace, they are equipped with knowledge and skills obtained from their respective tertiary institutions. The transition in itself is not an easy process as the knowledge from tertiary institutions is not readily available for transfer into the workplace unless appropriate support and resources are available to bridge the gap (Eraut, 2004a). It is this transition between tertiary institutions and the workplace that has instigated a range of perceptions, attitudes and emotions towards the CS programme. Dall’Alba and Sandberg, (2006) and Holmström (2002) note that such attributes constitute to the personal knowledge, prior knowledge and cultural knowledge that graduates bring into the work environment. Ultimately, it is concrete, incidental, emotional and personal experiences that aid new understanding. These are professional characteristics that influence clinical practice (Eraut, 2004a).

This category attends to the research question ascertaining the CSO’s experiences of knowledge development during their year of community service. It further illustrates that during the CS placements, graduates are likely to experience ranging emotional changes and experiences of learning in the new environment such that adaptation to the environment becomes inevitable, this is similar to the findings of Eraut (2004a). The variation identified in

this category indicated both negative and positive emotional changes and development. The negative emotional implications that occurred during CS were attributed to factors such as moving away from home, issues with colleagues, large caseload in the department and difficult patients. From the findings, it is possible to infer that the positive implications such as emotional maturity and endurance stemmed from lack of emotional support from supervisors and lack of access to mental health and wellness programmes. This led to CSO Audiologists developing coping mechanisms to deal with pressing issues on their own.

The variation in experiences of CS also reflected positive and negative aspects. The conceptions in this category reflect that the participants' experiences of the CSP were mostly attributed to the availability of resources, supervision, placement and social interactions within the workplace. The positive experiences were attributed to feelings of being welcomed into the department and community, exposure to a different environment, exposure to a variety of pathologies and the view of CS as a great opportunity to learn. This is an important factor for successful adaptation into a new environment because working with colleagues and supervisors allows graduates the opportunity to engage in new work practices, exposure to varying expertise and viewpoints in order to facilitate learning (Eraut, 2009). Conflict with supervisors and tension in the workplace contributed to negative experiences of CS.

A study conducted by Menon and Priyadarshini (2018) on the effect of workplace negativity factors on employee engagement found that there was a positive correlation between a negative work environment and emotional exhaustion. Furthermore, such an environment increases emotion exhaustion and impedes on active engagement in the workplace (Menon & Priyadarshini, 2018). This highlights the urgent need to be attentive to emotional and environmental factors within the workplace as they can negatively impact CSOs', their development within their CS year and the success of the CSP as a whole. Therefore, it is important for CSOs to be made aware of support structures available within their respective healthcare institutions during their initial orientation and induction programme as a means to avoid these adverse outcomes. Professionals tend to value the experiences received in the work environment more than those they receive in academic institutions (Eraut, 2004a). Thus, it is also important for hospital managers, supervisors and the DoH to aim towards improving CSO experiences during CS because this will lay a foundation for all future work experiences (Dall'Alba and Sandberg, 2006).

Although some of the participants were not happy with their placements in the respective institutions, they were able to contribute positively to the communities. Overall, they demonstrated acceptance to their new learning environment and an attitude and willingness to thrive. In addition, they showed positive understanding towards the general aim of the programme and its intended goal. Griffiths and Guile (2011) highlight the importance of having a learning environment that actively involve professionals in their learning; provide support, encourage the professionals to reflect on their learning as this is necessary to optimize and add meaning to their development. Similarly, Khan (2009) suggested that CSOs who had a positive work environment were able to adjust and adapt effortlessly into the community. Therefore, this help foster positive experiences of the CSP.

The transition from tertiary institution into the work environment is facilitated by real world experiences that encourage understanding, rationalizing, and stance in graduates (Bennet *et al.*, 2016). In the current study, there were notable qualitative differences in the reported attributes to this category and this indicates that the CS year was vastly different for each CSO Audiologist placed in KZN. Schön (1983) states that it is important for CSO Audiologists and other professionals, to fully immerse themselves in their new surroundings, to allow themselves to entertain feelings of surprise, nervousness or confusion as it is these experiences that will facilitate learning. However, it is also important to take cognisance of how emotional factors and the way in which individuals adapt to work environment affect transition into the CSP. The CSP should encourage structures that facilitate holistic transitioning into the programme such as orientations, workshops and ultimately provide information about appropriate channels of communication should CSOs face challenges in the workplace. This is to ensure that CSO Audiologists are awarded the opportunity to seek assistance in issues they cannot deal with on their own and to identify and remediate those challenges which may pose as potential barriers to learning.

### **5.3 Learning in the workplace during CS**

The development of a professional's knowledge base depends on the working conditions, which may inhibit or accelerate development. Therefore, work environments can be differentiated into two; a workplace that inspires learning and growth within generations of professionals and a workplace which propagates flaws from previous generations therefore contributing to the regression of professional development (Eraut, 1994; Eraut 2000). A positive environment is able to facilitate independence, positive interactions and professional

development (Strode, 2010). A negative environment, together with the lack of communication between professionals, supervisors or mentors prevents the dissemination and diffusion of knowledge thus posing as a barrier in knowledge development over time. Communication with colleagues, patients, or friends within the workplace is important for knowledge acquisition and general development (Eraut, (1994; Eraut 2000 & Strode, 2010). Therefore, this category aimed to provide an understanding to the possible reasons that could contribute qualitative differences in the experiences of knowledge development during CS in Audiology.

The conceptions of the work environment indicated qualitative differences that were identified to include positive and negative environmental influences and these were mostly attributed to external factors such as interactions with people in the environment. The positive environmental factors that contributed to learning and knowledge development included the availability of supervision, socialization within and outside the workplace, variation in patient cases and acceptance by colleagues and the community. Riveros and Viczko (2012) report on the importance of socialization and support in the workplace, whether it is provided formally or informally. The authors recognize that this aids in creating a meaningful learning environment where professionals are afforded the opportunity to enact their professional knowledge through practice. The negative environmental factors were attributed to conflict with supervisors, feelings of victimization, feelings of not being heard, lack of personal safety and lack of prioritization of Audiology services to name a few. There is significant value placed in the work environment throughout literature. This is because the outcomes of day-to-day work practices, consultation, problem-solving and teamwork contribute to learning (Eraut, 2008). The current study findings reflected that CSO Audiologists in KZN experienced varying working environments and that impacted on their learning. Similar trends have been noted in graduates and have well been document in literature by Griffiths and Guile (2011) and Eraut (2008).

The data in the current study also shows that CSO Audiologists felt that resource allocation for Audiology services was a challenge during their community service year. The qualitative differences in how resources impacted on the experiences of CSO Audiologists indicated both positive and negative variations. The positive variations were attributed to adequacy of resources and sufficient budget for hearing aids. The negative variations were influenced by the difficulty with ordering equipment and hearing aids, calibration and equipment maintenance, budget allocation, lack of equipment to conduct basic audiometry and objective

assessment and mostly inadequate infrastructure for Audiology practice. Comparable findings were noted in Khan *et al.* (2009) where graduates reported inadequate resource allocation, supervision, administration and logistics during their year of CS. The challenge of inadequate resources impacts on the provision of efficient and timely services to the public. Furthermore, it limits the practice of Audiology and professional growth as graduates are unable put into practice the theoretical knowledge and clinical skills that they have acquired in tertiary institutions. Correspondingly, Khan (2009) also recognizes the issues around allocating less qualified professionals like CSO's to under-resourced and demanding healthcare institutions. The author states that this may create skills and knowledge regression in CSOs due to limited clinical practice.

Within the conceptions of supervision and support, qualitative differences that were identified included positive, intermittent and negative variations. Positive variations were a result of adequate support from supervisors and the provision of assistance and mentorship as required by the CSOs. This yielded positive results on professional development as Morris & Blaney (2013) emphasize the importance of the relationship between graduates and supervisors in facilitating learning, confidence and active participation through feedback and discussions. Furthermore, it gives graduates the opportunity to interact, share experiences and seek advice from seasoned professionals (Raelin, 1997). Intermittent variations were attributed to supervisors resigning during the course of the year and supervisors taking annual/sick leave, leaving CSOs unattended. Lastly, the negative variations were attributed to limited/no supervision and limited support from present supervisors and the participants in this study indicated that their placement in healthcare institutions without the appropriate supervision was a hindrance to their learning. Although there were some participants who reported having adequate support and supervision throughout their CS year, the data from the current study indicated that majority had intermittent, inadequate or little to no supervision. This resulted in feelings of inadequacy, stress and burnout.

Supervisors or mentors serve to guide CSO Audiologists into the practices of the department, the functioning of the hospital and general protocol to follow as a professional. This is important to aid transition into the workplace and to minimize feelings of anxiety. Interestingly, most participants mentioned that the challenge of limited/no supervision encouraged them to work through those challenges by actively seeking mentorship from other senior staff, researching cases to aid in decision-making and being flexible to suit every situation. Although

these conditions are not conducive to formal learning, according to Eraut (2000), sometimes learning does occur in a non-formal way such that interactions or behaviours can lead to implicit learning. This could be why these participants also indicated to have learnt leadership skills, patient management, independent decision-making, multi-tasking and independence through their experiences. Such attributes are important for the development of experiential knowledge. Eraut (2009) recognizes that it is possible to learn through bad situations as reflecting on your mistakes, as well as the mistakes of others plays a vital role in learning.

The need for Audiology services in rural, underserved areas is acknowledged. However, the current model of community utilizes fixed-placements of CSO Audiologists in healthcare institutions, irrespective of environmental conditions and the institutions ability to meet the dual aims of the CSP. The findings of this research study reflect on how environmental, resource allocation, supervisory and infrastructural issues hinder the learning and development of CSOs and ultimately hinder provision of quality services. Similarly, Beyers (2013) recognized that without adequate support within the health system, the process of adaptation for graduates into the work environment can be negative or positive. Therefore, there is a need to address such issues especially in hospital facilities with CSO allocations that are to receive rehabilitation services for the first time (Khan, 2009) as it can impact on the attainment and sustainability of the goals of CSP.

#### **5.4 Professional development**

Learning programmes utilizing WBL approach are implemented to develop professional roles, relationships, attitudes, identities and knowledge. They stress the direct involvement with community of practice and an overall assessment of the developed work-related skills (Giffin *et al.*, 2018). The introduction of the CSP has contributed to the improvement of healthcare services and it has led to the significant increase in the number of practicing healthcare professionals within public healthcare institutions (Ned *et al.*, 2017; DoH, 2007). This section attempted to respond to the research sub-question pertaining to the qualitative differences in how Audiologists experienced professional knowledge development during community service.

The participants acknowledge all the ways in which they have experienced their development of professional knowledge through the CSP. The results indicate that the development of experiential knowledge and practical knowledge was more prevalent. Participant reported

improved clinical skills related to Audiology such as cerumen management, ototoxicity management, patient-interactions and general improvements in basic audiological assessments. They also highlighted how routines and high caseloads facilitated in their development of efficacy, discipline, clinical judgement and self-confidence. These findings were similar to Wranz (2011) and Beyers (2013) where development was noted during CS regardless of present challenges. Development usually occurs as graduates actively participate in routines, modification of routines and exposure to various cases. Typically, this development is implicit and it is how individuals will know that they have learnt through their experiences. Graduates will recognize that learning has occurred when they are able to carry out tasks and respond to situations in a way they would not have been able to before (Eraut, 2009).

The participants reported that it is through journal clubs, case presentations and Continued Professional Development (CPD) workshops that they developed their theoretical knowledge. However, most felt that it was a neglected part of their CSP in which they had to conduct their own research and reading to ensure continued knowledge acquisition. Irrespective, participants felt that by the end of their CS year, they had developed tremendously. Some participants mentioned that there was not much development in their theoretical knowledge during CS and this is a challenge that may not be prevented with the current model of CS as it follows a fixed-placement model. Nevertheless, the participants highlighted that the CSP helped to further embed previously acquired knowledge from university. This can be noted in Eraut (2004a) as the author explained that theory is mostly embedded in everyday practice than it would be overtly used for decision-making.

The study refers to issues surrounding the monitoring and evaluations of the development of CSO Audiologists. Out of twelve participants, only one mentioned being evaluated during CS as a means for their supervisor to monitor their learning and provide a platform for the CSO to reflect on her experience. This is important because reflection, supervision and observation allows for incidental learning, situational recognition, contextual understanding and the development of experiential knowledge (Eraut, 2009). However, this raises concern as it highlights that majority of the CSO Audiologists were left to experience their learning on their own without adequate monitoring and guidance from supervisors, medical managers or other senior staff. More especially, for those participants who reported issues of lack of support and prioritization from hospital management. This reveals a need for the DoH to establish firm guidelines for supervisors to evaluate and monitor the development and learning of CSOs

during CS because it is on-going professional learning that allows for the dissemination of good practice (Eraut, 1994). Furthermore, lack of evaluation and monitoring facilitates a system that rewards graduates for enrolling in the programme without tangible merit. This is supported by Duclos-Miller (2011) who emphasises the importance of organizations incorporating comprehensive transitional methods and guidelines to measure development in graduates within training workshops for supervisors.

The findings also reveal that not all CSO Audiologists are exposed to the same experiences of professional knowledge development the CSP. This category demonstrates the inequality in knowledge development and learning between CSOs during the CSP. The variation within the key factors affecting work-based learning creates a platform for qualitative differences in the experiences of professional knowledge development. Currently, the findings highlight that the CS programme does not yet fully embody the essence of a WBL programme as it does not yet provide equal learning opportunities to all CSO Audiologists. A WBL approach should allow graduates to capitalize on the opportunity to partake in various learning experiences and enable the transition from novice to expert (Morris & Blaney, 2013). This facilitates the learning of decision-making skills, clinical judgement and the ability to work efficiently under pressure with a clear understanding of the underlying principles of their work (Raelin, 1997). Furthermore, the findings indicate a variation in exposure to Audiological practices where practice ranged from only having an otoscope to assess patients to the use of a full test battery and electrophysiological assessments. Yet, the outcome of CSP assumes that all CSO Audiologists would have developed enough skills and knowledge in all areas of Audiology for the certification for independent practice. This unveils gaps within the CSP such that there is a lack of standardization amongst the DoH and supervisors as to what quantifies the development as sufficient for certification. Therefore, there is a need to develop a clear baseline for what qualifies as the minimum requirement for certification so to facilitate the production of competent professionals who are able to provide quality services outside of their CS year. As noted in the findings, exposure is limited within the of the year of the CSP and this further emphasizes the need for non-fixed CSO allocations during CS.

Overall, the participants all reported on their perception of the development throughout the CS year and although they were placed at different healthcare institutions throughout KZN, each facing different challenges, majority of them demonstrated general development in their professional knowledge. The factors that contributed to their development had much relation

to their work environment, the degree of support and independence given, and availability of resources to mention a few. Variation in learning can be observed according to the person and their work environment; the development of professional autonomy is thus determined by their motivation and willingness to learn (Strode, 2010; Eraut, 2009).

## **5.5 Conceptualizing community service: A new conceptual framework**

### **5.5.1. Reflecting on the use of the theoretical and methodological frameworks**

Section 2.6 of this research study I described the use of the Knowledge-to-Action Process as a conceptual framework to understanding knowledge acquisition and learning in the workplace. Through this framework by Moodie, *et al.* (2011), it was already known that there is a core process of knowledge development, where exposure to knowledge enquiry is followed by synthesis and later production of new knowledge. However, such a developmental process of knowledge is surrounded by exposure to problematic situations through which older knowledge can be adapted, refined, re-evaluated and become ready to use as suited to the demands of the context. The framework gives insight to the world of knowledge development while considering possible contextual factors that may influence the use of such knowledge. Although this framework was significant for the purposes of the current study, it does not adequately address the influences of intrapersonal factors, experiences of transitioning into a new environment and the extent to which the new environment facilitates learning. The framework was thus used in the current study as a means to understand knowledge development, not objectively, but in terms of how it was conceived by those who experienced the development during community service. This framework, did not account for the qualitative differences in the experiences of community service officers, which was a core interest of the study. This challenge, therefore, made it necessary for appropriate adaptations to be made on the Knowledge-to-Action Process framework to include aspects that would guide the researcher in searching for the qualitative differences among CSOs and the subsequent impact of those experiences.

In conjunction with the framework in Figure 1, phenomenography provided a secondary conceptual framework to specifically explore the qualitative differences in participants' experiences of community service, and related conceptions of knowledge development during the CS year. This was to allow the researcher to explore the CSOs' experiences of professional

knowledge development during their CS year and the extent to which the CSP contributes to their learning.

### 5.5.2 Conceptualizing a new framework of knowledge development during community service

The current study expands on the Knowledge-to-Action Process by highlighting three categories that contribute to professional knowledge development in CSO Audiologists as indicated by Figure 9. This framework further explains key factors that impact on knowledge development, the order in which they occur and how the different aspects of knowledge development during community service relate to each other.

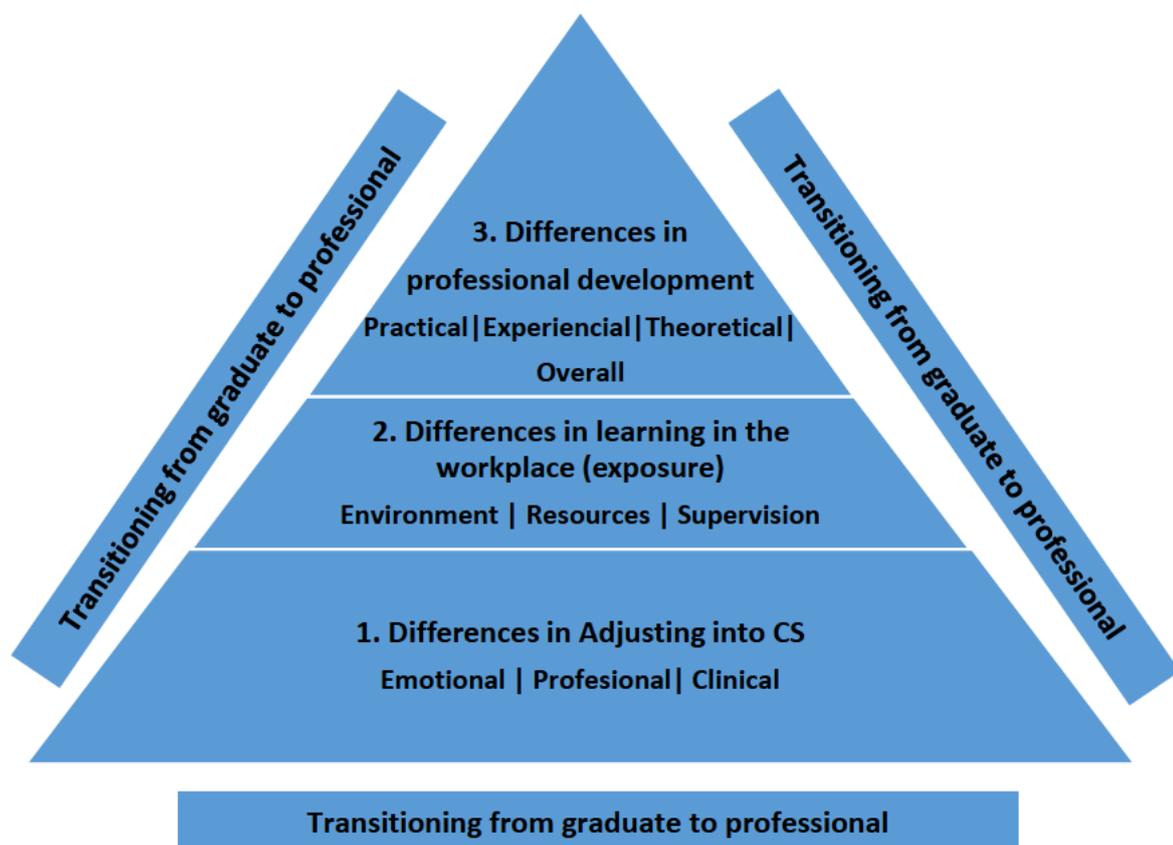


Figure 9: The model of transitional & developmental differences of new graduates

The adaptation represented in Figure 9 was created based on the research findings of the study. The results indicated that qualitative differences in the way in which CSO Audiologists developed their professional knowledge were attributed to successfully transitioning into their respective healthcare institution and utilizing their work environment for active learning so to

positively influence their professional development. Most importantly this new framework in Figure 9, may be used as a guide in future research looking to explore developmental differences in a group of newly qualified professionals. This aspect was not found in the original framework (Figure 1), which was best usable in looking at an individual instead of the development or knowledge translation of a group. This key difference in the two frameworks is the key theoretical contribution of the current study.

The process of transitioning from graduate into professional highlighted the following core differences as pertinent and in the particular order specified in Figure 9. Firstly, CSOs predominantly adjust emotionally, professionally and clinically. Adjusting to the work environment, is influenced by and attributed to supervision, environmental and resource-related differences. Lastly, the differences in professional development are attributed to practical exposure to different work settings, experiential differences, and theoretical exposure. As a result of such differences, each experience of the CSP was vastly different among the CSO Audiologists, and such differences remained vast due to the method of fixed-placement currently adopted for community service.

Similar to the Knowledge-to-Action Process, the current study indicated that the knowledge CSO Audiologists entered the programme with was used as a foundation for all their learning. Such knowledge was used as a basis for clinical practice and developed as the year progresses. Differences in external factors such as resource allocation, infrastructure, supervision and general environmental factors influenced the way in which CSOs developed during this period. In addition, it was noted that intrinsic factors such as emotional changes during CS also made an impact on development. These aspects are largely emphasized by the knowledge-to-action process and their relevance was noted in the findings of this study.

## **5.6 Conclusion**

The current study has demonstrated that the process of professional knowledge development is continuous. The outcome of the research aimed to explore the qualitatively different ways in which CSO Audiologists experience their development of professional knowledge during their year of community service in KZN, South Africa. The results highlighted that transitioning from graduate to professional, learning in the workplace and professional development were key factors that contributed to the qualitative differences experienced by CSO Audiologists. The research study also reflects the impact that the CSP has on the development of CSO

Audiologists and the challenges that act as barriers to knowledge development. Furthermore, it brings to light the extent to which the current model of fixed-placements of CSO Audiologists plays a role in creating qualitative differences in experiences and limiting the exposure to diverse clinical practices of Audiology. Lastly, it highlights that there is no clear standard for minimum requirement of competencies for CSOs. This results in the certification of graduates who could potentially have insufficient audiological knowledge and practice for independent practice. It is important to be mindful of the current research findings so to ensure that CSO Audiologists do not miss good educational opportunities to develop their practice and to ensure that the gaps that have been identified within the CSP are addressed. Furthermore, Parker, Giles, Lantry and McMillan (2014) recognize that not much is known in literature about the extent to which independence, clinical exposure and degree of support provided to new graduates. Therefore, this study aimed to provide such insight.

## **CHAPTER 6**

### **CONCLUSION**

#### **6.1 Introduction**

This chapter reflects and summarises the study. First, it provides a reflection on the foundation of the study, including the research problem and purpose. The paradigm and related methodology adopted in the study will be revisited. Further, this chapter reflects key findings, and related key points of discussion in response to the research question. Lastly, the chapter reflects on limitations and provides recommendations for further research.

#### **6.2 Reflections on the previous Chapters**

Graduates in Audiology enter the community service programme with prior knowledge acquired in their respective tertiary institutions. Through the use of work-integrated learning approaches, these institutions are able to provide graduates with sufficient theoretical knowledge for practice. The CSP thereafter, provides an environment where these graduates with a platform to develop their skills and knowledge through work-based learning. Both work-integrated learning and work-based learning approaches provide an environment that is integral to the development of professional knowledge and facilitate better understanding of practice (Griffiths and Guile, 2011). Collaboratively, they mould graduates into professionals who are prepared for independent practice.

The limited literature surrounding the use of the CSP as a tool to promote knowledge development as opposed to that of facilitating access to hearing and ear-related healthcare services and the extent to which CS encourages the development of professional knowledge formulated the research problem of the current study. Furthermore, the uncertainty regarding CSO Audiologists' experiences of professional knowledge development during the CS year, the extent to which fixed placement of CSOs in one institution hinders or facilitates professional knowledge development and what constitutes to the minimum requirements that need to be met for graduates to qualify for independent practice, were viewed as areas of concern to be explored in this research study. The aim of this study was to explore the qualitatively different ways in which CSO Audiologists experience their professional knowledge development during their year of community service in KwaZulu-Natal. Through elaborate data collection and analysis, the outcomes of the participants' experiences were

presented in Chapter four. This chapter thus, summarizes the main findings of this study, the study implications and its limitations. Moreover, this chapter provides recommendations for future research.

The studies conducted by researchers in Chapter two indicate how the community service program has played a role in the CSO development and has given CSO's a platform to make their experiences known. The CSP is recognized internationally and nationally as a means of service provision to remote, underserved areas. This initiative works to limit the impact staff shortage in such areas. The experiences of CSOs' reflected in this study indicate that the CSP provides graduates with the opportunity to learn, acquire new skills and grow into their professional roles. The current study proves that although there are noted challenges within the programme and the healthcare institutions, CSO Audiologists gain valuable work experience whether formally or informally that enables them to qualify as independent practitioner at the end of the year.

The three critical research questions were answered through the results, and relevant excerpts from the participants' transcripts were used as evidence. Three key categories of description were identified from the results and each category consisted of differences in conceptions of the CSOs' experiences. Significant differences between the CSO Audiologists' conceptions of community services were identified in the following categories. These were:

*1. Category 1: Transitioning from graduate to professional*

- Conceptions of experiences of CS
- Conceptions of emotional changes during CS
- Conceptions of transition and adaptation to the workplace

*1. Category 2: Learning in the workplace during CS*

- Conceptions of the work environment
- Conceptions of impact of resources for Audiology practice
- Conceptions of supervision and support

*2. Category 3: Professional development*

- Conceptions of practical knowledge development
- Conceptions of experiential knowledge development
- Conceptions of theoretical knowledge development

- Conceptions of CSO Audiologists' perceived development during CS

Overall, there were positive and negative qualitatively different ways the CSO Audiologists experienced their community service year in KZN, and the conceptions indicated the meanings CSO Audiologists attributed to those experiences. Specific qualitative difference between the positive conceptions were interpreted, details of which are shared in chapter four.

The current study demonstrates that the experiences of professional development were influenced mainly by the placement, transition into the workplace, the work environment, availability of resources and supervision. CSO Audiologists perceived the year to be a success, where they felt adequately prepared to practice as Audiologists. However; it was noted that due to issues of resources, their levels of competency amongst CSO Audiologists as not all were exposed to the same clinical procedures during CS. This might have been one of the shortfalls of this programme. The study shows that the CSP does facilitate development of professional knowledge although, the development might not be in the same degree across participants, similarly to studies conducted by Govender *et al.* (2015) and van Stormbroek & Buchanan (2016). This study also helps to demonstrate areas in the CSP that still need attention which will contribute to the success and longevity of the programme. The interaction of the CSO Audiologists and their learning environment proved to affect their experiences and the learning outcomes. In this study, it has shown improved development in practical, theoretical and experiential knowledge which form the foundation for professional knowledge and successful professional practice. The CSP has given CSOs' a foundation in which to base their professional careers and built their knowledge stores for continued development.

### **6.3 Implications of the study**

- The research findings in the current study serve to inform the Provincial Department of Health and the CSP coordinators of the current support structures that are implemented and functioning in healthcare facilities for CSOs. It informs them of the challenges, experiences and needs that CSO Audiologists encounter during their year of CS and thus provides an opportunity to provide solutions to minimize such challenges. Furthermore, the consideration to monitor the effectiveness of the program annually should be made. Khan *et al.* (2009) stated that a systematic evaluation and monitoring

of the CS programme is necessary such that the outcomes and suggestions can be used to influence policy development and putting the programme effectively into practice.

- The research findings suggest that it is up to tertiary institutions to adequately equip graduates for CS, the DoH to ensure the availability of all resources to support the development of CSOs' and the CSOs' themselves to be motivated and take initiative in their learning. This will ensure that the goals of the CSP are met and that CSP provides a more conducive environment for learning.
- This study also reveals that the fixed-placement in the CSP is a concern that contributes to vast differences in CS experiences which may need to be minimized. It therefore, creates a need for the rotation of CSO Audiologists between the various healthcare institutions gazetted for CSO placements. This would ensure adequate exposure to different working environments and learning opportunities.
- The current study contributes to research as this area has not been largely explored in Audiology. The findings generated in this study hope to inform improvements in the quality of work produced by future CSO Audiologists, assist managers and supervisors to reflect on their methods of providing guidance and imparting knowledge to CSO Audiologists and potentially improve them.
- Furthermore, the conceptual framework adapted by the researcher in the current study serves to contribute to the conceptualization of professional knowledge development of CSO Audiologists during their community service year in the field of Audiology.
- The study findings have also allowed participants in the study to critically reflect on their learning and how they have developed throughout the community service program. Penn et al. (2009) recognizes that it is only through research will our profession will achieve recognition among other professions and have impact on policy changes. The current study contributed this regard.

#### **6.4 Limitations study**

The limitation of the current research study is the inclusion of only CSO Audiologists in KZN. This potentially limited the generalizability of the research findings. However, the findings in the KZN province serve as a sample to provide valuable information about the CSP to programme managers and relevant stakeholders about its contributions to the development of CSO Audiologists' professional knowledge in comparable contexts.

In phenomenographic research, one of the study limitations is the elimination of bias influences (Rands & Gansemer-Topf, 2016). It calls for the researcher to closely scrutiny to ensure they reflect on the participants experiences taking into consideration how demographic factors such as gender, culture, race; social identity influences people's experiences. The researcher minimized this by declaring her positionality in the research and also by providing excerpts from the participants' transcripts to support all research claims.

### **6.5 Recommendations for future research**

- Future research in this field should include CSO Audiologists from other provinces to establish whether the current research findings are unique to KZN so to effectively influence CSP policies.
- The CSP should be restructured from a programme that focuses on providing access to services to one that collaborates this with encouraging and accommodating the development of CSO Audiologists.
- The findings of this research suggest a need for new innovative methods such as non-fixed CSO placements or the rotation of CSOs between the respective sites so to provide a greater context for learning and development that will enrich all graduates. Ultimately, providing the communities with CSO Audiologists who are diverse in their practice.
- The CSP could be structured to have minimum requirements for professional competencies to ensure that all graduates meet a certain developmental standard in order to qualify for a certification of independent practice.
- There are programmes, resources for CSOs' and quarterly meetings provided by the KwaZulu-Natal Speech-Language Therapy and Audiology Forum. CSOs' must be made aware of such initiatives and should make use of what is provided so to ensure that they have adequate support.

### **6.6 Conclusion**

The current study was able to discover the participants' experiences of professional knowledge during their community service and that learning is possible within the programme regardless of the circumstances. Qualitative differences were explored in this regard, as is the purpose of the phenomenographic design. The study was able to conclude that there are factors that actively influence to successful acquisition and development of knowledge and the participants

in this study were able to attain professional development at the end of their CSP. Phenomenographic research studies in Audiology are still underexplored, however, through this research study it is possible to see the wealth of knowledge provided by such a methodology. There is potential to construct and rediscover new conceptions for this topic in different disciplines or contexts.

## References

- Aarto-Pesonen, L., & Tynajala, P. (2017). Dimensions of Professional growth in work-related teacher education. *Australian Journal of Teacher Education*, 1.
- Africa, H. P. (2011). *Health Professions Act 56 of 1974*. Retrieved November 31, 2017, from Health Professions Council of South Africa: <http://www.hpcsa.co.za/legislature/rules>
- Åkerlind, G. S. (2005). Variation and commonality in phenomenographic research methods. *Higher Education Research & Development*, 24(4), 321–334.
- Akerlind, G. S. (2008). A phenomenographic approach to developing academics understanding of the nature of teaching and learning. *Teaching in Higher Education*, 633 – 644.
- Alsop, G., & Tompsette, C. (2006). Making sense of ‘pure’ phenomenography in information and communication technology in education. *Research in Learning Technology*, 14(3), 241–259.
- Anney, V. N. (2014). Ensuring the Quality of the Findings of Qualitative Research: Looking at Trustworthiness Criteria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 5(2), 272- 281.
- Barnard, A., McCosker, H., & Gerber, R. (1999). Phenomenography: A Qualitative Research Approach for Exploring Understanding in Health Care. *Quality Health Research*, 9(2), 212- 226. doi:10.1177/104973299129121794
- Benner, P. (1982). From Novice to Expert. *The American Journal of Nursing*, 82(3), 402- 407. Retrieved from <http://www.jstor.org/stable/3462928>
- Beyers, B. (2013). *Experiences of community service practitioners who are deployed at a rural health facility in the Western Cape*. Western Cape: University of the Western Cape.
- Blessing, L. T., & Chakrabarti, A. (2009). *DRM, a Design in Research Methodology*. London: Springer.
- Bliuc, A., Casey, G., & Bachfischer, A. (2012). Blended learning in vocational education: teachers’ conceptions of blended learning and their approaches to teaching and design. *The Australian Association for Research in Education*, 39, 237- 257. doi:10.1007/s13384-012-0053-0
- Bloom, G., & McIntyre, D. (1998). Towards equity in health in an unequal society. *Social Science and Medicine*, 47(10), 1529- 15388.

- Boshoff, N. (2014). Types of knowledge in science- based practices. *Journal of Science Communication*, 1- 16. Retrieved from <http://jcom.sissa.it/>
- Campbell, L., Novak, I., McIntyre, S., & Lord, S. (2013). A KT intervention including the evidence alert system to improve clinician's evidence-based practice behavior—a cluster randomized controlled trial. *Implementation science*, 8(132), 1- 15. Retrieved from <http://www.implementationscience.com/content/8/1/132>
- Dahlin, B. (1994). An epistemology of conceptions and its educational significance. In R. Ballantyne, & C. Bruce, *Phenomenography: Philosophy and Practice Conference* (pp. 87- 110). Brisbane, Australia: QUT Publications and Printing.
- Dall'Alba, G. (1998). Medical practice as characterised by beginning medical students. *Advances in Health Sciences Education*, 3, 101- 118.
- Dall'Alba, G. (2009). *Learning to be professionals: innovation and change in professional education*. London: Springer. doi:10. 1007/ 978-90-481-2608-81.
- Dall'Alba, G., & Sandberg, J. (2006). Unveiling professional development: A critical review of stage models. *Review of Educational Research*, 76(3), 383-412.
- Dayal, H. (2010). Provision of rehabilitation services within the District Health System – the experience of Rehabilitation Managers in facilitating this right for People with Disabilities. *South African Journal of Occupational Therapy*, 40(1), 23- 26.
- De Souza Machado, L. R. (2011). Professional knowledge according to development plans of federal institutes of education. *Cadernos De Pesquisa*, 41 (143), 352- 357. doi:10.1590/S100-15742011000200003
- Degen, G. M. (2010). *A phenomenographic study exploring nursing education and practice*. Iowa : Graduate Theses and Dissertations. Retrieved from <http://lib.dr.iastate.edu/etd/11927>
- Dickson, B. (2007). Defining and Interpreting Professional Knowledge in an Age of Performativity: a Scottish Case-Study. *Australian Journal of Teacher Education*, 32(4), 14- 28. Retrieved from <http://dx.doi.org/10.14221/ajte.2007v32n4.2>
- Drew, L., Bailey, S., & Shreeve, A. (2001). *Phenomenographic research: methodological issues arising from a study investigating student approaches to learning in fashion design*. England: Lancaster.
- Dringenberg, E., Mendoza-Garcia, J. A., Tafur, M., D., F. N., & Hsu, M. (2015). Using Phenomenography: Reflections on Key Considerations for Making Methodological Decisions. *122nd ASEE Annual Conference & Exposition*. Seattle: American Society for Engineering Education.

- Du Plessis, J., Marais, M., V. J., Steenkamp, I., & Troskie, I. (2006). Experiences and attitudes of dietitians during the first compulsory community service year 2003. *South African Journal of Clinic Nutrition*, 19(1), 10- 17.
- Duclos-Miller, P. A. (2011). Successful Graduate Nurse Transition: Meeting the Challenge. *Nurse Leader*, 4, 32-35. doi:10.1016/J.MNL.2011.05.006
- Dussault, G., & Franceschini, M. C. ((2006)). Not enough there, too many here: understanding geographical imbalances in the distribution of the health workforce. *Human Resource Health*, 4(12), 1- 16.
- Eraut, M. (1985). Knowledge creation and knowledge use in professional. *Studies in Higher Education*, 10(2), 117-133. doi:10.1080/03075078512331378549
- Eraut, M. (1994). *Developing Professional Knowledge and Competence*. London: The Falmer Press: Taylor & Francis Group.
- Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology*, 70, 113– 136.
- Eraut, M. (2004a). Transfer of Knowledge between Education and Workplace Settings. In H. Rainbird, A. Fuller, & A. Munro, *Workplace Learning in Context* (pp. 201- 220). London: Routledge.
- Eraut, M. (2004b). Informal learning in the workplace. *Studies in Continuing Education*, 26(2), 247- 273. doi:10.1080/158037042000225245
- Eraut, M. (2005). Professional knowledge in medical practice. In A. O. Bosch, & H. Pardell, *Monografias Humanitas, La ProfesionMedica: Los RetosdelMilenio* (pp. 47- 67). Barcelona: FundacionMedicina y HumanidesMedica.
- Eraut, M. (2007). Learning from other people in workplace. *Oxford Review of Education*, 33(4), 403- 422.
- Eraut, M. (2008). Using research into how professionals learn at work for enhancing placement learning. *WACE/ACEN Asia Pacific Conference 2008* (pp. 148- 154). Sydney: E- Proceedings.
- Eraut, M. (2009). How professionals learn through work. In N. Jackson, *Learning to be a professional through a Higher Education e-book* (pp. 1- 28). England: Surrey Centre for Excellence in Professional Training and Education (SCEPTRE).
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1- 4.

- Fagan, J. J. (2012). Developing World ENT: A Global Responsibility. *The Journal of Laryngology and Otology*, 26, 544– 547.
- Ferns, S., Campbell, M., & Zegwaard, K. (2014). Work-integrated learning. In S. Ferns, *HERDSA guide: Work Integrated Learning in the Curriculum* (pp. 1- 6). Australia: HERDSA: Milperra.
- Frehywot, S., Mullan, F., Payne, P. W., & Ross, H. (2010). Compulsory service programmes for recruiting health workers in remote and rural areas: do they work? *World Health Organization*, 88, 364– 370. doi:10.2471/BLT.09.071605
- Giffin, J., Neloms, G., Mitchell, A., & Blumenthal, D. (2018). *Based learning definitions state agencies work-based learning definitions themes from states and national organizations*. Washington, DC: American Institute for Research. Retrieved September 20, 2018, from American Institute for learning: <https://ccrcenter.org/state-work-based-learnign-initiative>
- Given, L. (2008). Research setting. *SAGE Encyclopedia of Qualitative Research Methods*. Retrieved from <http://dx.doi.org/10.4135/9781412963909.n398>.
- González, C. (2010). What do university teachers think eLearning is good for in their teaching? *Studies in Higher Education*, 35(1), 61-78. doi:10.1080/03075070902874632
- Govender, S., Brysiewicz, P., & Bhengu, B. (2015). Perceptions of newly qualified nurses performing compulsory community service in KwaZulu-Natal. *Curationis*, 38(1), 1- 8. Retrieved from <http://dx.doi.org/10.4102/curationis.v38i1.1474>
- Griffiths, T., & Guile, D. (2011). A Connective Model of Learning: the implications for work process knowledge. *European Educational Research Journal*, 2(1), 56- 73.
- Harrison, D. (2009). *An overview of health and health care in South Africa 1994-2010: Priorities, progress and prospects for new gains*. Washington, DC: Henry J Kaiser Family Foundation.
- Hayes, T. S., Hult, H., & Dahlgren, M. A. (2013). A phenomenographic approach to research in medical Education. *Medical Education*, 47, 261–270. doi:261–270. Doi:10.1111/medu.12101
- Health Professionals Counsel of South Africa. (2018). *News & Publications*. Retrieved November 31, 2017, from Health Professionals Counsel of South Africa: <http://hpcsa.co.za/publications/statistics>
- Hedlund, J., Antonakis, J., & Sternberg, R. J. (2002). *Tacit Knowledge and Practical Intelligence: Understanding the Lessons of Experience*. Virginia: United States Army Research Institute for the Behavioral and Social Sciences.

- Holmström, I. (2002). Gaining professional competence for patient encounters by means of a new understanding. *Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine*, 1- 40.
- Ireland, J., Tambyah, M. M., Neofa, Z., & Harding, T. (2009). *The tale of four researchers : trials and triumphs from the phenomenographic research specialization*. Brisbane: Queensland University of Technology.
- Kelemen G. (2015). Developing Professional Knowledge in the Initial Teacher Education. . *Procedia - Social and Behavioral Sciences*, 180, 357 – 364. doi:10.1016/j.sbspro.2015.02.129
- Khan, N. B. (2009). *Perceptions of and attitudes to the Compulsory Community Service Programme for Therapists in KwaZulu-Natal, 2005*. Durban: University of Kwazulu-Natal.
- Khan, N. B., Knight, S., & Esterhuizen, T. (2009). Perceptions of and attitudes to the compulsory Community Service programme for therapists in KwaZulu-Natal. *The South African Journal of Communication Disorders*, 56, 17- 22.
- Khan, S. H. (2014). Phenomenography: A Qualitative Research Methodology in Bangladesh. *International Journal on New Trends in Education and Their Implications*, 5(2), 1309-6249.
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques* (2 ed.). Daryaganj. New Delhi: New Age International.
- Larsson, J., & Holmström, I. (2007). Phenomenographic or phenomenological analysis: does it matter? Examples from a study on anaesthesiologists' work. *International Journal of Qualitative Studies on Health and Well-being*, 2(1), 55-64. doi:10.1080/17482620601068105
- Leedy, P., & Ormrod, J. E. (2013). *Practical Research: Planning and Design* (10 ed.). Boston : Pearson.
- Marton, F. (1981). Phenomenography: Describing conceptions of the world around us. *Instructional Science*, 10, 177- 200.
- Marton, F., & Booth, S. (1997). *Learning and awareness*. Mahwah, New Jersey: Erlbaum Associates.
- McIntyre, D., & Ataguba, J. (2014). *Access to quality health care in South Africa: Is the health sector contributing to addressing the inequality challenge?* Cape Town: University of Cape Town. Retrieved July 10, 2018, from <http://www.parliament.gov.za/October>

- Menon, A. S., & Priyadarshini, R. G. (2018). A study on the effect of workplace negativity factors on employee engagement mediated by emotional exhaustion. *IOP Conference Series: Materials Science and Engineering*, 390, 1- 8. doi:10.1088/1757-899X/390/1/012027
- Mji, G., Chappell, P., Statham, S., Mlenzana, N., Goliath, C., De Wet, C., & Rhoda, A. (2013). Understanding the current discourse of rehabilitation: with reference to disability models and rehabilitation policies for evaluation research in the south african setting. *South African Journal of Physiotherapy*, 69(2), 4- 9.
- Moodie, S. T., Kothari, A., Bagatto, M. P., Seewald, R., Miller, L., & Scollie, S. D. (2011). Knowledge Translation in Audiology: Promoting the Clinical Application of Best Evidence. *Trends in Amplification*, 15(1), 5– 22. doi:10.1177/1084713811420740
- Morris, C., & Blaney, D. (2010). Work-based learning. In T. Swanwick, *Undersatanding medical education: evidence, theory and practice* (pp. 69- 82). Oxford: Association for the study of Medical Education.
- Municipalities of South Africa. (n.d.). *Municipalities of South Africa*. Retrieved January 25, 2018, from KwaZulu- Natal Municipalities : <https://municipalities.co.za/provinces/view/4/kwazulu-natal>
- Naidoo, T. (2006). *Audiological Practice and Service Delivery in South Africa*. Johannesburg: University of Witwatersrand.
- National Department of Health. (2007). *A policy on quality in health care for South Africa*. Pretoria: National Department of Health.
- Ned, L., Cloete, L., & Mji, G. (2017). The experiences and challenges faced by rehabilitation community service therapists within the South African Primary Healthcare health system. *African Journal of Disability*, 6(0), 1- 11.
- Ng, S. (2011). The role of reflection in audiology students' development as professional practitioners: A constructivist grounded theory. *Seminars in Hearing*, 33(2), 117- 134. Retrieved from <https://ir.lib.uwo.ca/etd/246>
- Novick, G. (2008). Is There a Bias Against Telephone Interviews in Qualitative Research? *Research in Nursing & Health*, 31, 391–398.
- Olusanya, B., Neumann, K., & Saunders, J. (2014). The global burden of disabling hearing impairment: a call to action: a call to action. *Bulletin of the World Health Organization*, 92(5), 367-373. Retrieved from <http://dx.doi.org/10.2471/blt.13.128728>

- Oshvandi, K., Moghadam, A. S., Khatiban, M., Cheraghi, F., Borzu, R., & Moradi, Y. (2016). On the application of novice to expert theory in nursing; systematic review. *Journal of Chemical and Pharmaceutical Sciences*, 9(4), 3014- 3020.
- Ospina S. (2004). Qualitative Research. *Encyclopedia of Leadership*, 1279- 1284.
- Parker, V., Giles, M., Lantry, G., & McMillan, M. (2014). New graduate nurses' experiences in their first year of practice. *Nurse Education Today*, 34, 150- 156.
- Pascoe, M., & Norman, V. (2011). Contextually relevant resources in speech-language therapy and audiology in South Africa – are there any? *South African Journal Communication Disorders*, 58, 2-5.
- Penn, C., Mupawose, A., & Stein, J. (2009). From pillars to posts: Some reflections on Community Service six years on. *The South African Journal of Communication Disorders*, 56, 8- 16.
- Râbu, M., & McLeod, J. (2017). Wisdom in professional knowledge: why it can be valuable to listen to the voices of senior psychotherapists. *Psychotherapy Research*, 1- 48. doi:10.1080/105003307.2016.1265685
- Raelin, J. A. (1997). A Model of Work-Based Learning. *Organization Science*, 8(6), 568- 578. doi:1047-7039/97/0806/0563
- Rands, M., & Gansemer-Topf, A. M. (2016). Phenomenography: A methodological approach for assessment in student affairs. *Education Publications*, 45, 1- 22. Retrieved from [http://lib.dr.iastate.edu/edu\\_pubs/45](http://lib.dr.iastate.edu/edu_pubs/45)
- Reddy, S. (2010). *Experiences of clinical practice in a problem-based learning medical curriculum and subsequent clinical environment*. Durban: University of KwaZulu-Natal.
- Reed, B. I. (2006). *Phenomenography as a way to research the understanding by students of technical concepts*. Sao Paulo: Brazil: Núcleo de Pesquisa em Tecnologia da Arquitetura e Urbanismo (NUTAU): Technological Innovation and Sustainability.
- Reid, S. (2011). Fit for purpose? The appropriate education of health professionals in South Africa. *South African Medical Journal*, 101(1), 25-26.
- Reid, S. J. (2002). Community service for health professionals. *South African Health Review* 2018, 2002(1), 135- 160.
- Richardson, J. T. (1999). The Concepts and Methods of Phenomenographic Research. *Review of Educational Research*, 69(1), 53- 82.
- Rispel, L. (2016). Analysing the progress and fault lines of health sector transformation in South Africa. In A. Padarath, J. King, E. Mackie, & C. J., *South African Health Review*

- 2016 (pp. 17- 24). Johannesburg: Durban: Health Systems Trust. Retrieved from <http://www.hst.org.za/publications/south-african-health-review-2016>
- Riveros, A., & Viczko, M. (2012). Professional knowledge “from the field”: Enacting professional learning in the contexts of practice). *McGill Journal of Education*, 47(1), 37- 52.
- Roth, W. M., & Jornet, A. (2014). Towards a Theory of Experience. *Science Education*, 98, 106- 126. doi:10.1002/sce.21085
- Rutter, L. (2009). *Theory’ and ‘practice’ within HE professional education courses – integration of academic knowledge and experiential knowledge*. England: 6th LDHEN Symposium: Bournemouth University.
- Schön, D. A. (1983). *The reflective practitioner- how professionals think in action*. New York: Basic Books.
- Smeby J. (2007). Connecting to professional knowledge. *Studies in higher education*, 32(2), 207- 224.
- Spankovich, C. (2003). The quest for professional sovereignty. *The Hearing Journal*. Retrieved from <http://www.audiologyonline.com>.
- Statistics South Africa. (2016). *Community survey 2016*. Retrieved October 2, 2018, from Statistical Release: <http://cs2016.statssa.gov.za/>
- Statistics South Africa. (2018). *Mid-year population estimates 2018*. Retrieved September 10, 2018, from Statistical Release: [www.statssa.gov.za](http://www.statssa.gov.za)
- Strode, A. (2010). Students’ independent professional activity in pedagogical practice. *Journal of Teacher Education for Sustainability*, 12, 38–58. doi:10.2478/v10099-009-0053-y
- Strydom, H. (2013). An Evaluation of the Purposes of Research in Social Work. *Social Work Journal*, 49(2), 149-164. Retrieved from <http://dx.doi.org/10.15270/49-2-58>
- Sun, G. R., Saloojee, H., Jansen van Rensburg, M., & Manning, D. (2008). Stress during internship of three Johannesburg hospitals. *South African Medical Journal*, 98(1), 33- 35.
- Svensson, L. (1997). The theoretical foundations of phenomenography. *Higher Education Research and Development*, 16(2), 157- 171. doi:10.1080/0729436970160204
- Swanepoel, D. W. (2006). Audiology in South Africa. *International Journal of Audiology*, 45, 262-266. doi:10.1080/14992020500485650
- Thomas, D. (2003). *A general inductive approach for qualitative data analysis*. New Zealand: School of Population Health, University of Auckland.

- Trem, K. R. (2017). *Selecting an appropriate research sample for a phenomenographic study of values UFHRD stream*. Lisbon: Leeds Beckett University.
- Trigwell, K. (2000). A phenomenographic interview on phenomenography. In J. A. Bowden, *Phenomenography* (pp. 62-82). Melbourne: RMIT University Press.
- Trigwell, K. (2006). Phenomenography: An approach to research into geography education. *Journal of Geography in Higher Education*, 367-372. doi:10.1080/03098260600717489
- van Stormbroek, K., & Buchanan, H. (2016). Community Service Occupational Therapists: thriving or just surviving? *South African Journal of Occupational Therapy*, 46(3), 63-72.
- Visser, R., Bhana, R., & Monticelli, F. (2012). *The National Health Care Facilities Baseline Audit National Summary Report*. Durban: Health Systems Trust. Retrieved January 25, 2018 , from <https://www.health-e.org.za/wp-content/uploads/2013/09/National-Health-Facilities-Audit.pdf>
- Watland, P. A. (2007). Students' experiences of tutor support in an online MBA programme. *Proceedings of the 6th International conference on networked learning* (pp. 417- 424). Canada: Centre for distance education.
- Williams C. (2007). Journal of Business & Economic Research. *Research Methods*, 5(3), 65-72.
- World Health Organization. (2013). *WHO: Deafness and hearing loss*. Retrieved November 31, 2017, from Fact sheet N°300: <http://www.who.int/mediacentre/factsheets/fs300/en>
- Wranz S. (2011). *Compulsory Community Service for Speech-language and Hearing Therapy Professionals: Readiness, Reality and Readjustment*. Western Cape: Stellenbosch University.
- Yates, C., Partridge, H., & Bruce, C. (2012). Exploring information experiences through phenomenography. *Library and Information Research*, 36(112), 96- 119.
- Zamawe, F. C. (2015). The Implications of using Nvivo Software in qualitative data analysis: Evidence-based reflections. *Malawi Medical Journal*, 27(1), 13- 15.

## Appendix A: PROVISIONAL ETHICAL CLEARANCE FROM UKZN



22 August 2018

Ms Sphille Mbhele 213509306  
School of Health Sciences –Audiology  
Westville Campus

Dear Ms Mbhele

Protocol Reference Number : HSS/1040/018M

Project title: The professional knowledge development of community service Audiologists in KwaZulu-Natal - A phenomenographic study

**Provisional Approval - Expedited Application**

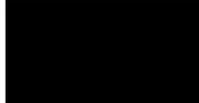
I wish to inform you that your application received on 31 July 2018, in connection with the above has been granted provisional approval, subject to the following:

- *Gatekeeper permission being obtained*

Kindly submit your response / documents to Dr Shenuka Singh (Chair), as soon as possible.

This approval is granted provisionally and the final approval for this project will be given once the above condition has been met. Research may not begin until full approval has been received from the HSSREC.

Yours faithfully



.....  
Professor Shenuka Singh (Chair)  
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Musawenkosi Makhoba  
cc Acting Academic Leader Research: Professor P Govender  
cc School Administrator: Ms P Nene

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Humanities & Social Sciences Research Ethics Committee

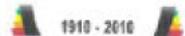
Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X64001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4606 Email: [ximbap@ukzn.ac.za](mailto:ximbap@ukzn.ac.za) / [smymam@ukzn.ac.za](mailto:smymam@ukzn.ac.za) / [mohuno@ukzn.ac.za](mailto:mohuno@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



1910 - 2016  
100 YEARS OF ACADEMIC EXCELLENCE

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**Appendix B: GATEKEEPER PERMISSION FROM THE ASSISTANT DIRECTOR  
OF THE DISABILITY AND REHABILITATION UNIT**



**health**

Department:  
Health  
PROVINCE OF KWAZULU-NATAL

DIRECTORATE: NON COMMUNICABLE DISEASES

12 Chief Albert Luthuli Street  
Pietermaritzburg, 3200  
Tel: 033 846 7247 Fax: 033 846 7273 Email: daniel.simbeye@kznhealth.gov.za  
www.kznhealth.gov.za

DISABILITY AND REHABILITATION

Date: 17 October 2018

Sphilile Mbhele  
University of KwaZulu-Natal  
Westville Campus  
Durban

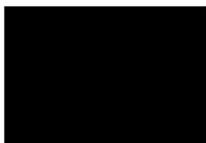
Dear S. Mbhele

**RE: PERMISSION TO CONDUCT RESEARCH IN AMAJUBA, UTHUKELA,  
UMZINYATHI, ILEMBE, ETHEKWINI, UMGUNGUNNDLOVU, KING CETSHWAYO,  
UMKHANYAKUDE, UGU AND ZULULAND DISTRICTS.**

I have pleasure in informing you that permission has been granted to you by the Disability and Rehabilitation Programme to conduct research on "The professional knowledge development of community service audiologists in KwaZulu-Natal- a phenomenographic study" in the above stated health districts of KwaZulu-Natal.

Please note the following:

1. Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
2. This research will only commence once this office has received approval of your study from the Provincial Health Research and Ethics Committee (PHREC) in the KZN Department of Health.
3. Please ensure this office is informed before you commence your research.
4. The Disability and Rehabilitation Programme will not provide any resources for this research.
5. You will be expected to provide feedback on your findings to the Disability and Rehabilitation Programme in the Department of Health KwaZulu-Natal
6. You are required to contact this office regarding dates for providing feedback when the research has been completed.



17/10/2018

ASSISTANT DIRECTOR:  
DISABILITY AND REHABILITATION

Fighting Disease, Fighting Poverty, Giving Hope

## Appendix C: GATEKEEPER PERMISSION FROM THE KZN-DoH



**health**

Department:  
Health  
PROVINCE OF KWAZULU-NATAL

Physical Address: 330 Langelibaale Street, Pietermaritzburg  
Postal Address: Private Bag X9051  
Tel: 033 395 2809/3189/3123 Fax: 033 394 3782  
Email: [hrkm@kznhealth.gov.za](mailto:hrkm@kznhealth.gov.za)  
[www.kznhealth.gov.za](http://www.kznhealth.gov.za)

DIRECTORATE:

Health Research & Knowledge  
Management

Ref: KZ\_201809\_023

Dear Ms S Mbhole  
(UKZN)

**Subject: Approval of a Research Proposal:**

1. The research proposal titled '**The Professional Knowledge Development of Community Service Audiologists in KwaZulu-Natal- A Phenomenographic Study**' was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

The proposal is hereby **approved** for research to be undertaken at the selected districts and facilities at KZN-DoH.

2. You are requested to take note of the following:
  - a. *Kindly liaise with the facility manager **BEFORE** your research begins in order to ensure that conditions in the facility are conducive to the conduct of your research. These include, but are not limited to, an assurance that the numbers of patients attending the facility are sufficient to support your sample size requirements, and that the space and physical infrastructure of the facility can accommodate the research team and any additional equipment required for the research.*
  - b. *Please ensure that you provide your letter of ethics re-certification to this unit, when the current approval expires.*
  - c. *Provide an interim progress report and final report (electronic and hard copies) when your research is complete.*
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to [hrkm@kznhealth.gov.za](mailto:hrkm@kznhealth.gov.za)

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

Dr E Lutge

Chairperson, Health Research Committee

Date: 19/10/18

**Appendix D: FULL ETHICAL CLEARANCE FROM THE UKZN ETHICS COMMITTEE**



25 October 2018

**Ms Sphilile Mbhele 213509306**  
**School of Health Sciences – Audiology**  
**Westville Campus**

Dear Ms Mbhele

**Reference number:** HSS/1040/018M

**Project title:** The professional knowledge development of community service Audiologists in KwaZulu-Natal – a phenomenology study.

**Full Approval - Full Committee Reviewed Application**

With regards to your response received 22 October 2018 to our letter of 22 August 2018, the Humanities and Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully,

[Redacted signature]

/px

cc Supervisor: Musawenkosi Makhoba  
cc Academic Leader Research: Prof P Govender  
cc School Administrator: Ms P Nene

---

Humanities & Social Sciences Research Ethics Committee  
Professor Shenuka Singh (Chair)/Dr Shamila Naidoo (Deputy Chair)  
Westville Campus, Govan Mbeki Building  
Postal Address: Private Bag X54001, Durban 4000  
Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: [simbsw@ukzn.ac.za](mailto:simbsw@ukzn.ac.za) / [soymann@ukzn.ac.za](mailto:soymann@ukzn.ac.za) / [mohuaj@ukzn.ac.za](mailto:mohuaj@ukzn.ac.za)  
Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)

 1910 - 2010   
109 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

## **Appendix E: INFORMATION DOCUMENT FOR ALL PARTICIPANTS**

**DISCIPLINE OF AUDIOLOGY**

**SCHOOL OF HEALTH SCIENCES**

**Tel: 031 260 7309 (Research supervisor)**

**E-mail: [makhobamu@ukzn.ac.za](mailto:makhobamu@ukzn.ac.za)**

**Cell: 0606826093 (Researcher)**

**E-mail: [sphililembhele@gmail.com](mailto:sphililembhele@gmail.com)**



---

To whom it may concern

My name is Sphilile Mbhele. I am a post-graduate student at the University of the KwaZulu-Natal currently conducting a Masters Research study on the “*Professional knowledge development of community service Audiologists in KwaZulu-Natal- a phenomenographic study*”

You are being invited to consider participating in the above-mentioned study. The aim and purpose of this research is to explore the developments that occur during the year of community service among CSO Audiologists. It aims to describe the contributions of community service in the development of professional knowledge in CSO Audiologists and to explore the similarities and differences of such developments. For the purposes of this study, I require Audiologists who completed their year of community service in the year 2017 and therefore, I kindly request your participation. The study is expected to enrol a maximum of 20 participants from various districts within the KwaZulu- Natal Province.

An interview process will be used for the purpose of this study. The participants will be contacted will be contacted to confirm availability, time and a date for the interview to take place. Each participant will be given an information document about the study, consent form prior to the interview. Your role in the above-mentioned study will be to partake in an interview session explicitly describe your experiences of community service. The responses will be gathered, analysed and interpreted by the researcher. The research findings will be made accessible to all participants and a copy will be used for public dissemination. The results will be published in an accredited journal or a peer review journal.

I hope that the study will create the following benefits: assist the National Department of Health in identifying current support structures implemented in healthcare facilities for CSOs and their

effectiveness, allowing the opportunity to monitor and improve them, provide insight to managers and relevant stakeholders about the challenges, experiences and needs CSO Audiologists face within the CS programme, findings of this study such that it will enable tertiary institutions them in better training/equipping fourth year students for community service and also in identifying gaps within the curriculum and will contribute to research as this area has not been largely explored in Audiology.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (HSS/1040/018).

In the event of any problems or concerns/questions you may contact the researcher or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

Researcher: Sphilile Mbhele	Supervisor: Mr. M. G. Makhoba
Cell No: 0606826093	Tel No: 0312607309
Email: sphililembhele@gmail.com	Email: makhobamu@ukzn.ac.za

Humanities & Social Sciences Research Ethics Administration  
Research Office, Westville Campus  
Govan Mbeki Building  
Private Bag X 54001  
Durban  
4000  
KwaZulu-Natal, SOUTH AFRICA  
Tel: 27 31 2604557- Fax: 27 31 2604609  
Email: HSSREC@ukzn.ac.za

Your participation in this study is voluntary and there will not be any negative consequences should you wish to refrain from participating. You are welcome to withdraw from the study at any point should you no longer wish to participate. Should you wish to withdraw from the study, kindly contact the researched and inform me. All the data collected will be kept confidential and will maintain anonymity. No personal identifying information will be used including; your name and healthcare facility you worked in.

## **Appendix F: CONSENT FORM FOR PARTICIPANTS**

**DISCIPLINE OF AUDIOLOGY**

**SCHOOL OF HEALTH SCIENCES**

**Tel: 031 260 7309 (Research supervisor)**

**E-mail: [makhobamu@ukzn.ac.za](mailto:makhobamu@ukzn.ac.za)**

**Cell: 0606826093 (Researcher)**



---

### **INFORMED CONSENT FORM**

Please complete the following:

I, \_\_\_\_\_ have read and understood the aim and purpose of this study. I have had the opportunity to ask questions regarding the study. I understand that my personal information will be kept confidential and my identity anonymous. I am aware that my participation is voluntary, and I can withdraw from the study at any point. I am aware that if I have any further questions/concerns or queries related to the study I may contact the researcher. I am aware that the research findings will be made accessible to all participants and a copy will be used for public dissemination. The results will be published in an accredited journal or a peer review journal.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

Humanities & Social Sciences Research Ethics Administration

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

**Additional consent**

I hereby provide consent to:

Audio-record my interview                      YES / NO

\_\_\_\_\_

Participant's signature

\_\_\_\_\_

Date

## **Appendix G: DATA GENERATION TOOL**

SCHOOL OF AUDIOLOGY

COLLEGE OF HEALTH SCIENCES

Tel: 031 260 7309 (Research supervisor)

E-mail: [makhobamu@ukzn.ac.za](mailto:makhobamu@ukzn.ac.za)

Cell: 0606826093 (Researcher)

E-mail: [sphililembhele@gmail.com](mailto:sphililembhele@gmail.com)



---

Dear participant,

My name is Sphilile Mbhele and I would like to ask you a few questions about your experiences as a CSO Audiologist in KZN. The interview should take about 45minutes to an hour and it consists of 8 main questions. Kindly make your responses as elaborate as possible and feel free to add any information that you might feel is relevant to the question as the aim is to explore your experiences. The responses you give will be kept confidential.

### **SECTION 1: BIOGRAPHICAL INFORMATION**

Age	
Gender	
First language	
Health facility (Clinic/CHC/District/Reginal)	

### **SECTION 2: EXPERIENCE OF COMMUNITY SERVICE**

1. Please share how you experienced your community service year overall as a CSO Audiologist at a public sector. Could the experience have been better or worse?  
Elaborate
2. What have you learnt from your experience of CS?
3. Please share how has this experience shaped your;
  - Knowledge in practice

- attitude as a professional (positive/negative)
  - Behaviour as a clinician? Elaborate
4. Have you noticed any emotional changes you experienced during community service?  
Elaborate (positive or negative)
  5. Do you think your experiences of community service may be different from other CSOs? Elaborate

**SECTION 2: EXPERIENCES AND PROFESSIONAL KNOWLEDGE**

**DEVELOPMENT**

1. Did you experience any changes in the way you applied knowledge and skills you acquired in university to the work environment? Elaborate
2. In your opinion, did you receive enough mentorship and supervision throughout the CS year to facilitate your development? Elaborate
3. Do you feel you could have developed any further as a professional during community service? Elaborate. What were the possible challenges?
4. Towards the end of CS did you feel you had adequate knowledge and skills for independent practice? Elaborate
5. Would you like to add anything else about your community service year? It may not have been covered in the questions but you feel it is important.
6. What advice would you give the CSO's Audiologists to follow

**Probing questions:**

Please explain further	Any other factors...
What do you mean by that	In terms of knowledge related to experience...
How did you feel about that	In terms of practical knowledge...
What were your thoughts about that	In terms of the theory...

**Closure of the interview:**

Thank you for your time, we are done with the interview. In the event that there is a need for further discussions or clarification, I will contact you and schedule a follow-up interview.

Handshake, goodbyes.

## Appendix H: THE PILOT STUDY FEEDBACK QUESTIONS

SCHOOL OF AUDIOLOGY  
COLLEGE OF HEALTH SCIENCES  
Tel: 031 260 7309 (Research supervisor)  
E-mail: [makhobamu@ukzn.ac.za](mailto:makhobamu@ukzn.ac.za)  
Cell: 0606826093 (Researcher)  
E-mail: [sphililembhele@gmail.com](mailto:sphililembhele@gmail.com)



Dear Participant

Kindly assist with feedback from the interview session you just had. Please complete the following questions as elaborately as you can.

- Did you have any difficulties understanding the questions asked in the interview

---

---

- Comment on how you felt during the interview

---

---

- Do you think it is practical to conduct this interview with other participants? Why?

---

---

- What do you think about the length of the interview

---

---

- How can I improve the interview

---

---

- Kindly add general comments and/ suggestion

---

---

**Appendix I: STEPS FOR DATA ANALYSIS**

Steps of analysis	Week 1- 3: the process of data analysis will begin
1.	The researcher will thoroughly read through the data collected
2.	Separate data with the same meaning and relevance to the phenomenon thus creating a pool of meaning
3.	The data will be grouped according to their similarities /differences (to form categories)
4.	Comparisons between categories to ensure that they are distinctly represented
5.	Continue reading and adjusting data until categories become more defined
6.	Name the categories according to their key features
7.	An outcome space will be apparent indicating the qualitatively different ways CSO's experience their CS year. The categories will then be represented in a hierarchy

**Appendix J: PROTECTING HUMAN RESEARCH PARTICIPANTS**  
**CERTIFICATE**



**Appendix K: INTRODUCTION TO RESEARCH ETHICS CERTIFICATE**



**Zertifikat  
Certificat**

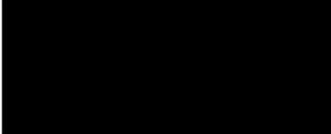
**Certificado  
Certificate**

Promouvoir les plus hauts standards éthiques dans la protection des participants à la recherche biomédicale  
Promoting the highest ethical standards in the protection of biomedical research participants



**Certificat de formation - Training Certificate**  
Ce document atteste que - this document certifies that  
**Sphilile Mbhele**  
a complété avec succès - has successfully completed  
**Introduction to Research Ethics**  
du programme de formation TRREE en évaluation éthique de la recherche  
of the TRREE training programme in research ethics evaluation

June 13, 2018  
CID : r0VF1GMMs8



Professeur Dominique Sprumont  
Coordinateur TRREE Coordinator



Continuing Education Program (5 Credits)  
Programme de Formation continue (5 Crédits)



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[REV : 20170310]