Students' experiences of interprofessional education in the Faculty of Health Sciences at the University of the Free State

by

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November 2016

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Student Number 1997044506

Dissertation submitted in fulfilment of the requirements for the degree

Master of Science (M.Sc.) in Physiotherapy

in the

Faculty of Health Sciences

Department of Physiotherapy

University of the Free State

Bloemfontein

November 2016

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Declaration

I hereby declare that the work that has been submitted in this dissertation is my own work, obtained from my own investigations. In cases where help was given by other, this has been acknowledged. This is the first time that this work is submitted at this university, in the Department of Physiotherapy, towards a M.Sc. (Physiotherapy) degree. This work has not been submitted elsewhere for the purpose of obtaining a degree.

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Michelle Butler

I hereby cede copyright of this research study in favour of the University of the Free State.

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Michelle Butler

Acknowledgements

I would like to acknowledge the contributions of everybody who assisted me and helped to make this research study possible. The following people are appreciatively acknowledged for their role in this study:

- To Father God, for strength to carry me through this process, from beginning to end.
- My supervisor, Dr Corlia Janse van Vuuren, for all your support and encouragement throughout this process. Thank you for your invaluable input into this study from the beginning to the end.
- My co-supervisor, Professor Yvonne Botma, for your financial assistance through the National Research Foundation (NRF) bursary. Thank you for your invaluable input in this study from beginning to the end.
- Mrs Juanita Swanepoel, for facilitating the focus groups and assisting me with the co-coding of the data. You were always ready with an explanation when I didn't understand something and for that I am eternally grateful.
- Mr John Dale, who had the arduous job of having to proof-read this dissertation. Thank you very much for crossing the "t's" and dotting the "I's".
- My husband, Iain, for your support and encouragements and always asking "Are you done yet?" Thank you for parenting while I was busy in front of the computer. I love you!
- My children, Joshua and Kyra, for not having as much time to play with you as I should have and for sometimes having to put up with less-than-great suppers. I love you!

TABLE OF CONTENTS

CHAPTER 3: RESEARCH METHODOLOGY

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CEW	Clinical Education Ward
CVA	Cerebrovascular accident
FoHS	Faculty of Health Sciences
IP	Interprofessional
IPE	Interprofessional education
IPL	Interprofessional learning
SAHP	School of Allied Health Professions
SoM	School of Medicine
SoN	School of Nursing
SP	Standardised patient
UFS	University of the Free State
WHO	World Health Organization
UK	United Kingdom
US	United States (of America)

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Abstract

Background and Aim

Interprofessional education (IPE) is widely seen as an important part of any healthcare educational module in order to prepare students for collaborative practice after qualification. Collaborative practice is increasingly seen as important in fragmented healthcare systems typical of developing countries such as South Africa. In a population as diverse as that of South Africa, where 11 official languages exist, good communication and teamwork are paramount to the quality of patient care as well as to patient safety. In an educational setting where healthcare training is profession-specific with few opportunities for interaction between professions, an IPE module allows students to develop the skills necessary for collaborative practice. The aim of this study was to describe the students' experience of the newly implemented IPE module at the University of the Free State, Bloemfontein, South Africa.

Method

This descriptive, qualitative inquiry made use of focus groups to gain insight into the students' experiences of the newly implemented IPE module. Purposive sampling was used to recruit 22 students from various races, genders and language groups within the Faculty of Health Sciences and included medical, occupational therapy, nursing, physiotherapy, optometry and biokinetics students. Five focus groups were held. Focus groups were recorded, transcribed verbatim, checked and coded to identify emerging themes.

Findings

Four themes emerged from the data, namely learning about, educational aspects, organisation of the IPE module and other benefits.

Conclusion

The IPE module enhanced knowledge on the scope of profession and leadership. Student assessment, the use of a scenario-based simulation and logistical aspects still need attention, but even so the students experienced the IPE module very positively and found it valuable. Students reported some development of aspects related to collaborative practice, such as clinical communication skills, but identified that implementation of collaborative practice in clinical placements was limited.

Key words

Interprofessional education, student experiences, collaborative practice, scope of profession, leadership, organisation of IPE, benefits of IPE

Ervarings van interprofessionele onderwys van studente aan die Universiteit van die Vrystaat, Bloemfontein, Suid-Afrika

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Abstrak

Agtergrond en Doel

Interprofessionele onderwys word wyd beskou as 'n belangrike deel van enige gesondheidsorg opvoedkundige module ten einde studente vir samewerkende praktyk voor te berei na kwalifikasie. Samewerkende praktyk word toenemend beskou as belangrik in die gefragmenteerde gesondheidsorgstelsels tipies van ontwikkelende lande soos Suid-Afrika. In 'n bevolking so uiteenlopend soos dié van Suid-Afrika, waar 11 amptelike tale bestaan, is goeie kommunikasie en spanwerk uiters belangrik vir die gehalte van pasiëntsorg sowel as vir die veiligheid van pasiënte. In 'n opvoedkundige instelling waar gesondheidsorg opleiding beroep-spesifiek is met min geleenthede vir interaksie tussen beroepe, stel 'n interprofessionele onderwysmodule studente in staat om die vaardighede wat nodig is vir samewerkende praktyk te ontwikkel. Die doel van hierdie studie was om die studente se ervaring van die interprofessionele onderwysmodule aan die Universiteit van die Vrystaat, Bloemfontein, Suid-Afrika te beskryf.

Metode

Hierdie beskrywende, kwalitatiewe ondersoek het gebruik gemaak van fokusgroepe om insig in die student se ervarings van die nuut geïmplementeerde interprofessionele onderwysmodule in te win. Doelgerigte steekproeftrekking is gebruik om 22 studente van verskillende rasse, geslagte en taalgroepe binne die Fakulteit Gesondheidswetenskappe te werf en het mediese, arbeidsterapie, verpleging, fisioterapie, optometrie en biokinetika studente ingesluit. Vyf fokusgroepe is gehou. Fokusgroepe is opgeneem, verbatim getranskribeer, nagegaan en gekodeer om opkomende temas te identifiseer.

Bevindinge

Vier temas het na vore gekom uit die data, naamlik leer, opvoedkundige aspekte, organisasie van die IPE program en ander voordele.

Gevolgtrekking

Die interprofessionele onderwysmodule het verbeterde kennis oor die omvang van professie en leierskap tot gevolg gehad. Studente-assessering, die gebruik van 'n scenario-gebaseerde simulasie en logistieke aspekte moet nog aandag geniet, maar die studente se ervaring van die IPE module was baie positief en daar is gevind dat dit waardevol is. Studente het gerapporteer dat die ontwikkeling van aspekte wat verband hou met gesamentlike praktyk soos kliniese kommunikasievaardighede, verbeter het maar dat daar steeds bestaande gapings in die implementering van samewerkende praktyk in kliniese plasings is.

Sleutel woorde

Interprofessionele onderwys, studente ervarings, samewerkende praktyk, omvang van professie, leierskap, organisasie van interprofessionele onderwys, voordele van interprofessionele onderwys

GLOSSARY OF TERMS

Collaborative practice occurs in healthcare when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, carers and communities to deliver the highest quality of care across settings (WHO 2010:13).

Collaborative patient-centred practice is a practice orientation; a way of healthcare professionals working together and with their patients. It involves the continuous interaction of two or more professionals or disciplines, organised into a common effort, to solve or explore common issues with the best possible participation of the patient. Collaborative patient-centred practice is designed to promote the active participation of each discipline in patient care. "It enhances patient and family-centred goals and values, provides mechanisms for continuous communication among care givers, optimizes staff participation in clinical decision making within and across disciplines, and fosters respect for disciplinary contributions of all professions." (Herbert 2005:2)

Interdisciplinary commonly refers to the profession in medicine where many different disciplines e.g. physician, surgeon, cardiologist work together, but not with other professions (Barnsteiner et al. 2007:145).

Interprofessional education (IPE) occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes (WHO 2010:13). IPE occurs when "*two or more professions learn with, from and about each other in order to improve collaboration and the quality of care*" (CAIPE 2002:1).

Interprofessional team is a team of healthcare practitioners from different healthcare professions who each bring specialised knowledge, skills and abilities to the group (Buring *et al*. 2009:2).

Multiprofessional education (MPE) occurs when there are students from two or more different professions who are learning the same thing in the same place due to a

common need across the professions. This may include shared lectures or clinical skills sessions. Although MPE may create opportunities for some inter-professional learning, it is not the ideal manner in which to provide IPE (Freeth 2007:3). It can commonly be used in large faculties which offer many different professions within healthcare as a means to reduce costs. Students from different professions are taught together, but there is no interaction between them (Earland *et al.* 2011:135), i.e. they learn in parallel (Oandasan & Reeves 2005a:24; Olenick et al. 2010:78). Each profession interacts with the patient independently of the other professions (Olenick et al. 2010:78).

Uniprofessional education forms the largest part of any undergraduate programme as this is where knowledge, skills and attitudes that are core to the specific professions are taught (Freeth 2007:3). No interaction between professions takes place.

"If you expect people to work in teams,

you best educate them in teams."

(Steinhert 2005:60)

CHAPTER 1

BACKGROUND AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Traditionally, all healthcare professionals are trained in silos with very little interaction between them during their study years (Oandasan & Reeves 2005a:24; Reeves 2013:16). However, once qualified in their respective professions and starting to work in clinical areas, these professionals are required to work in healthcare teams, usually without any previous interprofessional education (IPE) or collaborative training. This situation is worsened by changing patient needs, which seldom make it possible for one healthcare professional to provide for all the patient's needs, and therefore interprofessional (IP) teams are required to achieve optimal patient outcomes (WHO 2010:3).

Worldwide, IPE is now being used as the tool to enable professionals to work collaboratively, with the main aim of improving patient outcomes. As a result there has been increasing emphasis on the inclusion of IPE into the curricula of all healthcare professions. To this end, many universities have incorporated some form of IPE into their health sciences programmes. In Europe, IPE is reported in Norway (Aase *et al.* 2014:1; Kyrkjebø *et al.* 2006:508), Sweden (Gjessing *et al.* 2014:341; Hallin *et al.* 2009:151; Ponzer *et al.* 2004:727) and Greece (Liaskos *et al.* 2009:S44). IPE has been implemented at universities in the UK (Anderson *et al.* 2009:182; Armitage *et al.* 2008:276; Bradley *et al.* 2009:912; Earland *et al.* 2011:135), Canada (Curran *et al.* 2010:41; Ambrose *et al*. 2015:2; Ateah *et al*. 2011:209; Baker *et al.* 2008:372) and the US (Delunas & Rouse 2014:100). Australian universities (Boyce *et al.* 2009:433; Nisbet *et al.* 2008:57) and more recently, New Zealand universities, (Pullon *et al*. 2013:52; Darlow *et al.* 2015:1; McKinlay 2015:2) have started IPE programmes. A Japanese university has also reported on the implementation of IPE (Maeno *et al*. 2013:10). In South Africa, the University of the Western Cape (Mashingaidze 2012:1; Waggie and Laattoe 2014:370) and Stellenbosch University (Snyman *et al* 2015:318) have also included IPE. In Africa, the African Interprofessional Education Network (AfrIPEN) was established in 2015. It aimed to assist in the establishment of IPE in African countries, which involved the creation of

awareness of collaboration, the development of IPE curricula within an African context, facilitate the incorporation of IPE into existing healthcare professions' curricula and inclusion of IPE into all healthcare practitioners' scopes of profession (AfrIPEN 2015).

The World Health Organisation (WHO) (2010:10) is committed to IPE, highlighting the importance of developing the skills to work collaboratively with healthcare professions other than your own. The WHO (2010:22) views IPE and collaborative practice as a sound approach to alleviate the global shortage of healthcare workers experienced in health departments.

IPE is defined as learning that occurs when at least two different healthcare professions come together to learn about, with and from, each other in order to effectively and holistically manage a patient's condition by working collaboratively (CAIPE 2002:1; WHO 2010:13). However, if no formal opportunities are provided to students to engage in IP learning, it is unlikely to occur on its own.

Suter *et al.* (2009:44) explained that one of the most commonly reported benefits of IPE programmes is the clarification of professional roles. Students have reported that often they are willing to collaborate with other professions, but often do not engage with other professions as they do not know how to go about it. This lack of knowing how to engage with others may stem from a poor understanding of other's roles and responsibilities. This has also led to the students realising that perhaps others felt the same as them, meaning that others also did not understand their role. Students also attempt to protect their scope of profession which also leads to the student being less likely to collaborate with others. When a student doesn't understand the role of a certain profession and the expertise they bring, they tend not to include them in patient management.

Within an IPE module students are able to define their own roles, as well as the roles of other professions. They learn to communicate with other professions and learn how to function in a team (Lumague *et al.* 2006:249; Hallin *et al.*, 2009:156). All these aspects may later lead to swifter, more appropriate referrals between professions and then ultimately to improved patient care. By integrating the knowledge of all the healthcare team members, improved, safe healthcare services are possible (Kyrkjebø

et al. 2006:514). The value gained from IPE may however be dependent on students' attitudes.

Mashingaidze (2012:57) reported that students recognise the importance and benefits of IPE, as well as participate in the IPE activities but might be negatively influenced by factors such as scheduling problems and feelings of uncertainty with regards to expectations of the faculty regarding the IPE programme. Students may still tend to see other professions in a more traditional way, i.e. the doctor is responsible for the patient (Aase *et al*. 2014: 176). Aase *et al.* (2014:176) also identified that students may feel insecure and fearful of accepting responsibility in a clinical setting. This may also be influenced by traits such as gender and age (Curran *et al.* 2010:1). Hammick *et al.* (2007:746) reported in their systematic review that student attitudes may be influenced by the setting and whether the IPE programme is assessed for marks. This systematic review concluded that the student attitudes towards IPE were overall positive (Hammick *et al*. 2007:750), however, Curran *et al.* (2010:1) were of the opinion that those positive effects gained from IPE were not necessarily maintained in the long term. Bradley *et al*. (2009:919) found that attitudes towards IPE improved after an IPE programme, but returned to pre-IPE levels within three to four months. Little is known about the long term impact of IPE programmes (Reeves 2016:191). Although there was little change in attitudinal scores, Robben *et al.* (2012:200), found that students valued the IPE programme and that it improved their willingness to collaborate with others. Darlow *et al.* (2015:8) found that students felt that an IPE intervention improved their ability to function within an IP team.

At the University of the Free State (UFS), little interaction occurs between different professions within the Faculty of Health Sciences (FoHS) as they are separated not only by profession, but, in some instances, also by geographical distance. The different professions are housed in different buildings across the UFS campus, a situation not unique to the UFS (Goldman *et al.* 2010:371). Students are educated in their own professional scope of profession only. Therefore, in order for the FoHS to

initiate collaborative practice between professions, an IPE module[1] was introduced in 2014.

At this time, the IPE module for the FoHS was implemented as a pilot in order to determine the logistical and academic aspects of presenting the module. It was presented to the fourth year students as well as the fifth year (biokinetics only) students from the FoHS. (Biokinetics students have completed a Bachelor's Degree in Human Movement Science and are now enrolled for a two year Honours Degree in Biokinetics.) After implementation in 2014, facilitators had a chance to discuss the aspects of the programme which worked well, as well as suggest any changes that had to be made to improve the programme. The 2014 IPE programme was case-based, with a simulation. Two modules were presented, one in English and one in Afrikaans. Students were required to work in groups which were made up of different professions. Students (mostly nursing students) were used as the standardised patients (SP) during the simulation. Each profession was provided with an opportunity to present their role in the treatment of a patient who suffered a cardiovascular accident (CVA). Group facilitators consisted of members of the FoHS who volunteered their time, but did not necessarily have experience of IPE or group facilitation. Some small changes were made to the programme and it was presented as a compulsory module for all fourth year students (fifth years in the case of biokinetics) in the FOHS in 2015 in its slightly altered format. These changes involved the following:

- The two unilingual modules (for Afrikaans and English) where combined and presented as one bilingual module to the whole population.
- Older SP's instead of students were used to portray the patients.
- The presentations by each profession on their role in treating a CVA patient was removed and the scope of profession of every profession was addressed within the individual groups.
- Better training was provided for facilitators, especially with regards to debriefing.

[1] Please note that where reference is made to the UFS IPE activities, I have referred to it as the UFS IPE module. Elsewhere, where speaking in general terms of healthcare education I have referred to these as programmes.

As only facilitators had an opportunity after the pilot of the IPE to provide their feedback on the IPE module, the module developers felt that the students should also give their input into how they experienced the IPE module, after presentation thereof in 2015. This study was therefore launched to determine the students' satisfaction with the module presented in 2015, thereby giving a voice to the students too.

This study formed part of a bigger implementation and evaluation study. The bigger study aimed to describe the development, delivery and outcomes of the IPE module in the FoHS at the UFS, making use of quantitative and qualitative data gathering techniques. The greater study made use of student, lecturer and facilitator populations and described the development, design and delivery of the IPE module. It also included an evaluation of the module.

1.2 PROBLEM STATEMENT AND PURPOSE OF THE STUDY

The main aim of this study was to describe the experiences of the fourth and fifth (in the case of the biokinetics students) year students from the FoHS at the UFS regarding the IPE module that they attended in 2015 as a form of evaluating the current IPE module. The Faculty of Health Sciences consists of three schools, namely, the School of Medicine (SoM), School of Nursing (SoN) and the School for Allied Health Professions (SAHP). The latter is made up of five departments, namely Biokinetics, Nutrition and Dietetics, Occupational Therapy, Optometry and Physiotherapy. The objectives that were identified in order to achieve this aim where as follows:

i. obtain demographic information of the participants by means of a demographic questionnaire; and
ii. obtain the participants' views on their experience of the IPE module presented at the UFS in 2015 by means of focus group discussions.

Evaluation of study programmes is a means of improving teaching and learning quality (Kember & Ginns 2012:144), and, thus, this description of the students' experience would provide an idea of the student's satisfaction of the IPE module. In describing these experiences, it is important to note that the purpose of this study was to collectively describe and discuss the students' experiences of the UFS IPE module,

irrespective of their profession. This is in line with the focus of IPE being collaboration between professions and therefore not highlighting one profession when discussing IPE. However, due to my own background in physiotherapy, the physiotherapy students' experiences are highlighted, where applicable. As physiotherapy is furthermore also one of the core professions in an IP team, with most studies including physiotherapy, doing so contributes to an additional tendency to refer to physiotherapy in literature discussions.

1.3 RESEARCH PARADIGM

A research paradigm is a model which can be used to observe a phenomenon (Babbie 2013:57). The research paradigm that underpins this qualitative study is an interpretivism approach (also referred to as a constructivism approach by Creswell (2008:6)) which emphasises the understanding of the participants' viewpoints and how they interacted with the phenomenon being researched (Botma *et al*. 2010:42). There is value in how participants interpret their world and therefore their reality, and in how they attach meaning to their experiences (Fouche & Schurink 2011:309). It is based on the referral to ontology, epistemology and methodology.

1.3.1 Ontology

Ontology refers to how a researcher views the phenomenon being studied and what the researcher's perceived reality is (Creswell 2013: 41). In an interpretivist approach there are multiple realities which are socially constructed. This approach allows one to explore what people think, what their problems are and how they deal with them. It allows participants to interact with the researcher and participate in conversation. It generates knowledge regarding the meaning of experiences that have been shaped by their social interactions (Creswell & Plano Clark 2011:40). The goal of this approach is an understanding of the phenomenon.

1.3.2 Epistemology

Epistemology refers to how knowledge is gained (Creswell & Plano Clark 2011:41). People construct their knowledge by means of their own, subjective, lived experiences (Creswell 2013:20) to which they attach meaning. These meanings are formed through interaction with other people (Creswell 2013:25). As these meanings can be

various and multiple the researcher attempts to take all the participants views of the situation and develop a view of how the participants made meaning of a phenomenon.

1.3.3 Study Design

This study is a qualitative, descriptive study which makes use of an inductive approach: i.e. the data generated the theory (Hesse-Biber & Leavy 2011:5). Denzin and Lincoln (2011:3) explain qualitative research as involving "*an interpretive, naturalistic approach to the world".* Qualitative researchers investigate phenomena in natural settings and thereby attempt to find meaning of or interpret the phenomena (Denzin & Lincoln 2011:3). Many different qualitative research strategies exist. The strategies most used in health sciences research include phenomenology, ethnography, case studies, participatory action research and narrative inquiry (Botma *et al.* 2010:190).

As this study did not strictly fit into any of these traditional strategies, a qualitative, descriptive inquiry (Botma *et al*. 2010:194) was used to describe the students' experiences of IPE. A descriptive, qualitative inquiry is the study design of choice when a researcher wants to describe an event or phenomenon. It is defined as a "*means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem*" (Botma *et al*. 2010:194).

The research question could not be answered by quantitative methods as the purpose of this research was to gain an in-depth description of how the students experienced the IPE module, and experiences cannot be quantified.

1.3.3.1 Population and sample

Students who attended the IPE module made up the population for this study and were recruited by means of telephone calls or emails, using the attendance list for purposive sampling per profession. Due to the qualitative nature of the study, sample size was not predetermined and was not a determinant of the quality of the research as the research relies on obtaining a deeper understanding of the topic. Data saturation i.e. the point at which no more new information is obtained with further focus groups, determined how many focus groups were held.

1.3.3.2 Data gathering method

The study made use of focus groups in which students expressed their own opinions. Focus groups require participants to gather for a group discussion, guided by a trained facilitator to discuss a topic. Focus groups have been found to be valuable in the study of medical curricula (Barbour 2005:745). Medical education increasingly calls for the students' voices to be heard (Barbour 2005:743), and a focus group is one way of achieving this.

1.4 DATA ANALYSIS

Focus group discussions were transcribed verbatim afterwards. I attempted to make sense of these views in order to gain a better understanding of the participants' experiences. Transcribed data were then analysed according to Cresswell's method of data analysis by myself and a co-coder. Participants' views were used to construct broad themes and categories regarding their experiences of the IPE module.

1.5 ETHICAL ASPECTS

This study formed part of a larger study for which ethical approval had already been obtained from the Ethics Committee of the Faculty of Health Sciences at the UFS (now called the Health Sciences Research Ethics Committee of the University of the Free State HSREC-UFS – ECUFS 93/2014)(Appendix A). Necessary permission was granted by all relevant parties (Appendix B), and the participants signed an informed consent form after they had read the information sheet (Appendix C).

Although the IPE module is compulsory for all fourth year students within the FoHS, participation in the study (focus group interviews) was voluntary and no student was negatively affected by declining participation.

1.6 VALUE OF THE STUDY

The findings from this study will be the used to improve the content, structure and delivery of the IPE module at the University of the Free State. This will be the first step in making use of student data in the improvement of the module. The module developers can use the findings to make changes to the module which would address

specific aspects identified by the students which were deemed relevant by the module developers. The focus groups allowed any aspects to come to the fore and therefore any aspect could be addressed.

IPE aims to improve collaboration between different professionals with one of the main outcomes being improved patient outcomes (WHO 2010:13). The IPE module teaches students how to collaborate and therefore the patient ultimately benefits from a good IPE module. The collaboration between professionals that is taught will also benefit the lecturers within the FoHS as they become more aware of the possibilities of working together during the presentation and facilitation of the IPE module, leading to benefits to the FoHS (e.g. collaborative research). It is therefore not only the students who benefit from the findings of this study, but also the other stakeholders within the UFS.

1.7 OUTLINE OF THE DISSERTATION

The dissertation is laid out as follows:

Chapter 1 This chapter provides the background and overview of the study. It orientates the reader as to what to expect in the chapters that follow.

Chapter 2 This chapter places the research in context. Due to the qualitative nature of this study (see section 1.3.3), chapter 2 describes only the literature which is linked to the context of the module that was evaluated in this study. This is in order to orient the reader with regards to the module that was evaluated by the students. Further literature is found in chapter 4 where it is integrated within the interpretation of the findings. Literature is also found in chapter 5 (recommendations) to a lesser extent.

Chapter 3 This chapter discusses the research methodology of this study. It clearly positions the study within the qualitative research paradigm, focusing on an in-depth understanding of the student experience in order to generate a richness of data, rather than generating numbers as in a quantitative study. For this reason the sample size was determined by the discussions and whether data saturation was achieved. This differs from

quantitative research, which has increased validity with larger sample sizes.

Chapter 4 This chapter discusses the findings from the study. It provides an in-depth analysis of the literature (see section 1.3.3), aligned with the data that was obtained. It therefore consists of the findings, the literature and an integrated discussion thereof. As mentioned above, this chapter, together with chapter 2 make up the literature for this study. The focus on the literature in chapter 4 is to create the theory and is therefore additional to the literature explaining the context (in chapter 2).

Chapter 5 In this chapter, the main highlights from the study are summarised and recommendations are made for improving the IPE module that is implemented at the UFS. These recommendations are made from the findings and in some cases are supported by the literature. Recommendations for further research are given and a conclusion is provided.

1.8 CONCLUSION

This chapter provides background to the study and gives an overview of how the study was undertaken. The next chapter will provide the relevant contextual literature regarding the IPE at the UFS in order for the reader to understand the context of the module and subsequently this research.

CHAPTER 2
LITERATURE

2.1 INTRODUCTION

This chapter includes the literature that is relevant to understanding the module that was evaluated by the students who participated in this study. It places the reader into the context of the study by exploring the literature and then explaining how this was incorporated into the module presented at the University of the Free State (UFS).

2.2 DEFINING INTERPROFESSIONAL EDUCATION

IPE is a method used to train students to work in interprofessional (IP) healthcare teams, i.e. to practice collaboratively (Bridges *et al.* 2011:1). Traditionally the different healthcare professions in South Africa have very little interaction between each other during training as each department and/or school is run autonomously. Their education is thus profession-specific (Reeves 2013:16), often referred to as occurring in silos, leaving each profession with limited awareness of the roles of other professions. This profession-specific training model is comparable with health education in the US (Olenick and Allen 2013:150) and the UK (Oandasan and Reeves 2005a:24). Profession-specific training models result in students entering the workplace where they are required to work in teams with other professions, yet have rarely, if ever, been exposed to IP teams in their training (McNair 2005:456; Kyrkjebø *et al*. 2006:508). Hallin *et al.* (2009:151) indicated that acquired knowledge, skills and attitudes differ between IPE and uniprofessional education. For this reason, there needs to be a move away from the silo approach in order to achieve success in healthcare.

IP teamwork is seen as an important way in which to improve patient safety (Reeves 2016:193). However, international research shows that most undergraduate healthcare education programmes do not address the understanding of professional roles (Aase *et al.* 2014:170), or do not provide sufficient exposure to IP teamwork during clinical education (Kyrkjebø *et al.* 2006: 514). It may be excluded from curricula due to educators believing that healthcare professionals will intuitively know how to work with each other, although this is not the case (Barnsteiner *et al.* 2007:144). A great barrier to effective teamwork is a lack of knowledge of other healthcare workers'

capabilities and competences (Aase *et al.* 2014: 176). Teamwork is achieved when students are involved in education programmes in which respect, trust, communication and awareness and acceptance of other disciplines' roles are taught (Petri 2010:76; Suter *et al*. 2009:48). So while qualified professionals are expected to work together effectively, they are never given the opportunity to do so and to practise this skill as students, as education maintains the mentioned silo approach (Olenick and Allen 2013:150). Unfortunately in most healthcare education programmes communication skills that are taught consist of communication with the patient and the patient's family with little or no focus on IP communication (Hall 2005:193).

There are many inconsistencies in literature regarding the terminology referring to IP education. Examples of terms include shared learning, common learning, interdisciplinary education and inter-agency training. For the purposes of this study the term **"interprofessional education" (IPE)** will refer to learning that occurs when "*two or more professions learn with, from and about each other in order to improve collaboration and the quality of care*" (CAIPE 2002:1). The suffix "-professional" is most commonly used in IPE literature as it refers to a person who has acquired specialised knowledge with intensive academic training (Oandasan and Reeves 2005a:23). Olenick *et al.* (2010:82) adds that in IPE, different professionals participate in a non-hierarchical, interactive process where they learn together while focusing on patient-centred care to achieve the best outcome for the patient. It includes the sharing of knowledge and the sharing of values across the professions as well as within the professions. Thistlethwaite (2012:59) also stresses that IPE should be interactive, irrespective of the manner in which it is presented to students. It provides an experiential learning opportunity (Olenick *et al*. 2010: 77) where students develop knowledge through a real-life experience (such as participating in a healthcare team).

In IPE, the healthcare team may be made up of (but not restricted to) any of the following professions:

- Nursing;
- Medical;
- Occupation therapy;
- Physiotherapy;

- Optometry;
- Dietetics and nutrition;
- Pharmacy;
- Dentistry;
- Paramedical;
- Radiology;
- Speech and language therapy; and
- Any other medical professions who evaluates and treats a patient.

In the South African context, the biokineticist may be included. Other professions of which the training is not necessarily based in health sciences faculties, but could be included in IPE, include social work and psychology. Respiratory therapists (incorporated into the physiotherapy scope of profession in South Africa) may also be included according to Olenick *et al*. (2010:77).

Thistlethwaite (2012:60) states that IPE aims to prepare healthcare professionals who, once graduated, are able to understand their own as well as other professional roles and have a good understanding of teamwork, be it as a leader or as a member. It creates opportunities for interaction to occur, promoting collaborative practice and optimal patient care.

2.3 OUTCOMES OF IPE

The Centre for the Advancement of Interprofessional Education (CAIPE) in the UK developed seven principles for IPE provision and development, namely that it works to improve the quality of healthcare, it focuses on the needs of service users and carers, it involves service users and carers, it encourages professions to learn with, from and about each other, it respects the integrity and contribution of each profession, it enhances practice within professions and it increases professional satisfaction (Freeth 2007:2). Essentially their vision entailed the creation of a work environment that would value the contributions of the different healthcare workers as well as understand and co-ordinate their contributions. Robertson and Bandali (2008:501) also include the principles of teamwork, communication and conflict resolution. By

using these learning principles, certain outcomes for an IPE programme can be achieved.

Thistlethwaite and Moran (2010:504, 509) suggested that IP learning outcomes should be categorised into 1) profession-specific outcomes, 2) generic outcomes (for two or more professions), and 3) generic outcomes for all professions. As seen in Table 2.1 below, Thistlewaite and Moran (2010:510) collated the six broad themes (and sub-themes) which can form the outcomes of an IPE programme and can lead to IP learning. The Interprofessional Education Collaborative Expert Panel (2011:15) also identified four key areas of competency for IPE which included 1) values and ethics of IP practice, 2) professional roles and responsibilities, 3) IP communication and 4) IP teamwork. As can be seen in Table 2.1, these competencies correspond to the outcomes listed by Thistlethwaite and Moran (2010:511).

Table 2.1. Themes and sub-themes of synthesised outcomes of IPE (taken from Thistlethwaite and Moran, 2010:511)

Outcome/Themes	**Sub-themes**
Teamwork	• Knowledge of and skills for (including recognition of importance of common goals) teamwork • Knowledge of, skills for and positive attitudes to collaboration with other health professionals • Assume the roles and responsibilities of team leader and team member • Barriers to teamwork • Improve collaboration with other health professionals in the workplace • Analysis of when and why professionals become key workers • Team dynamics and power relationships • Co-operation and accountability
Roles/Responsibilities	• Knowledge and understanding of the different roles, responsibilities and expertise of health professionals

	• Knowledge and development of one's own professional role • Similarities and differences relating to roles, attitudes and skills • Understanding of role/professional boundaries • Being able to challenge misconceptions in relations to roles • Knowledge of health system and organisation of healthcare within it • Philosophies of care
Communication	• Communicated effectively with other health professional students • With other professionals • Negotiation and conflict resolution • Express one's opinions to others involved with care • Listen to others/team members • Shared decision making • Communication at beginning and end of shifts (handover, handoff) • Awareness of difference in professionals' language • Exchange of essential clinical information (health records, through electronic media)
Learning/reflection	• Identification of learning needs in relation to future development in a team • Identification of common professional interests through reflection • Learning through peer support • Reflect critically on one's own relationship within a team • Transfer interprofessional learning to clinical setting • Self-questioning of personal prejudice and stereotyped views

The patient	• The patient's central role in IP care (patient-focused or centred care) • Understanding of the service user's perspective (and family/carers) • Working together and co-operatively in the best interests of the patient • Patient safety issues • Recognition of patient's needs • Patient as partner within the team
Ethics/attitudes	• Acknowledge views and ideas of other professionals • Respect • Ethical issues relating to teamwork • Ability to cope with uncertainty • Understand one's own and other's stereotyping • Tolerate difference, misunderstandings and shortcomings in other professionals • Whistle blowing

2.3.1 Collaboration/Collaborative Practice

Although this outcome is not specifically mentioned in Table 2.1, the ultimate outcome of any IPE programme is to achieve collaborative practice among healthcare practitioners (Olenick *et al*. 2010:80). According to the World Health Organisation (WHO) (2010:13) collaborative practice occurs when health workers from different professions work with patients, their families and the community to provide services of the highest quality in all healthcare settings. Aase *et al.* (2014: 170) states that the Norwegian government views IP collaboration as a "*critical element*" in providing optimum healthcare in the country, although healthcare programmes rarely teach students how to work collaboratively with other healthcare professionals (Ateah *et al*. 2011:209).

Collaborative practice can result in:

- Improved access to and co-ordination of health services (Reeves *et al.* 2013:4, WHO 2010:18).
- Improved use of specialist clinical resources (WHO 2010:18).
- Improved health outcomes for people with chronic diseases (WHO 2010:18).
- Improved patient care and patient safety (Reeves *et al.* 2013:4, Bridges *et al.* 2011:1, WHO 2010:18).
- Decreased patient complications (WHO 2010:18).
- Decreased length of hospital stay (WHO 2010:18).
- Decreased tension and conflict among caregivers (WHO 2010:18).
- Decreased staff turnover (WHO 2010:18).
- Decreased clinical errors (WHO 2010:18).
- Decreased mortality rates (WHO 2010:18).
- Improved ability to refer patients between the professions (Lumague *et al*. 2006:250; Snyman *et al.* 2015:318).
- Improved communication (Lumague *et al*. 2006:250).
- Respect for other professions (Lumague *et al*. 2006:249; Snyman *et al.* 2015:318).
- Better use of professionals' skills (Reeves *et al.* 2013:4).

IPE can enhance IP collaboration and decision-making (Lapkin *et al*. 2013:90) as IP collaboration does not happen automatically (Waggie and Laattoe 2014:370). A systematic review by Zwarenstein *et al.* (2009:2) reviewed six studies, finding that IPE resulted in improved teamwork and collaboration in four of the studies. The other two studies found little proof that this was the case. Perceptions of and understanding of other professions' role as well as one's own professional role can affect the formation and effectiveness of collaborations (Ateah *et al*. 2011:209).

The newly implemented UFS IPE module also had collaborative practice at its centre. The main competence that the module aimed to achieve through these IPE sessions was to encourage collaboration among healthcare professionals based on the six key domains of collaborative practice in order to improve health outcomes. These key

domains are care expertise, shared power, collaborative leadership, optimised role/scope, shared decision-making and effective group functioning (RNAO 2013:6). Each session also had an outcome. Session one aimed to clarify what collaborative practice is and to establish a statement of shared values. The outcome of session two and three was for the students to demonstrate shared decision-making and power through effective communication between all the healthcare professionals. (The difference between session two and three was that in session two the patient was suffering from an acute stroke, while in session three the same patient had progressed to being medically stable but not yet fully rehabilitated back to full function.) The outcome of session four was to compile a plan on how to establish a collaborative team in a new healthcare facility by making use of the principles learned during the IPE module.

Directly linked to collaborative practice in IPE, is teamwork and communication. These aspects were also imbedded in the UFS IPE module outcomes as seen above and will be discussed in the following section.

2.3.2 Teamwork and communication

Effective teamwork and communication cannot be separated and are therefore discussed together. Effective team functioning is dependent on effective teamwork (Buring *et al.* 2009:3). Irrespective of the healthcare profession, it is imperative that patient care is a top priority. Patient needs have become more challenging and complex and as a result no single professional is able to meet all these needs (Barr 2009:187). Achieving a holistic approach to patient care requires inputs from many health professionals. An IP approach requires effective teamwork as professionals share their expertise in order to achieve their shared goal (Buring *et al*. 2009:4) namely to restore function in a patient (Bridges *et al*. 2011:1) IPE interventions are able to promote communication between students from different professions as well as improve teamwork (Hallin *et al.* 2009:156). However, not many healthcare education programmes include training in teamwork in their discipline-specific programmes (Barnsteiner *et al*. 2007:149) and therefore students are not often faced with having to work in IP teams (Aase *et al*. 2014:171). There are also many challenges to teamwork.

Problems with working in teams stem from the lack of knowledge, lack of teamwork skills and lack of respect for others (McNair, 2005:456). Communication breakdowns may be caused by poor teamwork (Anderson *et al*. 2006:182) and poor IP communication may result in poor patient outcomes (Olenick and Allen 2013:150; Thistlethwaite 2012:59) or fatal mistakes (Olenick *et al*. 2010:75). It was shown in the US and Australia that preventable deaths and adverse events may be caused by lack of communication, poor teamwork and poor IP collaboration (Olenick and Allen, 2013:149; Armitage *et al*. 2008:277). Although no data are available for South Africa, in a population as diverse as South Africa's with 11 official languages (and other unofficial languages), communication between professionals could be an enormous barrier to optimal patient care.

Hall (2005:191) found that a difference in values traditionally held by certain professions may also be a barrier to communication. She explains how physicians assume leadership roles as it is what was taught to them during their training and they therefore find it very difficult to share control. In comparison, nurses value talking to their patients to gain insights into their condition, instead of relying solely on the objective data. Aase *et al.* (2014:173) found that medical students were required to work individually, to take responsibility for patients and to make decisions. The hierarchy so entrenched into medical training, as well as the status that doctors enjoy, can be a barrier to IP teamwork. Doctors are trained to take responsibility for their decisions and therefore the sharing of responsibility and decision-making are traits unfamiliar to doctors (Whitehead 2007:1012). Snyman et al (2015:318) reported that when students collaborate with other professions, they realise that doctors are unable to solve all the patient's health-related problems alone, challenging the traditional hierarchy of the doctor always being in charge.

Maeno *et al*. (2013:15) found that the students included in their study saw IP communication as important and that IPE potentially improved communication, thereby enhancing IP co-operation. In health professions curricula, no formal training regarding teamwork is provided to students. Students are expected to instinctively know how to work together with other professionals in teams (Sargeant *et al.* 2008:233).

In Figure 2.1 the population and in Figure 2.3 the group composition of the UFS IPE module are provided in order to demonstrate the teamwork that was required of the students in the module. Teamwork thus had to take place across the boundaries of different Schools within the Faculty, different Departments within the Schools, as well as across a range of different disciplines.

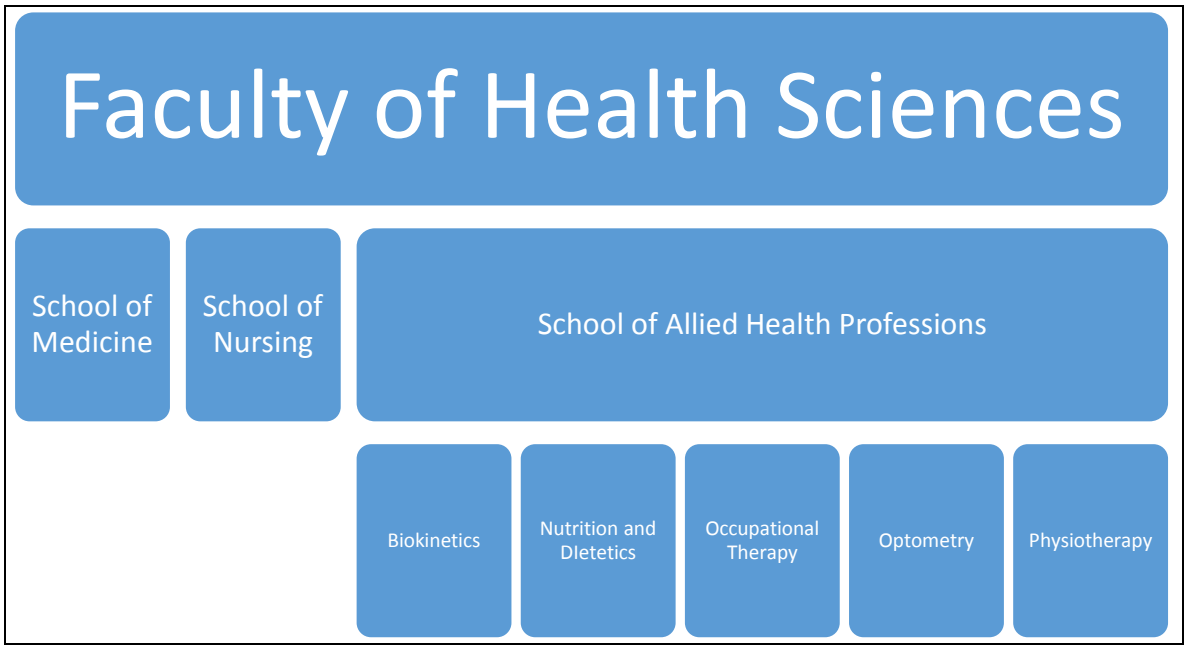

Figure 2.1 Population at the UFS Faculty of Health Sciences

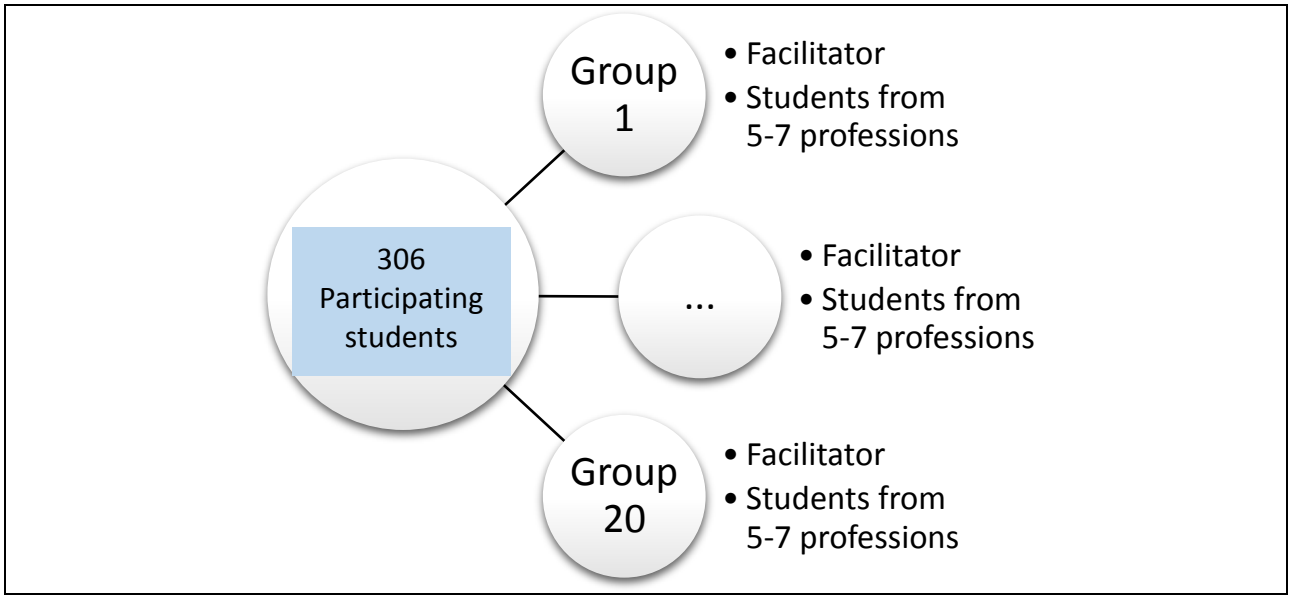

Figure 2.2 Group Composition for IPE at the UFS

Figure 2.2 shows that 306 fourth year students in the FoHS were divided among 20 facilitators. The dietitians, optometrists and biokineticists were small groups (14, 29 and 4 respectively). Therefore not every group had all of these professions represented, although attempts were made that groups who did not have a dietitian had an optometrist, for example. Unfortunately the dietitians were only able to attend one session as a result of clashes in their timetables. Group composition remained the same throughout the four sessions. This offered group members the opportunity to interact with each other and get to know each other better over the four sessions. A facilitator from any of the three schools within the FoHS was allocated to each group. The role of each student in the group was that of their own profession. Therefore, participation in the group consisted of exercising their own roles and responsibilities.

2.3.3 Roles and Responsibilities

The Health Professions Council of South Africa (HPCSA) states that the core competencies of medical practitioners include being a communicator, collaborator, leader and manger, health advocate, scholar, and professional (HPCSA 2014). These can be seen as the roles of the healthcare professional. IPE is able to provide the student with skills to assist in developing all these competencies, especially with regard to being a collaborator, communicator and leader.

Numerous authors have written about the impact that IPE has on role clarification (Buring *et al*. 2009:3; Maeno *et al*. 2013:15; Barker and Oandasan 2005:211). MacDonald *et al.* (2010:242) view knowledge of professional roles as a key competency of collaborative practice. Maeno *et al*. (2013:15) reported that students recognised that patients should be managed holistically and that their families should be included in their care. This requires different professions to be involved and each profession should have a good understanding (and a greater awareness) of their own role, but also the roles of the other professions (Kilminster *et al*. 2004:715). This leads to the enhanced understanding of each profession and the establishment of collaboration between professions as students become much more aware of their own professional roles. According to Barker and Oandasan (2005:211), knowledge of each profession is a critical component of an IPE programme.

Different knowledge and the values that each profession places on this knowledge may cause a professional to feel ostracised from an IPE opportunity and thereby restrict collaborative learning (Oandasan and Reeves 2005b:40). Students may form stereotypes for their own, and well as other professions and these stereotypes may be re-inforced by the faculty members who train students (Oandasan and Reeves 2005b:41). An IPE initiative may help students to socialise with each other, thereby providing opportunities for effectively collaborating and in doing so, may start to break down negative stereotypes resulting in positive attitudes (Oandasan and Reeves 2005b:41). Negative stereotypes may be the cause of poor teamwork too (Barr, 2009:190) as negative stereotypes may lead to negative interactions between professions. Students may still have many preconceived ideas of what the tasks of a certain profession consist of (Delunas and Rouse, 2014:104, Lindberg 2009:242). Stereotyping leads to negative attitudes which may be attributed to the students being influenced by the clinicians who teach them (McNair 2005:459). If students complete their professional degree and enter their careers without being exposed to interaction with other professions, poor understanding and perceptions of these professions go unchallenged. One way in which to reduce preconceived ideas in students is to improve their understanding of other professions' role (Ateah *et al.* 2011:209), thereby leading to collaborative practice with effective working relationships.

In health professions education, the view that the doctor is at the top of the hierarchy (and therefore leader of the team) is still predominant (Voyer 2013:21). Olenick and Allen (2013:158) found that in a group consisting of nursing, medical, pharmacy, physical therapy, occupational therapy, physician assistant and social work students, medical students had the lowest mean score on attitude to IPE. In a study that only looked at medical and nursing students, Delunas and Rouse (2014:103) found that medical students had significantly less positive attitudes towards communication and collaboration than nurses did, and interestingly, this less positive attitude was irrespective of whether that student had participated in a healthcare team or not. However, these students did agree that collaboration between these professions was important, but that in reality it did not happen. Hallin *et al.* (2009:156) also found that of the healthcare professions included in their study (nursing, occupational therapy, medical and physiotherapy), medical students had the least interaction and/or contact with members of other professions. These students did, however, acknowledge that

communication and effective teamwork between the team members was crucial to quality patient care. Aase *et al*. (2014:173) found that medical students had a lack of knowledge with regard to the roles and responsibilities of nurses. On the other hand, the same study found that nurses were taught to share responsibility within a team context.

Delunas and Rouse (2014:103) agree with Lidskog *et al. (*2007:387) that collaboration is only possible when the different professions have a deeper understanding of the similarities and differences between professions. This means that students need to have opportunities to engage with professions other than their own in order to share their values and knowledge and to understand their respective roles and functions. Students are satisfied with the opportunity to learn about other professions' roles in face-to-face learning opportunities (Curran *et al*., 2010:47). When students learn to collaborate, by means of IPE, negative attitudes and stereotypes may decline causing the focus to be on effective teamwork and building good relationships focusing on patient-centred care (Olenick and Allen, 2013:150).

Students reported that their own discipline-specific education did not include training in team skills (Kyrkjebø *et al.* 2006:508) and they found these skills lacking when performing in an IP team. An IP team consists of "*members from different health professions who each have specialised knowledge, skills and abilities*" (Buring *et al*. 2009:2). The team members combine their findings and collaborate and communicate with the team members to reach a decision regarding the approach to the patient's care. In this manner, each team member is afforded an opportunity to take the leadership role in situations applicable to their expertise. Competencies that are ideally taught during IPE programmes include teamwork, leadership and the compilation of common patient goals (Buring *et al.* 2009:7). Teams in which the members work effectively, communicate well and understand each other's roles tend to result in safer, high quality patient treatment (Buring *et al.,* 2009:1*).*

2.3.4 Patient-centred care

The aim of an IP team is to use collaborative practice to provide patient-centred care (Buring *et al*. 2009:2). Patients should be involved in their own care with regard to decision-making, allowing the patient to discuss their options for treatment. In this

way, the patient becomes part of the IPE team. This also requires healthcare practitioners to provide the patients with the necessary information in order for them to make informed decisions as part of the IP team (Nisbet *et al*. 2008:63). Team members are required to develop a shared goal for patient treatment and then utilise their own professional expertise to achieve this patient-centred treatment goal (Buring *et al*. 2009:2).

The UFS IPE module also valued patient-centred care. The UFS IPE module made use of simulation to present the module. The case-study used in the simulation consisted of a patient who had suffered from an acute CVA (stroke) and was admitted to hospital. The simulation made use of a SP who was trained to portray the patient and provide feedback on their experience of how the group functioned and communicated, as perceived by the SP as a patient.

In order for the main focus in healthcare to remain patient-centred care, it is vital that individuals' attitudes towards working together are positive.

2.3.5 Attitudes

Attitudes towards IPE may be concerned with the values and beliefs that are held, professional identity, stereotypes and status (Parsell and Bligh 1999:96). Curran *et al*. (2010:49) found that students participating in IPE had positive attitudes, although attitudes differed across the various professions.

There are various instruments available to measure students' attitudes towards and readiness for IP education. The Readiness for Interprofessional Learning Scale (RIPLS) (Parsell and Bligh 1999:99; McFadyen *et al*. 2005:602), the Attitudes Towards Healthcare Teams Scale (ATHCTS) (Heinemann *et al*. 1999:123), Interprofessional Attitudes Questionnaire (IAQ) (Lindqvist *et al.* 2005:269), Interdisciplinary Education Perception Scale (IEPS) (Luecht *et al*. 1990:181), as well as the adapted version of the IEPS (McFadyen *et al*. 2007:433) are commonly used. These scales are used for the students' self-reported changes and therefore cannot measure whether there was an actual change in students' attitudes (Reeves *et al*. 2008a:15).

Studies have, however, shown that IPE interventions are able to improve students' attitudes towards collaborative practice (Robben *et al*. 2012:200; Wakely *et al.* 2013:424; Darlow *et al*. 2015:5). The long-term effect of these changes has not been established as yet. However, Reeves *et al.* (2013:16) are of the opinion that by implementing IPE in undergraduate programmes, there is an investment into the future of healthcare systems.

During the IPE module at the UFS, students completed the RIPLS at the beginning of their IPE module and again at completion of the module. These results were analysed and used in another study and are not discussed in the present study.

2.3.6 Ethics

IP ethics includes how professionals should treat the different professionals with whom they work. Characteristics such as mutual trust, being patient-centred, confidentiality and respect are important ethical principles to keep in mind when working interprofessionally (Banks 2010:281). Issues that may arise as a result of healthcare workers working together include information sharing, power struggles, a conflict in personal values and the overlapping of roles (Banks 2010:282). Bennett *et al*. (2011:575) suggest that an IPE intervention with at least three different professions present can foster mutual respect, as well as recognition of each other's roles. Where there is mutual respect and good knowledge of professional roles, teams function effectively (Ateah *et al.* 2011:213). Lack of respect leads to poor teamwork, as well as poor collaboration with others (Sargeant *et al.* 2008:233).

During the IPE module at the UFS, the first session required students to draw up a set of values to which their groups would adhere. These included aspects such as (but not limited to) mutual respect, tolerance of differing opinions, confidentiality, trust, acknowledgement of different professions and their roles and discrimination on the basis of preconceived ideas and stereotypes. This value statement would be the guideline for how to group planned to function while involved in the tasks of the IPE module.

2.4 FORMAT OF IPE

The learning activities within IPE are varied and depend on how they are incorporated into healthcare professions' educational programmes. Langton (2009:40) identified five types of formats of IPE delivery, namely, insertion into an existing (or new) curriculum, insertion within a clinical practice area, as a common curriculum across all professions, an eLearning course or a work-based programme. In this current study a common curriculum across all professions was used.

A number of different approaches towards IPE programmes have been described, namely a case-study (case-based) IPE programme (Botma *et al.* 2014; Baker *et al.* 2008; Reeves, 2016:187; Olenick *et al*. 2010:79), collaboration in a rehabilitation unit (Lumague *et al.* 2006:249), shadowing (Freeth 2007:17), simulation (Olenick *et al*. 2010:79), training in a clinical education ward (CEW) (Hallin *et al*. 2009:156) or clinical work in an IP team (Freeth 2007:17; Reeves 2016:187). Reeves (2016:187) also names other interactive learning methods such as e-learning (online discussions) and blended learning (combining e-learning with traditional face-to-face methods) as ways in which to deliver IPE programmes. Snyman *et al.* (2015:318) found that by making use of the International Classification of Functioning, Health and Disability (ICF) in IP teams, IP collaboration could be promoted. Combination of various methods can be used, for example, a case study can be incorporated with simulation in order for the student to practice delivering care (Thistlethwaite *et al.* 2012: e427).

The module at the UFS makes use of a didactic interactive session, with an unfolding case study combined with simulation, as seen in Figure 2.3.

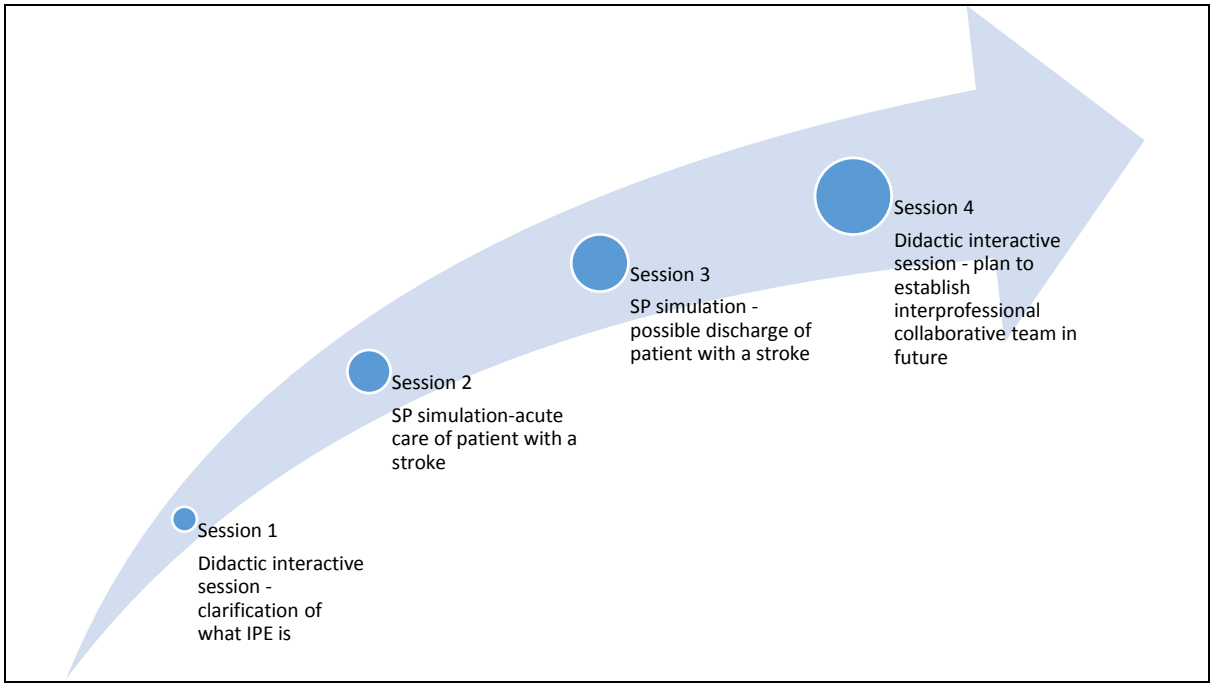

FIGURE 2.3 Use of interactive sessions with simulation

The case study used in the IPE module at the UFS was that of a patient who had suffered a stroke. The patient was a 65 year old caucasian male who lives in a rural area. He reported to a district hospital in Bloemfontein 48 hours previously. He was admitted to the high-care unit. He is retired, living off a small pension and was accompanied by his wife. He was transferred to the ward and this is where the students first met the patient. All medical history (current and previous) was given, as well as all the current findings on examination. The medication he had been given was listed and the diagnosis of left middle cerebral artery infarction was made.

The case study required the students to manage the patient in the acute stage. In a follow-up session, students were required to debate whether the patient should be discharged. These two sessions (session two and three) made use of SP's to simulate the case study. The students were required to simulate a ward round where all the different professionals were present and were interacting with each other, and the SP, in order to develop a management plan for the patient. They had to communicate effectively in order to achieve the stated outcome (see section 2.2.1).

In a Best Evidence Medical Education (BEME) systematic review (Thistlethwaite *et al.* 2012: e427), case-based learning (CBL) was defined as having students work on

cases based on real patients in order for them to learn how to manage the patient and understand the mechanism leading to the patient's condition. They allow the students to develop a holistic approach to care and thus prepare the students for their work in clinical areas. In CBL, practice can be linked to theory and can be used for individual or group activities.

Scalese *et al*. (as cited by Robertson and Bandali (2008:500)) defined simulation as '*a person, device or set of conditions which attempts to present the evaluation of problems authentically, readily available at any time, and can reproduce a wide variety of clinical conditions*.' Simulation in an educational context refers to the "*recreation of an event that it as close to reality as possible*" (Baker *et al.* 2008:373). The use of simulation allows students to use their knowledge and skills and portray their attitudes in order to "manage" a "patient" in a situation that poses no risk or harm to the patient. The "patient" is an actor, known as a standardised patient, who is paid to portray the role of a real patient with a medical condition (Paul *et al*. 2014:2). After the simulation has been done, the student is able to observe their clinical decisions via videos (Baker *et al.* 2008:373) and receive feedback (Robertson and Bandali 2008:500; Kyrkjebø *et al*. 2006:512), thereby determining whether the required outcomes were met.

Experiential learning is defined by Kolb (1984) as a planned activity which engages students resulting in learning. The cycle of experiential learning begins with a concrete experience. Thereafter, a period of reflection on the experience takes place. In this way learning is able to take place which allows a student to then use what they have learnt and apply it in another similar situation. Experiential learning is usually associated with training in a work place, but simulation can be seen as experiential learning too. By making use of simulation, students are able to take part in complicated, demanding cases and must manage them appropriately (Kyrkjebø *et al.* 2006:508). Students can see the direct link between the learning experience of the simulation and real life as a future practitioner. The student has to respond to the patient's needs as they would in a real-life situation and students found this simulation-based learning relevant. This experiential learning which is relevant to their practice in future has been found to facilitate IP learning (Baker *et al.* 2008:373) and is also incorporated the principle of adult learning whereby a learners needs to be actively engaged in the process of learning (Bryan *et al.* 2008:6). A simulated situation

involving different professions can allow students to practice their skills and collaborate with other team members. In these simulations students are able to bring their own existing knowledge, skills and attitudes and in an experiential learning activity, are able to respond appropriately to the situation with no risk to the "patient". This no-risk environment helps to improve the students' confidence, allows them to improve their knowledge by application thereof, and allows them to reason clinically (Robertson and Bandali 2008:501).

However, one reported disadvantage of the use of simulation in IP education may be that the student concentrates more on their own knowledge and skills. This resulted in less focus on the knowledge that related to the efficient functioning of a team, such as communication, co-operation and leadership (Kyrkjebø: 2006:513). Students are more opposed to IPE activities which use a lower level of realism and their learning experience was poorer in such activities (Rosenfield *et al*. 2011:475).

2.5 FACILITATION OF IPE ACTIVITIES

Facilitating IPE is a demanding, challenging task (Lindqvist and Reeves 2007:404) as a result of the diverse student groups involved therein. Essential character attributes for successful facilitation of IPE learning are among others:

- Experience of IP work.
- In-depth understanding of interactive learning methods.
- Knowledge of group dynamics.
- Confidence in working with IP groups.
- Flexibility (to creatively use professional differences within groups)
- Enthusiasm
- Humour
- Empathy (Reeves 2008a:188; Lindqvist and Reeves 2007:404).

Facilitators value training before commencement of the IPE programme (ref) as often the number of facilitators is large, especially within a large faculty where the number of students is high as there are many programmes offered within the faculty. In order to get facilitators involved, ongoing workshops/seminars or developmental sessions are needed to provide the facilitators with opportunities to develop the knowledge and

skills needed to facilitate IPE (Reeves 2016:189). During the facilitation of IPE sessions, facilitators also found that they relied on peer support and were able to share their personal experiences with each other. They also felt that it was imperative that they were role models to the students that they were facilitating (Lindqvist and Reeves 2007:404). A challenge, for some facilitators, was the ability to determine how much direction should be given during the delivery of patient care (Reeves *et al.* 2002:342).

The role of the facilitator during a debriefing session is vital as it is often during debriefing that the students will start to critically analyse their actions, make connections to their real-life situations and start to better understand IP collaboration (van Soeren *et al*. 2011:437). The type of facilitation used may influence how much a student is prepared to share their own experiences. A facilitator who immerses themselves into the group and shares their own professional and IP experiences, obtains better participation from the group members than one who stands apart and wants to "teach" (van Soeren *et al*. 2011:438).
In the UFS IPE module, facilitators for the groups were professionals who came from the various departments and school within the FoHS at the UFS. These professionals were volunteers (most often lecturers) who received a two hour training session before the commencement of the IPE module. Not all facilitators had previous experience with group facilitation or simulation. The same facilitator was used for the same group during every session in order for the students to feel comfortable with their facilitator and feel comfortable sharing their experiences with them.

The facilitators gathered half an hour before the students' sessions began in order for them to orientate themselves for the day's session. Any additional information was also given by the organizer, where necessary. At the beginning of each session, the facilitator gave the group instructions regarding how each session would work. The instructions given to the students were that they should communicate effectively with other team members in order to demonstrate shared power, shared decision-making, collaborative leadership and professional roles in order to provide the "patient" with optimal care. The facilitator was there to guide them, but did not take an active role in the simulated ward round.

After the simulation, the SP was given the opportunity to provide the group with feedback from his/her perspective. The SP told the students how they experienced the simulation (e.g. did the student greet the patient, speak clearly etc.), as well as how they felt the group communicated amongst themselves and with the SP. The facilitator provided the students and SP with guidance here. The feedback from the SP was followed by a debriefing by the facilitator, using the plus delta model of debriefing.

The group's own footage from the first simulation was shown during their third session and students discussed what they saw, once again under the guidance of the facilitator. The students then had another simulated ward round. Once again the SP was given the opportunity to provide feedback regarding how the students communicated and how she/he perceived the interaction. A debriefing session followed once again.

In the IPE module all students had covered the theory necessary for the management of a patient suffering from a stroke. This was a factor in determining the timing of the IPE module within the FoHS.

2.6 TIMING OF IPE

Various opinions exist regarding when IPE activities should be included into professional development and at present there is no consensus. Armitage *et al*. (2008:278) and Bennett *et al.* (2011:575) suggest that IPE should occur in the undergraduate years. Hind *et al.* (2003:30) found that students entering their studies in one of the healthcare disciplines displayed positive attitudes towards IP learning and a strong willingness to participate in IPE activities. The reason for this could be the sense of belonging to a greater group (i.e. first year students or healthcare students) and as such IPE can effectively be incorporated into their curricula as the students are very receptive to learning with each other (Hind *et al*. 2003:33). Students have their greatest readiness for IPL at the beginning of their professional education (Coster *et al*. 2008:1667) and by introducing IPE activities at this stage fewer negative stereotypes about each profession have formed (Hind *et al.* 2003:33). By introducing IPE early in an educational programme the feeling of isolation from other professions can be eliminated before they are allowed to develop (Hall 2005:194). The IPE

activities can be used to prepare students to work collaboratively and then later to reinforce what they learned (Reeves 2016:187). However, effectiveness of the IPE activities may be affected by inadequate understanding of professional roles in the early years of study (Olson and Bialocerkowski 2014:242; Waggie and Laattoe 2014:370).

On the other hand, Reeves (2016:187) argues that IPE activities held post-qualification are beneficial as professions have a good understanding of their own professional role and identity. It has also been suggested that IPE should form part of continuous professional development (CPD), therefore continuing throughout the professional's career (Reeves 2016:187).

Besides the timing, there is no consistency regarding how many hours are required for an IPE intervention. The duration of IPE interventions varied vastly, namely a three hour session (Solomon and Salfi 2011:3), ten hours spread over four weeks (Nisbet *et al.* 2008:58), 11 hour intervention (Darlow *et al.* 2015:8), a one week long programme (Maeno *et al*. 2013:10), a two week long programme (Ponzer *et al.* 2004; Hallin *et al.* 2009:152), and a four to seven week long programme (Waggie and Laattoe 2014:370). One study made use of a nine credit module for IPE (Pardue 2013:98). Most interventions lasted between 24 and 120 hours (Reeves *et al*. 2008b:14). No study was found where the number of hours of an IPE intervention was investigated or compared.

At the UFS, the IPE module consisted of four sessions held within seven weeks, running from February to April 2015. Sessions were not every week as a result of there being public holidays in between. Each session was held on a Wednesday afternoon and lasted for approximately two hours, scheduled to start at 14:00 until 16h00.

IPE was delivered to final year students from all the departments within the FoHS, with the exception of medical students who were in their penultimate year of study. Biokinetics students were in their final year of study, but were fifth year students. This is due to the biokinetics programme being a two year honours (intern) programme. The Department of Sports Sciences felt that the students in their first year of the

honours programme did not have sufficient discipline specific knowledge and therefore sent second year honours students to participate in the IPE module. It is important that all the students had covered the theory of a stroke so that they would have common knowledge and be able to manage the patient effectively.

2.7 RESEARCH IMPLICATIONS FOR IPE

At present, authors are reporting more on the establishment of IP clinical teams where students are performing their normal clinical duties. These students are reported to be more inclined to practice in the community after qualification (Ambrose *et al*. 2015:1, 15).

There is a call for more qualitative studies of IPE (Olson and Bialocerkowski 2014:243; Reeves *et al.* 2013:16). Studies which utilise more rigorous study methods such as randomised controlled trials are also required (Reeves *et al.* 2013:16). Studies concerning the areas of cost analyses as well as effectiveness of IP education versus uni-professional education are needed (Reeves *et al.* 2013:16). Carr (2015:78) recommends that research which investigates the influence of IPE on patient safety be performed.

2.8 INTERPROFESSIONAL EDUCATION PROGRAMME AT THE UNIVERSITY OF THE FREE STATE

This section will briefly explain what the IPE module entails, as presented to students in the FoHS in 2015. This section should be read in conjunction with the IPE workbook (Appendix E).

2.8.1 Design and delivery

During 2013 a proposal was approved which aimed to design, deliver and evaluate an IPE programme. This proposal was submitted by Professor Yvonne Botma and Dr Matthys Labuschagne and, with assistance from numerous other professionals from different health care professions, the programme was designed for first implementation in 2014. The team that designed the final IPE programme consisted of Prof Yvonne Botma (SoN), Dr Matthys Labuschagne (SoM), Mrs Desire Coetzee

(SoN), Mr Riaan van Wyk (SoM), Mrs Rialda Hattingh (SAHP – Occupational therapy) and myself, Mrs Michelle Butler (SAHP - Physiotherapy).

During 2014, two IPE programmes were planned, one in the first semester for the English speaking students and one in the second semester for the Afrikaans speaking students (due to the language policy of the UFS being parallel medium). However, due to full curriculums across the board in the FoHS, some departments could only attend either the first semester or the second semester programme, irrespective of the language it was offered in. This led to the decision to have only one programme per year in English. English is the language of communication (written and spoken) in the clinical settings in which the students are required to work, and therefore English was the chosen language for subsequent programmes. In 2014, all the students from the FoHS were included.

After the 2014 programmes, the team involved in the design of the programme once again gathered and made changes to the programme. These changes involved logistical changes and the use of students as SP's was replaced with paid actors. Some changes were made to student assessment within the programme too.

2.8.2 Programme content

Each of the four sessions had a specific outcome as well as a competence which was to be achieved. These were communicated to the students via a workbook (Appendix E). Each student received a workbook which contained all the information required for the IPE sessions. The workbook also contained each activity that students had to do as well as a timeframe in which to do it. The workbook also had other resources such as the HPCSA documents regarding medical students' core competencies, which can be expanded to the other healthcare professionals, and articles relevant to the case study. The core competencies were drawn up by the Medical and Dental Board of the HPCSA, but can be extrapolated to apply to all healthcare professionals, and thus, were included for reference.

Students were also asked to complete the Readiness for Interprofessional Learning Scale (RIPLS) at the beginning of the first session and at the end of the last (fourth)

session. This information was used in a larger study of which this study forms a smaller part.

2.8.2.1 Outline of Session One

Students first had to complete the RIPLS. After completion, the group was introduced to one another through the use of an icebreaker. A short presentation regarding what IPE is was given and thereafter the students had to provide a visual representation to show what their concept of collaborative practice is and how it contributes to improved patient outcomes. The students then compiled a statement of what their group values were. This would be used as a reminder of how to interact with the "patient" and the group members for the rest of the IPE programme.

The students then evaluated their peers regarding how they had participated in the session.

2.8.2.2 Outline of Session Two

Students were given time to read through the patient scenario. This was followed by a simulated grand ward round with all the professionals present. The students were allowed to interact with the "patient" and examine the "patient" if necessary. The instructions given to the students were that they should communicate effectively with other team members in order to demonstrate shared power, shared decision-making, collaborative leadership and professional roles in order to provide the "patient" with optimal care. The facilitator was there to guide them, but did not take an active role in the simulated ward round.

After the simulation, the standardised patient (SP) was given the opportunity to provide the group with feedback from his/her perspective. The SP could include any feedback as there was no set criteria. The SP told the students how they experienced the simulation (e.g. did the student greet the patient, speak clearly etc.), as well as how they felt the group communicated between themselves and with the SP. This was followed by a debriefing by the facilitator using the plus delta model of debriefing, which consists of exploring the positive elements and what needs to be changed.

The students then evaluated their peers regarding how they had participated in the session.

2.8.2.3 Outline of Session Three

The difference between session two and three was that in session three the patient is medically stable but still requires rehabilitation. However, the bed is needed for another patient and the doctor wants to discharge the patient.

The footage from the group's own simulation from session two was shown and students discussed what they saw. The students then had another simulated grand ward round. Once again the SP was given the opportunity to provide feedback regarding how the students communicated and how she/he perceived the interaction. A debriefing session followed.

The students then evaluated their peers regarding how they had participated in the session.

2.8.2.4 Outline of Session Four

The footage of the group's own simulation from session three was shown and students were able to discuss what they saw. The students then had to compile their collaborative practice plan. In order to determine whether their readiness for IP learning had improved, the students completed the RIPLS.

The students then evaluated their peers regarding how they had participated in the session.

2.9 CONCLUSION

In South Africa, newly graduated physiotherapy students report that the nature of the places they found themselves during their placements for their mandatory community service year post-qualification was such that no one professional was able to help the patient (Mostert-Wentzel *et al*. 2013: 25). Most often collaboration was required with other health professionals. To this end, these physiotherapists suggested that exposure to IP training is an important addition to any undergraduate curriculum in all healthcare professions in South Africa (Mostert-Wentzel *et al*. 2013: 25). Skills,

knowledge and attitudes that are needed to achieve effective teamwork which results in high quality patient care, cannot be taught in uni-professional education, and therefore IPE programmes are a vital part in any healthcare practitioner's education. The knowledge that no single profession is able to meet every patient need should drive a desire for collaboration between many different professionals (Suter *et al.* 2009:44). The inclusion of IPE activities can improve the skills and knowledge that professionals need in order to practice collaboratively (Reeves 2013:16).

Armitage *et al.* (2008:277) stated that IP education is an integral component of enabling better teamwork. It is therefore vital that students in healthcare professions undergo IPE at an undergraduate level to improve teamwork and ultimately patient outcomes in order to develop a change in the future workforce and to promote an optimal healthcare system (Buring *et al*. 2009:6). The recognition of this led to the implementation of an IPE module at the UFS.

This chapter focuses on explaining the context of the research. It provides the available literature regarding IP education, as well as the motivation for the study. It shows what the UFS IPE module involved and how it was delivered. In the next chapter, the research methodology that was followed will be described in detail.

CHAPTER 3
METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research methodology and process for this study. It describes, amongst others, the research paradigm, the purpose of the study, the data gathering and the data analysis used in the study. Ethical considerations are also included.

3.2. RESEARCH PARADIGM

A research paradigm is a model which can be used to observe a phenomenon (Babbie 2013:57). Having come from a positivist approach, as was appropriate to my training as a physiotherapist, the temptation to perform a positivist study was great. However, this approach would not have been the best one in order to answer my research question – that of describing the experiences of the students, as a positivist approach tends to believe that one single reality exists. Therefore, the research paradigm that underpins this qualitative study is an interpretivism approach (also referred to as a constructivism approach by Creswell (2008:6)), which emphasises the understanding of the participants' viewpoints and how they interacted with the phenomenon being researched (Botma *et al*. 2010:42). There is value in how participants interpret their world and therefore their reality, and in how they attach meaning to their experiences (Fouche & Schurink 2011:309). The research paradigm is based on the referral to ontology, epistemology and methodology.

3.2.1 Ontology

Ontology refers to how a researcher views the phenomenon being studied and what a researcher's perceived reality is (Creswell 2013: 41). In an interpretivist approach there are multiple realities which are socially constructed. This approach allows one to explore what people think, what their problems are and how they deal with them. It allows participants to interact with the researcher and participate in conversation. It generates knowledge regarding the meaning of experiences that have been shaped by peoples' social interactions (Creswell & Plano Clark 2011:40). The goal of this approach is an understanding of the phenomenon.

Together with other health professionals in the Faculty of Health Sciences (FoHS) at the University of the Free State (UFS), I have been involved in the design and delivery of the interprofessional education (IPE) module for two years. I was a facilitator of learning during these IPE sessions in 2014 when it was piloted, as well as in 2015 and 2016. Literature is divided on the outcomes and long term benefits of IPE and therefore I wanted to investigate the UFS students' experiences of the module offered at the UFS.

I have worked in a variety of clinical settings (private hospital, special school) where various healthcare professionals have interacted. However, I experienced limited opportunities for IP collaboration in these clinical settings. A variety of factors could cause this, but perhaps one of the reasons could be the lack of education regarding IP collaboration. A large number of professionals still work autonomously with little regard for interacting with other professionals. Thus, a generation of healthcare professionals who will willingly interact with others for the good of their patients is needs to be developed.

I view the fourth and fifth year students in the FoHS as professionals-in-training and as they are nearing the end of their studies, they are viewed as junior colleagues. They are all actively involved in the treatment of patients under the supervision of qualified professionals. As there was a large group of students attending the IPE module, varying opinions could have been offered and each of these opinions was seen as valuable. The students' learning experience about IP collaboration was through active engagement with the theoretical content and two immersive unfolding simulation sessions. Hence the students were able to share their own lived experience thereof. I believe that the students were able to internalise the experience and make meaning of it for themselves. In my opinion, the improved interaction of the students with the standardised patient (SP) and among themselves during the second simulation experience demonstrated that the learning experience was meaningful. Although I gained new insights due to my involvement in planning and executing the learning experience, my experience is different from those of the students. Interpretivism implies that it is impossible to have a single reality and therefore it is important to explore how the students experienced the learning opportunities and what their realities are.

3.2.2 Epistemology

Epistemology refers to how knowledge is gained (Creswell & Plano Clark 2011:41). People construct their knowledge by means of their own, subjective lived experiences (Creswell 2013:20) to which they attach meaning. These meanings are formed through interaction with other people (Creswell 2013:25). As these meanings can be various and multiple a researcher attempts to take all the participants' views of the situation and develop a view of how the participants made meaning of a phenomenon.

Knowledge regarding the students' experience was gained by analysing the focus group data and observing the interaction between students during their focus groups, as well as by the information offered during the focus groups.

I believe that learning takes place through various methods and that active engagement with the material, as well as building on existing knowledge that each student has will encourage deeper learning to take place. Through involvement in the IPE module, it is clear that IPE can plant the seed of IP collaboration, with the hope that students will take on board the information/learning experience provided during the IPE module and therefore become healthcare professionals who work collaboratively with others. Through focus groups I aimed to get insight into their experiences of the learning and/or interaction that had taken place during the IPE module.

3.2.3 Methodology

Methodology refers to the process of research (Creswell 2011:41) and includes the rules and procedures that need to be adhered to during the investigation to obtain the required information (Botma *et al*. 2010:41). It is the procedure for the investigation (Babbie 2013:4). This study was a qualitative study which made use of an inductive approach i.e. the data generated the theory (Hesse-Biber & Leavy 2011:5). It made use of focus groups whereby students expressed their own opinions. Focus groups require participants to gather for a group discussion, guided by a trained facilitator to discuss a topic. I attempted to make sense of these views in order to gain a better understanding of their experiences. Participants' views were used to construct broad themes and categories regarding their experiences of the IPE module. This study was

interpretive in nature and aimed to make sense of the students' experiences of IPE and to describe them from the students' own perspectives.

3. 3 RESEARCH PURPOSE

The purpose of this study was to describe the experiences of the fourth and fifth year students from the FoHS at the UFS regarding the IPE module that they attended in 2015 as a form of evaluating the current IPE module. Evaluation of study modules is a means of improving teaching and learning quality (Kember & Ginns 2012:144); thus this description of the students' experience would provide the module developers with an idea of the student's satisfaction with the module. The objectives that were identified in order to achieve this aim where as follows:

i. obtain demographic information of the participants by means of a demographic questionnaire; and
ii. obtain the participants' views on their experience of the IPE module presented at the UFS in 2015 by means of focus group discussions.

This study formed part of a bigger implementation and evaluation study, which was approved by the Ethics Committee of the FoHS (now called the Health Sciences Research Ethics Committee of the University of the Free State HSREC-UFS - ECUFS93/2014). The bigger study aimed to describe the development, delivery and outcomes of the IPE module in the FoHS at the UFS, making use of quantitative and qualitative data gathering techniques. The greater study made use of student, lecturer and facilitator populations and described the development, design and delivery of the IPE module. It also included evaluation of the module.

The main aim of this study is to describe the students' experiences of the IPE module that they attended in 2015.

3.4 STUDY PROCESS

Figure 3.1 shows the research process that was followed.

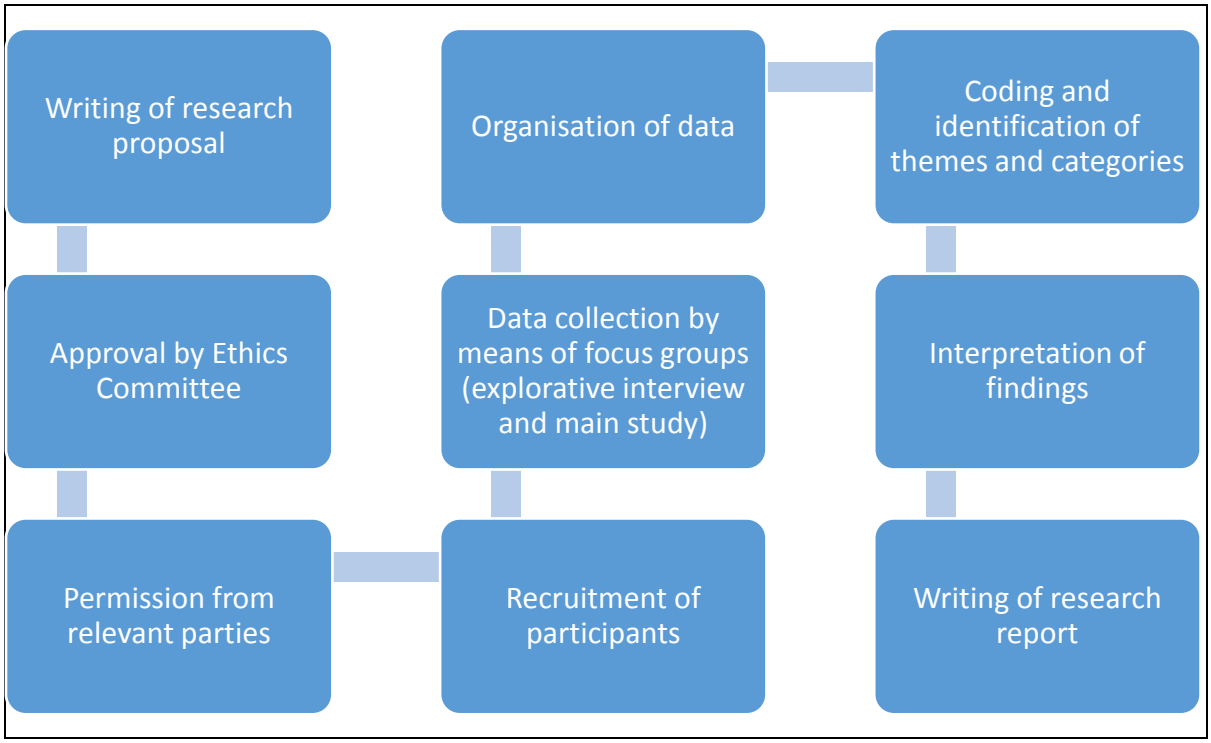

Figure 3.1 The research process.

3.5 STUDY DESIGN

This study made use of a qualitative descriptive study design. Denzin and Lincoln (2011:3) explain qualitative research as involving "*an interpretive, naturalistic approach to the world".* Qualitative researchers investigate phenomena in natural settings and, thereby, attempt to find meaning of or interpret the phenomena (Denzin & Lincoln 2011:3). Many different qualitative research strategies exist. The strategies most used in health sciences research include phenomenology, ethnography, case studies, participatory action research and narrative inquiry (Botma *et al.* 2010:190).

As this study did not strictly fit into any of these traditional strategies, a qualitative, descriptive inquiry (Botma *et al*. 2010:194) was used to describe the students' experiences of IPE. A descriptive, qualitative inquiry is the study design of choice when a researcher wants to describe an event or phenomenon. It is defined as a "*means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem*" (Botma *et al*. 2010:194). An inductive strategy (Botma *et al*. 2010:189) was used in that the researcher did not work from a rigid conceptual framework, but rather used the data collected to guide the research.

This study included a small quantitative aspect in addition to the predominantly qualitative design in that demographic questionnaires were given to the participants to complete. This aimed to accurately describe the demographic information of the participants.

3.6 STUDY POPULATION

The population consisted of the fourth year students from the School of Medicine, and the School of Nursing. In the School of Allied Health Professions, fourth year students from the departments of Nutrition and Dietetics, Occupational Therapy, Optometry and Physiotherapy were included and in the Department of Exercise and Sports Science, the fifth year interns (Biokinetics) were included. Biokinetics students are students who have completed a Bachelor's Degree in Arts (Human Movement Science) and have been selected to do a two year Honour's Degree in Biokinetics. The reason for the inclusion of fifth year students from Biokinetics is that the IPE module was presented in the first term of the first semester of 2015. At this stage, the biokinetics students had only had approximately five weeks of class/practical experience and therefore did not have enough discipline-specific knowledge that was needed to participate in the IPE module. Fourth year students from all other school or departments in the FoHS have, at this point, had at least one year of clinical experience working in a variety of settings. The department of Exercise and Sport Science therefore sent their interns (fifth study year students who had completed one year of honours degree training in Biokinetics) to participate in the IPE module. The total number of students that attended the IPE sessions in the FoHS in 2015 was 306.

3.6.1 Unit of analysis

The unit of analysis refers to the groups of people or objects that the researcher will study (by observation or other means) and collect data from in order to draw conclusions (Botma *et al*. 2010:52; de Vos 2011:93).

The **inclusion criteria** for the study were as follows:

- Students who attended at least three IPE sessions.

The **exclusion criteria** for the study were as follows:

- Students who attended IPE sessions in 2014.

3.6.2 Sampling process

Due to the large number of students in the FoHS, I used purposive sampling. In this sampling method, participants are chosen as they possess a specific feature or characteristics (Botma *et al*. 2010:201) and are able to provide a researcher with an understanding of the phenomenon (Strydom & Delport 2011:392). Sampling was done by myself as I did not know the students and therefore was not able to identify students who would best be able to provide the information. In this way potential research bias was reduced. The sampling was purposive in that I attempted to include a student from every discipline in each focus group.

Each focus group aimed to have seven participants. Literature differs with regards to the ideal number of participants in the focus group with numbers from four to fifteen given (Babbie 2013:349; Grove *et al.* 2013:275). The number of focus groups to be held was determined by the information obtained. Once the information that was being given did not produce any new thoughts or experiences, no more focus groups were held. I aimed to do as many focus groups as was necessary to provide a trustworthy answer to the research question (Greef 2011:366). As such, five focus groups were conducted before data saturation was reached. A total of 22 participants were included. Table 3.1 shows the composition of the focus groups.

Table 3.1: Composition of focus groups

Group	Age Range (Years)	Gender		Profession	Total number of participants in group
		Male	Female		
Focus Group 1	21 - 26	1	4	Physiotherapy Occupational therapy (2) Optometry Medicine	5
Focus Group 2	21 - 22	1	5	Physiotherapy Medicine (3) Nursing (2)	6
Focus Group 3	21 - 25	1	3	Physiotherapy Occupational therapy Medicine Nursing	4
Focus Group 4	22 - 25	2	2	Physiotherapy Biokinetics Medicine	4
Focus Group 5	21 - 22	0	3	Physiotherapy Occupational therapy Medicine	3

3.6.3 Recruitment of participants

During the last IPE contact session, the students were told about the study and the possibility of inclusion in the study (although focus groups were held two to three months after the last session). The attendance registers used for the IPE modules were obtained and used to determine which students attended at least three sessions of the IPE. In the Biokinetics group there were only 3 students who met the inclusion criteria of attending at least three IPE sessions. All three students were contacted in this case. No student from the Department of Nutrition and Dietetics attended more than one session and therefore they were not included in this study at all. There were only five students from the Department of Optometry that attended at least three IPE sessions and they were therefore all contacted.

The students from the Department of Physiotherapy, Department of Occupational Therapy, the SoM and the SoN who attended all the sessions were put on a list per profession and numbered. Numbers were randomly selected from a hat for inclusion in the focus group so that each group had a representative from each profession. The selected participants were then contact telephonically, by SMS or via email. If a student was unable to participate in the study, their number was returned to the pool for possible reselection and an alternative student was contacted (again a number was drawn). The same procedure was followed for each focus group.

When I contacted the students they were given the date, time and venue for the focus group as well the possibility of inclusion for an alternative date if they were not able to participate on the given date.

I did not take into account the students' gender, race or language. The attendance registers that I received did not contain this information and as learning outcomes are not written for gender, race or language, these factors played no role in the composition of the focus groups. Although students may receive tuition in their preferred language (either English or Afrikaans), they are required to conduct all their communication in clinical areas in English. For this reason the focus groups were conducted in English, although any student who struggled to express themselves was given the opportunity to speak Afrikaans. The facilitator would then translate the information to the rest of the group.

I made use of over-recruitment in order to compensate for no-shows (Greef 2011:366) which might occur. I aimed for six participants per group (due to there being no students from Department of Nutrition and Dietetics) as this forms a manageable group for one facilitator and allows the participants to sufficiently share their experiences without some participants getting "lost" (Greef 2011:366). Table 4.2 indicates how many of the total population of each profession met the inclusion criteria, as well as how many of each profession where included in the unit of analysis.

Table 3.2 Study population

Profession	Total Population	No. meeting inclusion criteria	No. included in unit of analysis
Biokinetics	4	3	2
Nutrition and Dietetics	14	0	0
Medicine	112	76	6
Nursing	71	47	3
Occupational Therapy	31	22	5
Optometry	29	4	1
Physiotherapy	45	30	5

3.7 DATA GATHERING TECHNIQUE/METHOD

3.7.1 Focus Groups

Focus group interviews were used as a means of data collection. Focus groups have been found to be valuable in the study of medical curriculums (Barbour 2005:745). Medical education increasingly calls for the students' voice to be heard (Barbour 2005:743), and a focus group is one way of achieving this.

Focus groups provide a manner in which a researcher can gain a better understanding of the participants' views or opinions (Botma *et al*. 2010:210) by encouraging interaction between participants (Crano *et al.* 2015:297). They allow several participants to be interviewed together, thereby facilitating a conversation or

discussion (Babbie 2013:349). The conversation has a specific focus (Crano *et al.* 2015:297); in this case, their experience of the IPE module, and students are able to respond to other participants' verbalisations of their experiences (Hesse-Biber & Leavy 2011:166). The group members share an important feature (Crano *et al.* 2015:297), i.e. they are all healthcare students who attended the IPE groups. In the focus groups, students were able to discuss and interact with each other, thereby stimulating more in-depth insights into the students' experiences (Crano *et al*. 2015:297) by providing rich descriptions.

3.7.1.1 Advantages of focus groups

Some of the advantages of focus group interviews include the following:

- They are inexpensive (Babbie 2013:349; Stewart & Shamdasani 2015:45)
- They have high face validity (Babbie 2013:349).
- They have speedy results (Babbie 2013:349).
- They are socially orientated to capture real-life data in a social environment (Babbie 2013:349).
- They have good flexibility (Babbie 2013:349; Stewart & Shamdasani 2015:46).
- They allow the researcher to obtain rich descriptions in the participants own words (Stewart & Shamdasani 2015:45).
- They allow direct interaction with the participants, also allowing participants to react to what others have said and add on to what others have said (Stewart & Shamdasani 2015:45).
- They can be done at short notice (Stewart & Shamdasani 2015:45).
- They allow illiterate populations to be reached (Stewart & Shamdasani 2015:46).

3.7.1.2 Disadvantages of focus groups

As well as advantages of focus group interviews, some disadvantages have been noted, namely:

- There is less control in a focus group than in a personal interview (Babbie 2013:349).
- Data is difficult to analyse (Babbie 2013:349).
- Facilitators need special skills (Babbie 2013:349).

- Differences between groups can be troublesome (Babbie 2013:349).
- Groups can be difficult to assemble (Babbie 2013:349).
- Small number of participants may reduce the generalisation to the larger population (Stewart & Shamdasani 2015:48).
- The data interpretation may be difficult due to the nature of the discussion (open-ended questions) (Stewart & Shamdasani 2015:48).

The focus groups were held at the Clinical Skills Unit (CSU) at the SAHP. The CSU has adequate seating and air conditioning. It is a private, safe, comfortable setting (Grove *et al.* 2013:274). As the focus groups were held after hours (i.e. at 17h30 in the afternoon), it was quiet and the discussions could be held with no interruptions. While the students were waiting for all the participants to arrive, they were introduced to each other and engaged in small talk. This contributed to the students feeling at ease during the focus groups. Once all the students had arrived, the facilitator explained the study to them.

During the focus groups, students were seated around a table in a circle (Stewart & Shamdasani 2015:31), facing each other, with the facilitator seated at the table with them. I was also in the room, but I did not sit around the table with the students as I did not take part in the conversation (Crano *et al.* 2015:297). The purpose of my presence was solely to start the video-recording and audiotaping (with the participants' permission) and to observe the focus group interviews.

No remuneration was provided for participation. However, mints, water and cold drinks were provided to the participants to have during the focus group. As focus groups were conducted near a mealtime, a light meal was provided at the conclusion of the focus groups (Stewart & Shamdasani 2015:62).

3.7.2 Facilitator

The facilitator (also referred to as the moderator in some literature) is an important factor in making sure the discussion of the topic is focused and runs smoothly (Stewart & Shamdasani 2015:40). As I was involved in the development, delivery and facilitation of the IPE module, an independent facilitator who was not involved in the

IPE module conducted the focus groups. This was to prevent any bias from myself. The facilitator has an M. Occupational Therapy degree and is experienced in interviewing people and conducting focus groups. The facilitator underwent focus group training by the Santrust pre-doctoral module and is currently enrolled for a Ph.D. in Occupational Therapy. She is familiar with group processes and group dynamics. The facilitator was informed of the aims and objectives of the study (Grove 2013:275) and given the question for the focus group in advance. The same facilitator was used for all focus group discussions.

3.7.3 Data collection procedure

The facilitator introduced herself and explained the aim of the study and the procedure for the focus group. All the information contained in the information sheet (Appendix C) was shared and the students were given a written copy thereof, which they read. It was especially noted that the focus groups would be audio- and videotaped. Participants were informed that their identities would remain confidential and that participation was voluntary. The facilitator emphasised that the discussion would be informal and that all opinions were welcomed and that they had the freedom to express anything applicable to IPE. This would allow for a deeper understanding of their experience of the IPE module.

After the explanation of the study, the students were given the opportunity to ask questions to clarify anything that was unclear. The students then signed the informed consent forms thereby consenting to participate voluntarily in this study. When written consent had been obtained the students completed the short demographic questionnaire (Appendix D). Once the students were finished completing this questionnaire the facilitator told the students that the audio- and videotaping would begin.

The facilitator asked the students "*Tell me about your IPE experience*" and let the students speak. The facilitator also used phrases such as "*Can you tell me more?*" or "*Can you explain what you mean?*" in order to clarify statements or to check that statements that were made, were correctly understood (Grove *et al*. 2013:276).

The duration of each focus group differed, varying from 45 to 60 minutes. No focus group took longer than one hour.

After completion of the each focus group, I transcribed the interview verbatim as soon as possible. The transcribed interview with the video- and audiotapes were given to an independent person to check for truthfulness of the transcripts.

The transcribed interviews were then analysed as described in section 3.8.

3.7.4 Explorative Interview

An explorative interview was performed before the final data gathering occurred to detect possible obstacles in the study. The same procedure for recruitment of participants as described in section 4.6.2 was used in the explorative interview. However, it proved extremely difficult to get participants from all six disciplines together for a focus group due to all disciplines having extremely full schedules and therefore, together with the study supervisors, it was decided to conduct focus groups with at least three of the professions present. This was done consistently throughout the study.

Five students were selected and agreed to participate in the exploratory interview. The study was explained to the students and they were given an information sheet. They were asked to read it and then sign the informed consent form. These students completed the demographic questionnaire and the facilitator performed the interview. They were told when the video and audio recording began. The facilitator then proceeded with the data collection (see section 3.7.4)

All data collected from the explorative interview was used in the study as no changes were made to the data collection procedure. I took note of the length of the focus group, which did not exceed 90 minutes, and was satisfied that all aspects of the IPE had been covered.

3.8 DATA ANALYSIS

The aim of data analysis is to arrange the data in such a way as to elicit the meaning thereof (Polit & Beck 2010:463). Qualitative analysis is a process which makes use

of reasoning, thinking and theorising in order to make sense of the specific phenomenon under investigation from the empirical data. It involves going over all the collected data (which may be transcriptions, interviews, case study reports or others) in order to understand the meaning that participants have given to their experience and how their perceptions, attitudes, values and experiences construct the phenomenon, as well as how it relates to their social being (Schurink, Fouche & De Vos, in De Vos, Strydom, Fouché, & Delport. 2011:399; Niewenhuis in Maree 2010:99).

A process of inductive reasoning was used to analyse the qualitative data in this study. This was an ongoing process during which data were analysed, checked and then verified by returning to the original data. The goal of this analysis was to summarise the information gathered into words, phrases and themes or patterns and then to make sense of these (Niewenhuis in Maree, 2010:99).

This qualitative study made use of content analysis through open coding which is defined as a "*systematic approach to qualitative data analysis that identifies and summarises message content*" (Niewenhuis in Maree, 2010:101). Data were analysed by adapting Creswell's method of data analysis (Botma *et al.* 2010:223) as shown in Figure 3.2.

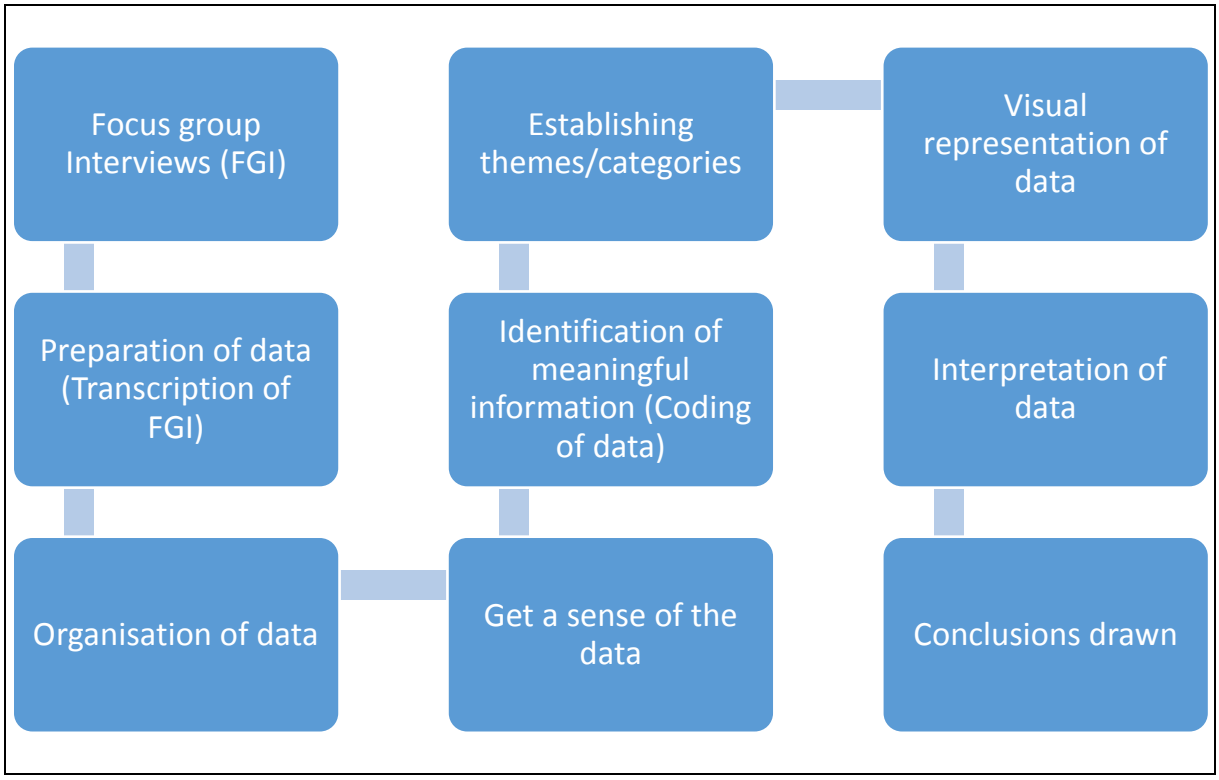

Figure 3.2: Adapted process of data analysis (based on Creswell's method of analysis (Botma *et al*. 2010:224))

3.8.1 Preparation and organisation of data

Focus groups were transcribed verbatim by myself as soon as possible after the focus group was held. Transcribed data were given to an independent person to check against the recordings, thereby enhancing accuracy.

Data were organised according to the number of the focus group (one through five) and each file was saved using a descriptive word or phrase (Niewenhuis in Maree, 2010:104). Video and audio recordings were also saved in a password protected file. Only I knew the password. Demographic information was coded and read into a Microsoft Excel spreadsheet.

3.8.2 Develop a general sense

I transcribed the data myself which enabled me to become familiar with the data that had been collected and allowed me to engage with the information (Hesse-Biber & Leavy 2011:304). I read and re-read the transcribed data in order to get familiar with

it (Creswell & Plano Clark 2011: 207). I made use of memoing (writing down impressions or thoughts while listening to audiotapes or reading through transcribed data) (Niewenhuis in Maree 2010:104; Creswell & Plano Clark 2011: 207).

3.8.3 Coding of data

A software module, Atlas.ti™, was used to analyse the data. Atlas.ti™ allows data to be organised and coded and allows memos to be written and data organised into visual representations. The computer software does not provide codes or code information automatically. A researcher must still write in the codes and select the text to which a code will be applied.

I read through the data, identifying units of information that may be meaningful (called analytical units (Niewenhuis in Maree, 2010:105)). Each unit was coded by marking with a descriptive word or phrase. Saldaña (2013:3) defines a code as *"a word or short phrase that symbolically assigns a summative, salient, essence capturing and/or evocative attribute for a portion of language-based or visual data*." All sets of data were coded using the same codes so that all the information from different sources could be collected together and examined. A master list was kept which described all the codes as they developed in the study (Niewenhuis in Maree, 2010:105). I developed the codes as the data were evaluated, i.e. inductive coding was used (Niewenhuis in Maree, 2010:107). All data were coded before moving onto the next step (establishing themes). The transcribed data were given to a co-coder who independently coded the data. Any differences were solved through discussion and where applicable, codes were combined or left out if deemed irrelevant or not recurrent throughout the groups.

3.8.4 Establishing, identifying and describing themes

In this step of the analysis, the co-coder and I compared our data coding. Any related codes were combined to form categories which were assigned a name (a descriptive word of phrase which will identify the category). A description of each category was written and examples of text from the transcribed data were added to show the meaning of the category. Several categories were grouped together to form themes. Creswell (2013:186) defines themes as a description of several related codes which form a common concept. The themes referred to the major findings (Botma *et al.*

2010:225) and display a multitude of opinions. Figure 3.3 below shows how themes, categories and codes are related.

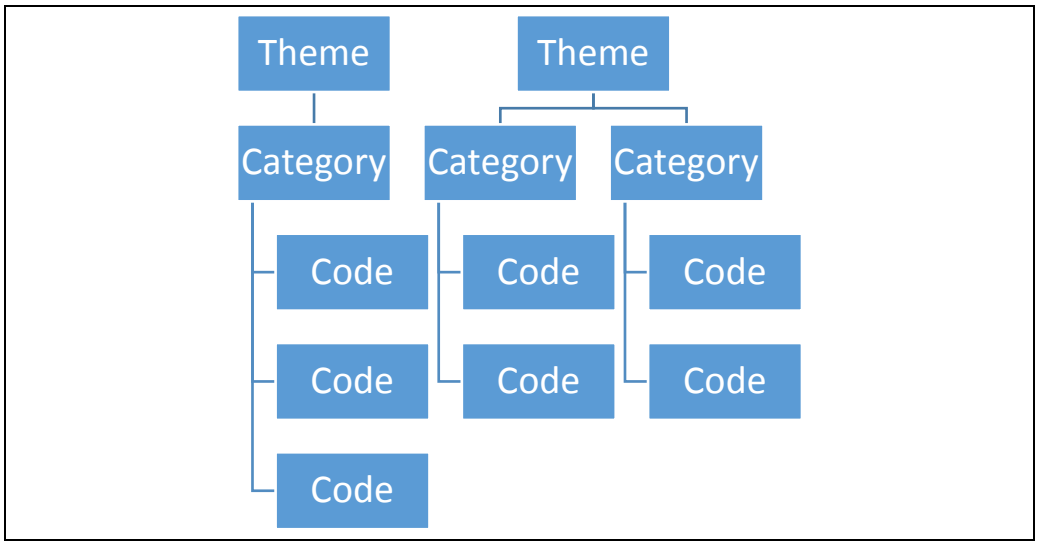

Figure 3.3 Relationship between themes, categories and codes (adapted from Saldaña 2013:13)

At the end of this step, I re-read all transcriptions to ensure that all essential information had emerged from the data through the categorisation process.

3.8.5 Findings

A visual representation was made to show how the categories and themes were linked with each other (Creswell 2013: 187). These findings are visually represented and discussed in detail in chapter 4.

3.8.6 Interpreting data

Interpretation in qualitative research involves abstracting out beyond the codes and themes to the larger meaning of the data (Creswell 2013: 187). The analysed data were examined to determine whether it brings a better understanding of the phenomenon. I was then able to describe the experiences of the students and to draw conclusions. The findings and interpretation of the data are summarised in chapter 4.

3.9 ETHICAL CONSIDERATIONS

The Nuremburg Code (1949) and the Declaration of Helsinki (2013) have been developed over the years to ensure the safety and ethical treatment of participants in

research as well as the protection of the research setting (Denscombe 2014:309; Hesse-Biber & Leavy 2011:61,85). The core principle of these codes are that researchers are expected to conduct their research in a particular manner so that it:

- Protects participants' interests.
- Ensures that participants are fully informed of the research and that participants are engaging in the study on a voluntary basis.
- Fully discloses all aspects of the study, thereby operating with integrity.
- Adheres to the country's laws (Denscombe 2014:309).

This study adhered to all of the above.

This study formed part of a larger study for which ethics approval was obtained from the Ethics Committee of the Faculty of Health Sciences at the UFS (now called the Health Sciences Research Ethics Committee of the University of the Free State HSREC-UFS (ECUFS93/2014, Appendix A).

Additional permission was obtained from the following (Appendix B):

- Dean of the Faculty of Health Sciences, Prof G van Zyl
- Dean: Student Affairs, Mrs C Faasen
- Vice-rector: Research, Prof C Wittuhn
- Head of School: Nursing: Prof M Mulder
- Head of School: Medicine, Prof A St Clair-Gibson
- Head of School: Allied Health Professions, Dr S van Vuuren

Although attendance of the IPE module is compulsory for all the fourth year students within the FoHS, participation in the study was voluntary and no student was negatively affected by declining participation. No remuneration was received by students, but each students did receive a meal as a way of saying thank you for participating. There was no harm foreseen to any participant.

Anonymity refers to the fact that information/responses from individual persons cannot be ascribed to them specifically (Babbie 2013:35). **Confidentiality** means that a researcher knows who has provided the information/responses but does not reveal

this information (Babbie 2013:36; Hesse-Biber & Leavy 2011:69). As interviews were conducted, anonymity was impossible. However, I maintained the confidentiality of personal information and data at all times. The information will only be disclosed if required to do so by law. All data were handled confidentially and was only known to myself, the facilitator, the independent individual assigned to check the data, as well as the study supervisors. No names appeared in the transcriptions and names are unknown to the study supervisors. All information obtained was stored on an external hard drive with the files, videos and audiotapes password protected. Only I knew the password.

Informed consent is a process in which the participants is fully informed of what the study entails, as well as what is expected from him/her, in order for them to decide whether they feel willing to participate in the research or not (Crano *et al.* 2015:428) i.e. they make an informed decision. Each student was informed of the study by means of an information sheet and signed the informed consent form (Appendix C), thereby giving permission to participate in the study. This included providing permission for the video-taping and audio-taping of each session for analysis purposes. Participants were informed that any information gathered from this study may be published in an accredited journal. The information sheet, as well as the informed consent form, were only made available in English as this is the official language of communication in the clinical areas in which the students work.

3.10 TRUSTWORTHINESS

Qualitative research uses the term trustworthiness as alternative to reliability and validity, which are used in quantitative research. Lincoln & Guba (1985) (as cited in Creswell 2013:244) use the terms credibility, transferability, dependability and confirmability in order to describe how trustworthy a study is.

The facilitator provided each focus group participant the opportunity to voice their opinions, thereby increasing the trustworthiness of the study as the information was obtained directly from the population. All sessions were recorded and a co-coder was used to improve the trustworthiness of the study (Niewenhuis in Maree 2010:114). Hence, themes were not decided solely by myself, but in conjunction with a co-coder and with study leaders. Multiple data sources, namely transcriptions, notes and

observations, were used to obtain a variety of information. Confidentiality was maintained at all times.

After data were transcribed, the audiotapes, as well as the transcriptions were given to an independent person to verify (Niewenhuis in Maree 2010:114). The facilitator who conducted the focus groups co-coded the data. As she had performed the focus groups, she has already been immersed in the data and it was therefore possible for the facilitator/co-coder and I to discuss the codes and agree on the codes, categories and themes. The procedure for each focus group was consistent. Focus groups were held until saturation was reached i.e. no new information was obtained and I, together with the facilitator, felt that sufficient information had been obtained (Grove *et al.* 2013:371).

3.10.1 Internal validity/Credibility

Credibility is defined as the truthfulness of the data, as well as the interpretation thereof (Polit & Beck 2010:492). Internal validity is the extent to which the data allows a researcher to draw conclusions about the relationships within the data (Leedy & Ormrod 2010:99). During the analysis I avoided any generalisations, as the experience of a particular participant was not necessarily that of the population (Niewenhuis in Maree 2010:115). I aimed to provide a truthful picture of the focus group interview and therefore continually went back to the transcriptions and notes. An independent individual checked the accuracy of the transcriptions.

In addition to this, the focus groups were conducted by an experienced facilitator who conducted each focus group in the same manner and gave the same instructions and opportunities to each group. The focus group interviews were held two to three months after the completion of the IPE module. All focus groups were completed within a timespan of one month. All participants had attended at least three IPE sessions.

3.10.2 Dependability

In qualitative studies the researcher becomes part of the data collection. The question therefore is whether a different researcher would have been able to produce the same findings (Denscombe 2014:298). Dependability implies that the data will be stable over time and conditions (Polit & Beck 2010:492). By using reputable methodology

and reasonable decisions, this study should be able to be replicated using the information provided, and reach the same conclusions if the study is done again using the same (or similar) population, in the same context or one very similar.

3.10.3 Objectivity/Confirmability

Confirmability refers to how much the research can produce the findings, without the influence of the researcher who is undertaking the study (Polit & Beck 2010:492; Denscombe 2014:300). I was actively involved in the development and delivery of the IPE module, and therefore, to avoid any bias on my part during the focus group, an independent facilitator conducted the focus group interview. This facilitator was not involved in the planning or implementation of the IPE module and did not know the participants. Each focus group was video and audiotaped. The data analysis was also performed by myself, in conjunction with a co-coder. The emergent themes, categories and codes were discussed between ourselves and agreed upon.

3.10.4 External validity/Transferability

External validity is the "*extent to which its results apply to situations beyond the study itself*" (Leedy & Ormrod 2010:99). Dense descriptions of the students' experiences were given, however the information obtained cannot necessarily be transferred to the rest of the population due to the personal viewpoints and values of the participants. However, transferability may by possible in cases where the context is similar to that of this study. This is identified as a limitation in this study (see section 5.3).

3.11 METHODOLOGICAL SHORTCOMINGS

Although I made every effort to include all the professions in every focus group due to the contextual nature of the study, the students' full schedules made it impossible to do so. Therefore, in consultation with the study supervisors, the decision was made to include at least three professions in each focus group. This would still allow for good interaction between the professionals.

As a result of the time consumed by the attempt to include all the professionals in each focus groups, the focus groups only took place in July and August 2015, while the last IPE session had taken place in April 2015. The fact that there were mid-year

examinations in May and June also affected the timing of the focus groups. I first made numerous attempts to include all the professions in a focus group but due to logistical problems and each curriculum being very full, this was impossible. Hence, the focus groups consisted of at least three professions and not all six of the professions that took part in the IPE module.

3.12 CONCLUSION

This chapter describes the manner in which I undertook this study, explaining all aspects of the planning, data collection and data analysis. In the next chapter, I will focus on the findings from the study and will discuss the findings in their context and support or contrast them with existing literature.

CHAPTER 4
FINDINGS AND INTERPRETATION

4.1 INTRODUCTION

Following on the discussion on the methodology used in this study, this chapter contains the discussion of the quantitative and the qualitative findings obtained during the data collection.

The study consisted of two parts, namely a small quantitative section (see part 1) and a larger qualitative section (see part 2). Quantitative data was obtained by means of a short, self-compiled demographic questionnaire. Qualitative data was obtained by means of five focus groups in which students from the Faculty of Health Sciences (FoHS) from the University of the Free State (UFS) participated.

4.2 PART 1: QUANTITATIVE FINDINGS

A short questionnaire was completed by participants in order to describe their demographics.

4.2.1 Demographic data

The study included 22 students from the FoHS who consented to participate. Participants had a mean age of 22.45 years of age, with a range from 21 to 26 years of age. On the one hand, it has been found that age has no effect on attitudes to IPE (Olenick and Allen 2013:159), whilst on the other hand Wellmon *et al.* (2012:30) found that older students had less positive outcomes of interprofessional education (IPE) than the younger students.

The study sample included five males (23%) and 17 females (77%). In South Africa, the average total percentage of female students throughout all undergraduate health sciences modules at five universities (including the UFS) is 73% (Benatar 2016:20). The gender distribution of the focus groups is therefore representative of undergraduate students in health sciences faculties in South Africa. This is comparable to other international studies in the US (Delunas and Rouse 2014:102), New Zealand (Darlow *et al*. 2015:102) and the UK (Coster *et al*. 2008:1671), which also had a large majority of female students.

Participants represented six of the seven different professions in the Faculty of Health Sciences (FoHS) at the UFS, with the Department of Nutrition and Dietetics having no representatives in the focus groups. This was due to the students from that department not being able to attend at least three of the IPE sessions (as part of the inclusion criteria for this study) as a result of timetable clashes. The study population was comparable with other studies which included many different professions, namely the studies of Darlow *et al*. (2015:3) in which students from dietetics, medicine, physiotherapy and radiation therapy participated, Ponzer *et al.* (2004:729) in which students from medicine, nursing, occupational therapy and physiotherapy participated, Nisbet *et al.* (2008:59), in which students from medicine, nursing, dietetics, occupational therapy, physiotherapy, speech pathology and social work participated, and Lumague *et al*. (2006:247) in which students from medicine, nursing, occupational therapy, pharmacy, physiotherapy, social work, and speech/language pathology participated. As the biokinetics degree is unique to South Africa, no other studies featured this profession. Figure 4.1 shows the distributions of study participants across the different professions.

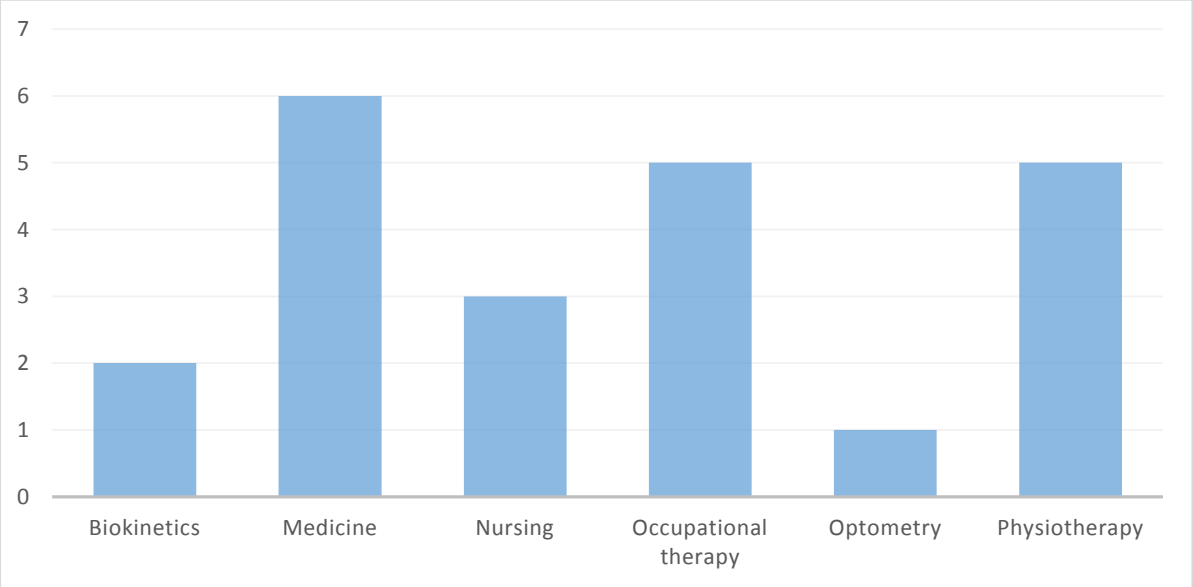

Figure 4.1 Professions represented in the study (n=22)

Of the 22 participants, only three (14%) had been registered for another degree prior to their current degree in the FoHS. None of these participants had been registered for a health-related degree. One participant studied towards a Bachelor of Commerce degree, one participant was enrolled for a Bachelor of Science degree for one year

prior to selection for their desired healthcare profession degree, and another completed a Vocational Graduate Diploma as well as an Advanced Diploma in Hotel Management.

Figure 4.2 indicates to which interprofessional (IP) or multi-professional activities participants had previously been exposed. Participants marked all the activities that they had taken part in. As can be expected in a large faculty, most exposure to other professions was in the form of shared lectures, which is not an IP activity *per se* due to the limited interaction or discussion between the students. There is also limited learning from and/or about each other (as per definition of IPE) due to the lecturer purely providing information to more than one profession at the same time. Exposure to simulation activities was small due to simulation facilities being limited to the SoN and the SoM. The SAHP does not have their own simulation laboratory. Although participants were exposed to ward rounds where there were other professions present, once again this exposure was merely attendance of the ward round with the qualified professionals. Participants had experience of treating patients together.

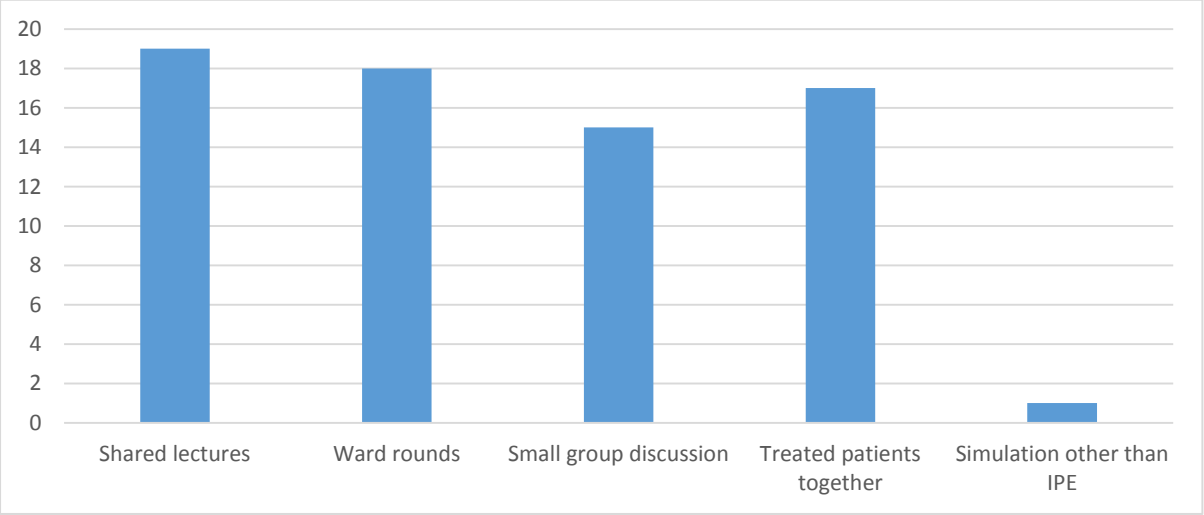

Figure 4.2 Previous exposure to interprofessional or multiprofessional activities (n=22)

Table 4.1 shows, in summary, the comparison of the demographic data of the five different focus groups in this study.

Table 4.1: Comparison of demographic information per focus group

Group	Mean age (Years) (Range)	Gender		Profession	Total number of participants in focus group
		Male	Female		
Focus Group 1	23 (21-26)	1	4	Physiotherapy Occupational therapy (2) Optometry Medicine	5
Focus Group 2	21.67 (21-22)	1	5	Physiotherapy Medicine (3) Nursing (2)	6
Focus Group 3	22.75 (21-25)	1	3	Physiotherapy Occupational therapy Medicine Nursing	4
Focus Group 4	23.25 (22-25)	2	2	Physiotherapy Occupational therapy Biokinetics Medicine	4
Focus Group 5	21.67 (21-22)	0	3	Physiotherapy Occupational therapy Medicine	3

The quantitative findings assisted in describing the sample. The qualitative findings will describe the students' experiences of the IPE.

4.3 PART 2: QUALITATIVE FINDINGS

Focus group data were thematically analysed by two researchers and the emergent themes, categories and codes were identified, as indicated in Table 4.2. During the coding process, some aspects came out strongly as a category and therefore no codes were developed for these categories. During the discussion of the themes, the profession whose quotation is given is not identified as I wanted to describe the overall experience of the participants and not compare the experiences of the different professions. Participants had experiences on different levels, as individuals and as a group.

Table 4.2 Emergent themes, categories and codes

Theme	Categories	Codes
Learning about	Scope of profession	
	Leadership	• The doctor is not the boss • Leadership and personality • No leader - we felt lost • Leadership based on knowledge • Shared leadership (shared responsibility/decision-making)
Educational aspects	Assessment of IPE activities	• IPE is not for marks • Peer assessment not meaningful
	Role of the facilitator	
	Outcomes	
	Study guide	• I used it and it helped • We never used it • Literature is redundant

	Simulation	• Scenario was not inclusive • Fidelity of simulation • From simulation to reality • More variety in scenarios • Feedback from SP's
General organisation of IPE	Time	• Takes extra time • Scheduled time not used optimally
	Instructions	• We knew what to do • We want clearer instructions
	Composition of teams	• All from beginning to end • Include other professions
	Module	• First and last session were the same • Values session
Other benefits	Chance to promote profession	
	Seeing an ideal future	• IPE not implemented in practice • The seed has been planted
	Meeting colleagues	• Counters isolation • Less intimidating in clinical areas
	Challenging stereotypes	• Improved communication • Learning to appreciate each other

A detailed description of each of these themes follows below.

4.3.1 Theme 1: Learning about

The first theme that emerged from the focus groups was “Learning about”. Within this theme, two distinct categories emerged, namely scope of profession and leadership.

It is evident that the UFS IPE module gave participants the opportunity to learn about the scope of profession of the professions that were represented in their groups (biokinetics, medical, occupational therapy, optometry, nursing and physiotherapy). In the scenario (see section 2.3), the case was such that there were opportunities for different students to take the leadership roles at different times and, as a result, leadership was also identified from the data as a category within theme 1.

Figure 4.3: Theme 1: Learning about

4.3.1.1 Scope of profession

Scope of profession refers to the evaluation and treatment techniques that are specific to a certain profession and that they are permitted to perform in terms of their registration with the regulatory body for their profession (e.g. Health Professions Council of South Africa (HPCSA)), even though there can be areas of overlap between professions. Participants strongly identified that the IPE taught them about the scope of profession of the other healthcare professionals in their groups.

…I'm just realising what everybody's scope really entails because the thing is, you end up in a hospital and you just don't really know who to refer to…and you've got to kind of explore that on your own.

Participants found that their involvement in the IPE module made a great impact on their knowledge and more importantly, on their understanding of the professional roles of other professions.

Hearing what every profession does, it helped to be able to go into the next clinical area with a better understanding of what the registered nurse (does).

These participants felt they were able to explain to the others in their groups what their professions entailed and in return felt they were able to ask other professions about their role in certain situations. They felt that by having better knowledge of scopes of practice of other professionals, patient referrals between professions could be enhanced.

....for us to refer, that's the most important part, that we actually know what each discipline does and how and which way they are involved with the patient.

Participants also came to realise that there are areas of overlapping scopes of practice, and identified the need to discuss who should be providing the treatment in such a case, expressed as:

…okay, but I can also do that. Who now does it? Who decides who does what? And where do you draw the line?

It was interesting how the participants also enquired about the roles of the professions that were not present in their groups (for example, the role of the dietitian and biokineticist). Not all groups had all professions represented and there was a strong need for the input from those professions which were not there. In some cases, the facilitator was able to provide some knowledge regarding the missing profession's scope and in some instances the facilitator was from the missing profession and therefore well situated to provide this information.

The literature supports learning about scope of profession in that many authors have stated that IPE is an effective platform for role clarification, that of obtaining further knowledge and understanding of one's own profession as well as that of other professions (Ponzer et al 2004:730; Nisbet *et al*. 2008:65; Hallin *et al.* 2009:155; Bridges *et al.* 2011:6035). Improved knowledge of scope of profession can improve referrals between the different professionals (Anderson *et al.* 2006:190; Reeves *et al.* 2008b:17; Mashingaidze 2012:40) and IPE is the tool which enhances knowledge of professional roles. Findings by Earland *et al*. (2011:138) were that students had a greater awareness of other's roles as a result of their participation in IPE activities. Barker and Oandasan (2005:211) are of the opinion that knowledge of the professional roles of others is vital to the development of collaborative practice. However, for some students there was more than just knowledge gained. These students felt that they had a better understanding of other professions, as Maeno *et al.* (2013:16) also found. Nisbet *et al*. (2008:65) demonstrated that students not only had a better understanding of other professions, but were able to apply this new knowledge to a case study.

Earland *et al.* (2011:138) found that the students felt more prepared to work with other professionals as a direct result of IPE. Small groups are effective in providing the opportunity for students to meet students of other professions and to learn about their professional roles (Curran *et al*. 2010:47). Learning from experience (such as the interaction between the professionals and with a "patient" in a simulation) is highly recommended and students are required to transfer the knowledge gained to the real-world context (Curran *et al*. 2010:49). Van Soeren *et al.* (2011:437) found that role-play simulation stimulated the students to learn about other professions' roles.

MacDonald *et al*. (2010:241) recognise that there are areas of overlapping scope of profession. These authors suggest that where overlaps occur, the professionals should come together to discuss who will take responsibility for the particular area of care. In this way, no duplication of care will occur, thereby avoiding time wasting and reducing the cost of patient care.

Unfortunately some participants felt like they were unable to fully relate their professional roles due to the scenario being limited to only one condition. This was true for the optometry and biokinetics students who participated in the present study:

My group especially, not many of them know what a biokineticist did. ……Even though, I mean, I can't do anything (for the patient in the hospital setting).

(Biokinetics Student)

I know in our case (Optometry) *it would be nice to get an outpatient 'cause we don't really treat patients in the hospital. We see them maybe beforehand and refer or after they complete their systemic treatment. So an outpatient will maybe be a better simulation.*

(Optometry Student)

While other studies have found that students learn more about their own professional roles (Earland *et al.* 2011:135;) or that IPE contributes to growth in own professional identities (van Soeren *et al*. 2011:439), there was limited experience of this in the UFS students' IPE module. The participants, however, felt that they were able to promote their own profession (see section 4.3.4.1), due to the participants experiencing that preconceived ideas of what certain professions did were still prevalent, expressed as

Physios work with lower limbs and OT's (occupational therapists) *work with upper limbs.*

Participants were able to then clarify these preconceived ideas and explain more about their profession to the other group members. Interestingly, it was the medical students participating in the study who felt they learned the most about the roles and responsibilities of the allied health professionals, as they felt the students from the allied health professions had a relatively good idea of the scope of profession of their colleagues from other professions within the SAHP.

Ultimately, effective IP practice is related to knowledge of professional roles, irrespective of what the professions are that make up a group (Suter *et al.* 2009:48). Professional roles should be clearly outlined and should practice within their scope of profession. IP teamwork allows communication of these roles and provides the opportunities for students to gain the knowledge and understanding required for IP practice (MacDonald *et al*. 2010:240).

"Scope of profession" was possibly one of the strongest experiences that the participants verbalised from their experiences in the IPE module. Participants not only felt that they had gained knowledge with regard to the scope of profession of other professionals in their groups, but also had a better understanding thereof.

4.3.1.2 Leadership

The category of "Leadership" included five codes, namely:

- The doctor is not the boss.
- Leadership and personality.
- No leader - we felt lost.
- Leadership based on knowledge.
- Shared leadership (shared responsibility/ decision-making).

a) The doctor is not the boss

Participants identified that the traditional, hierarchical view of the medical doctor being the leader of the healthcare team, followed by the rest of the healthcare professionals, is antiquated and that the leader of a healthcare team is no longer always the doctor.

> *….the boss of the ward is not the doctor.*

The participants felt that in their groups they all had equal status.

> *What was nice was that we were all sort of on the same level.*

The participants experienced a sharing of leadership as the case-based scenario unfolded, where the leadership was not constant, but rather changing with the patients progression through the stages of treatment (from acute to rehabilitation). The participants were very aware that the "doctor" (medical student) does not always have as much knowledge regarding the patient's physical rehabilitation and return to function as the members of the allied health professions do, indicating that there was a need for changing leadership. Unfortunately, there is a view that the doctor is always the head of a healthcare team (Whitehead 2007:1012; Voyer 2013:21; Dallaghan *et al.* 2016:3) and it will take time for the older, more traditional view to be replaced with

a more patient-centred approach in which the leadership role is shared between professionals.

Leadership has been identified as one of the key competencies of IP practice (MacDonald *et al*. 2010:238). The approach towards leadership in healthcare teams has traditionally been one of the doctor being "in charge" (Nisbet *et al.* 2008:66), even though their skills necessary for team collaboration were non-existant (Varkey *et al*. 2009:248). It is clear in literature that the leader of the team should be the one who has the most expertise for the specific stage of patient treatment (Mickan and Rodger 2000:203). This came to light in the current study where the students with the most experience with rehabilitation of patients who had suffered a stroke took leadership during the rehabilitative phase of the patient's care. This means that the leader should not always be the doctor as other healthcare professions also possess leadership skills. Within the IP team, leadership skills, together with care expertise, should be made use of (Nisbet *et al.* 2008:66) in order to achieve optimal, holistic, patient-centred care. Within a hospital setting, a busy doctor often determines the communication schedule and this may add to the perceived central role that the doctor plays within the IP team (Whitehead 2007:1013).

b) Leadership and personality

Personality traits influence how we communicate, socialise and interact with others. Forsyth (2014:101) identified five personality traits that may have an influence on the interaction between group members, namely, extroversion, agreeableness, conscientiousness, neuroticism and openness to experience, with extroversion, aggreeableness and openness to new experiences being the traits that may have the most effect on group processes. A person who tends to extroversion will be outgoing, motivating the group to do/perform and may therefore take on a leadership role. An aggreeable personality trait results in positive, co-operative participants, while those who display an openness to new experiences are more creative.

> *…in our group I must admit that I took the lead, but just because I like to talk a lot but that doen't mean the physio had the best approach, but it comes in where the individuals really differ.*

…everyone was a little hesitant to take the lead, there wasn't a leader, and as I said, that's just a matter of personalities.

Some participants experienced that it was a personality trait in a student that resulted in that student taking the lead and not necessarily that student's professional role or leadership qualities. The leader tended to be a more extroverted, confident student. It was not the student whose knowledge was superior or the student who knew what needed to be done. It was the student who was perhaps the loudest or most willing to find answers and we therefore see how certain personality traits can influence team leadership.

Students who tend to be proactive by making use of their opportunities to influence their education are also more proactive later in professional practice (Veronesi and Gunderman 2012:226). Those who participate in extracurricular activities (I.e. those not part of their formal curriculum) on a voluntary basis develop leadership skills in that they learn to work with together with others. Once again, volunteering for participation indicates a desire to learn and to contribute and could be a result of one's personality (Veronesi and Gundermann 2012:228). Varkey *et al*. (2009:248) found that the important characteristics of a leader were self awareness, empathy, cultural sensitivity, professionalism, drive, confidence and creativity, and that these characteristics were vital in a leader in order for that leader to encourage others in their task and to encourage shared leadership. These characteristics are ingrained into personality, emerging when placed into opportunites where these characteristics are required.

c) No leader – we felt lost

The importance of having a team leader at all times was re-inforced by the participants. In situations where a leader did not emerge, students had problems in identifying what they had to do in their scenario.

…everyone was a little hesitant to take the lead, there wasn't a leader, and as I said, that's just a matter of personalities. There wasn't a definite leader figure in our group. That led to some problems. We always had to nominate someone, "you must take the lead today".

This feeling of not having a leader referred to not having a student leader for their group, as well as not having a facilitator to assist them in their learning. The participants felt that they were unsure what to do when a leader did not emerge, resulting in them feeling lost.

Facilitators who failed to attend the IPE sessions also affected the group:

> *…'cause it's very bad at first when we didn't have a facilitator. Just like making sure each group does have that.*

As the groups were randomly assigned, this lack of leadership was unavoidable, although this is what would happen in practice in professional healthcare teams. In this situation, participants found that the leadership or guidance that other groups may have received in guiding them to what they needed to do was missing. The participants acknowledged that the facilitators gave them some sort of leadership which they were able to build on (see section 4.3.1.3). A lack of facilitator was also an area of concern in Anderson *et al.* (2006:190), where a group did not get a facilitator.

Little is written about the lack of leadership in IPE. Rather, it is reported that effective team functioning is dependent on effective, suitable leadership (Mickan and Rogers 2000:202). However, Goldman *et al.* (2010:371) found that if there was no leader in a team setting, there was little development or growth of the team (or group) itself. Aase *et al.* (2014:175) found that medical students felt that they were often placed in positions in which they had to take the lead, but were never given any training on how to be an effective leader.

d) Leadership based on knowledge

Participants who felt that they had good knowledge of a condition felt more confident to take the leadership role at the different stages of the patient's progression through rehabilitation.

> *I felt like in my group I took the leadership. I could provide leadership, 'cause I know the condition, I know what I'm supposed to do.*

...the people more experienced with ward rounds took leadership because they knew how this thing (ward rounds) *works.*

Some participants felt really confident with the scenario (see section 2.3) as they felt they had sufficient knowledge to manage the patient's condition (i.e. CVA) or had participated in ward rounds previously. This prior learning led the participant to become the leader, based solely on the fact that she felt she knew what had to be done. As each profession functions autonomously, there is no control over where in that profession's curriculum certain content is provided to students. Although the students had covered the condition in theory, not all had necessarily been exposed to these patients in clinical areas yet and therefore could have influenced the leadership. In this event, those who felt they were knowledgable about the condition because they had worked in clinical areas with such patients, stepped forward to lead the group through the scenario.

Care expertise, one of the six key domains identified by RNAO (2013:6) would explain why there could be leadership based on knowledge. The professional who has the most applicable expertise for the patient's condition/impairment should be the one to take the lead in a collaborative team. Leaderhip should not be related to a professional group, but rather to the appropriate care expertise required at a specfic point in time (Mickan 2005:203).

e) Shared leadership (including shared power and shared responsibility)

The IPE module taught the students that shared leadership is necessary in order for the holistic treatment of the patient, according to a biopsychosocial model of care. Shared leadership refers to the changing of leadership within the same group, according to the needs of the patient at any point in the process of patient care.

In the scenario, the progress of the patient from the acute care to the rehabilitative phase (see Figure 2.3) meant that there was an opportunity for changing leadership (see section 4.3.1.2 (e)). The participants felt at ease working with the other professionals and felt comfortable knowing that the professions were making the decisions together. These participants demonstrated that they were comfortable with

sharing the responsibility for their decisions and that they felt that they each had a specific role to play in the patient's treatment. This also highlighted that the participants felt they should be able to identify when their own knowledge and expertised ended and the patient should be handed over to another professional.

> *…if something goes wrong you can be like, we decided this together, I didn't decide this on my own.*

> *So I think it was a good way just to show people we don't always know everything, that we also like to get some input and sometimes we don't know what's going on and then there is somebody else that knows what''s going on….there just needs to be an opportunity for those professions to speak up.*

> *…there's more than one person that you can ask for help and that you can refer the patient…*

> *But it's a nice thing, this IPE cause it makes everyone realise okay, this is my scope of practice, this is how far I can go, this is how much I can do, I need to give it over to someone now who can do more for this patient.*

Responsibility for tasks within patient care can move between healthcare professions and it is in this shifting of responsibilities that discussions regarding responsibilities need to occur (Whitehead 2007:1013). In their concept analysis of IPE, Olenick *et al.* (2010:78) state that in IPE there is sharing of values, decision-making and knowledge. Engel and Prentice (2013:5) agree that interprofessional teams show intent to interact with each other, especially when it comes to decision making.

Student leadership in IPE initiatives is essential and can be seen as a mechanism of cultural change in the soon-to-be qualified professionals (Hoffman *et al* 2008:656). Leadership is an important competency that can be developed through IPE (Buring *et al* 2009:4) in order for students to be able to facilitate an IP team meeting in which good communication leads to good decision-making and, ultimately, to optimal patient

care. According to Varkey *et al.* (2009:248) students preferred to develop leadership skills through learning from experience (such as in simulation, small group discussions and case studies) and this aided in the development of shared responsibility, as was found in the present study.

4.3.2 Theme 2: Educational aspects

The second theme consists of the aspects the participants identified which pertain to education. It includes assessment of the IPE activities, the role of the facilitator, the outcomes involved, the study guide and the scenario-based simulation that was used in sessions two and three of the IPE module presented at the UFS.

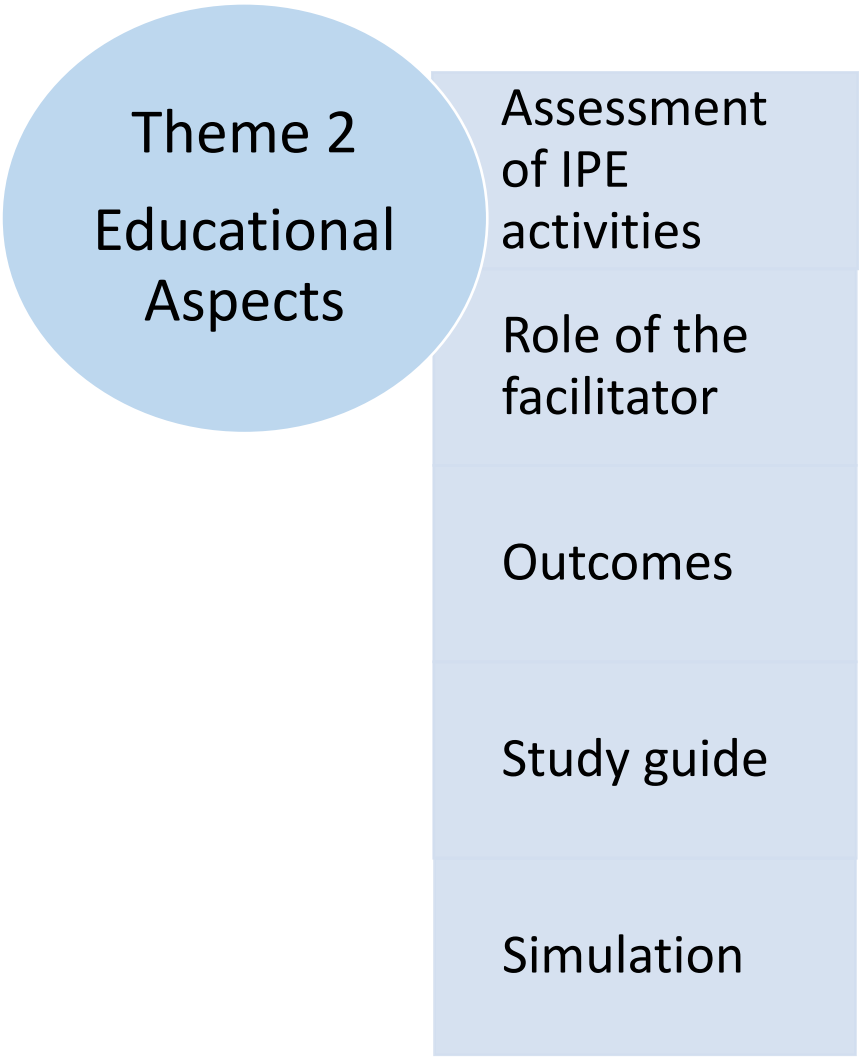

Figure 4.4: Theme 2: Educational Aspects

4.3.1.2 Assessment in the IPE module

The category of "Assessment in the IPE module" included two codes, namely:

- ❖ IPE is not for marks.
- ❖ Peer assessment is not meaningful.

a) IPE is not for marks

The IPE module required students to assess their peers at the end of each session. The marks were allocated as a number on a continuum from one to ten, where the number ten represented excellent participation/contribution and one represented no participation/contribution.

> *If I may speak on behalf of a few students because most of them didn't actually want to take so much time to be there 'cause they were like, I don't get marks for this.*

> *I think all these extra courses….it's always a bit of a negative. It's for self-enrichment, but really, do we want to do it for self-enrichment?*

A concern from the participant's side was that the IPE sessions did not count any marks towards any of their module marks, even though peer assessment did take place. In their eyes it is not important or relevant to their studies to do something if you do not get marks for it. An activity is only valuable when marks will be attached to the activity.

> *People take it more seriously* (when something is for marks).

The statement above may also explain why attendance of the IPE sessions was relatively erratic as the IPE was viewed as an "extra" even though students were told that it was compulsory for all students involved in the IPE module to attend. Mashingaidze (2012:50) found that some students only attended IPE as it was made compulsory. The assessment of IPE participation and how the marks were used (or in this case, not used) affected the students' motivation for attending. One participant stated:

Students don't like to do unnecessary things because how many people attended the first one and then like "I'm not doing it, I'm not coming back'.

The IPE module is not an official module with its own module code and is not credit bearing, making it impossible to allocate marks to each profession in a uniform manner. Marks were made available to departments although there was no control over how they incorporated the marks into their individual modules.

Assessment of students engaged in an IPE module remains challenging for various reasons, staff shortages and cost being two reasons (Simmons and Wagner 2009:168). Nisbet *et al.* (2008:66) suggest that convincing students that IPE is valuable despite there being no assessment remains an organisational barrier to IPE. The idea of formal assessment is difficult as an IPE module is usually run across various schools and departments within a health faculty, and if marks are to be awarded, this module should be compulsory to all students within that faculty and marks should be awarded in the same manner to all students (Pullon *et al.* 2013:56). Bridges *et al.* (2011:7) agree with Anderson *et al.* (2006:193) that the assessment of student participation will add value to the IPE module. Cameron *et al.* (2009:224) agree that, as assessment affects students' learning, students may view IPE as important if they are assessed on it. Thistlethwaite (2012:64) argues that there are many logistical problems in the assessment of students, as there may be differences between academic and professional requirements between professions. Many professional registration bodies expect students to be assessed by practitioners of the same profession and in the case of IPE this is not always possible, as facilitators from all professions are used in the delivery of an IPE module (Thistlethwaite 2012:64). Palatta *et al.* (2015:994) agree that assessment of IPE remains a problem as often the assessment is of a qualitative nature, investigating perceptions, rather than evaluating whether IPE competencies have been achieved.

Norcini *et al*. (2011:206) defined assessment as activities that involve "*testing, measuring, collecting, and combining information, and providing feedback.*" A student's actions may be influenced negatively when the assessment type chosen is the incorrect one for the situation and therefore assessment criteria are vital for successful assessment. Various methodologies may be used for IPE assessment,

including peer assessment, self-assessment, case-based assessment and team assessment (Simmons and Wagner 2009:170). Although peer assessment was used in the IPE module at the UFS, students were not satisfied with the IPE assessment (see section 4.3.1.2(b)).

Norcini *et al.* (2011:206) identified the following factors which must be taken into account when planning assessment activities, namely, that assessment should be incorporated into the work flow, assessment should always include feedback, assessment is not a once-off activity, but an ongoing one, and that feedback should be provided as soon as possible after assessment. Unfortunately however, these aspects were not incorporated into the assessment of the IPE activities. Students at the UFS were assessed on individual performance, but Simmons and Wagner (2009:170) suggest that the aim of assessment in IPE should possibly be to assess teamwork and collaboration. However, assessment of team performance remains challenging. Motivation and enthusiasm are important aspects to take into account as they do affect how much the student will immerse themselves in the IPE experience (van Soeren et al. 2011:438) and often motivation for attending activities is driven by the awarding of marks.

b) Peer assessment not meaningful

Aside from the opinion that the assessments were not for marks, participants felt that the peer assessments were not meaningful.

> *And to be very honest with you I'd rather feel too bad to give anyone a bad mark anyway, 'cause I don't know you ……so then it's not really a true reflection cause you've spoken about it and I'm like, you seem to know what you're doing so cool, you're nice so I'll give you a 90 (%).*

Tayem *et al.* (2015:380) explain that peer assessment (PA) has been found to be effective in improving learning, however, it is dependent on feedback being given, which did not occur in the present study. Feedback can improve the students' attitudes towards each other by making them more respectful and dependable. It makes them more willing to share their own knowledge. PA can also improve a student's motivation and interaction during the process of learning (Tayem *et al*. 2015:380; McGarr and

Clifford 2013:679). In order to maintain efficacy in a group setting, accurate, timely feedback of performance is required (Mickan and Rodger 2000:206).

Participants were unhappy about having to rate their peers, as well as about being rated by their peers. Due to the nature of the IPE module where students who were unfamiliar with their peers from other professions were grouped together, and only had a limited number of hours in which to get to know them, the participants found it difficult to assess their peers and award them with fair marks. The participants verbalised that the marks were not really based on any particular criteria and so the marks were very subjective. The assessment was not seen as a true reflection of the group member's capabilities as the situation was a simulated, unnatural setting. Participants also felt that they did not know their group members well enough to provide an appropriate mark. This sentiment could be due to the fact that students equate assessment with the evaluation of knowledge, rather than engagement in the module. It was felt they would rather grade their peers higher in the hope that they'd also receive higher marks.

> *Also, what was the point of it? I was never told what mark I got. I was given marks to never actually be told what I was given or I was never given feedback.*

The other problem with the awarding of marks was that the students never received feedback regarding how they were marked on any of the four occasions. In this way the students did not know how they were marked or whether any comments had been made regarding their participation in the group over the four sessions. Good educational practice provides feedback (whether formally or informally) after assessment as it can be seen to enhance learning by providing the student with information regarding what good performance is, how it differs from the student's current performance, and how to close the gap between the two (Nicol and MacFarlane-Dick 2006:204). It is important that this feedback is performed as soon as possible after the assessment activity in order for the maximum effect on student learning (Geyser 2004:108). Feedback should also relate to the outcomes that have been provided to the students (Rust 2002:153). In the present study, assessment was not so much whether the outcome of collaborative practice had been reached, but rather whether the student participated in the discussion of how to manage the patient

or implement collaborative practice in clinical settings. This aspect of the current IPE at the UFS was possibly not thoroughly thought through during the design of the module, possibly leaving the students unclear as to the role of the assessment. Students are used to being assessed to determine their knowledge. Evaluation should judge the participants strengths and weakness according to a standard performance (Meakim *et al.* 2013:6), which in this present study did not occur (see recommendations).

Assessment of participants' performance by their peers was felt to be a waste of time and therefore meaningless as the IPE marks were not actually incorporated into the profession-specific marks, therefore having no value. Similarly, in a study in Ireland physiotherapy students who were involved in peer assessment also found that peer assessment had little value (McGarr and Clifford 2013:684) although it was not assessment of IPE. Teaching students in the same study found the value of peer assessment in the feedback they received afterwards, once again highlighting the importance of feedback after assessment. Assessment of IPE activities will require urgent attention as it does affect the students' motivation for attending IPE.

4.3.2.2 Role of the facilitator

The role of the facilitator was identified as an important aspect of the IPE experience (see section 2.4). During the IPE session, both positive and negative experiences of the facilitator were identified.

> *I think in some ways the facilitator also like, really made it, in that they broke the ice when they needed to, they gave us advice but they also left us to kind of come to our own conclusions first.*

> *In our group our facilitator played a role in that she kind of helped us lean towards the answer we kind of needed or the direction we needed to go in….*

The participants who identified positive experiences of the facilitator, verbalised how the facilitator had taken them through the process and provided good guidance without telling them exactly what had to be done or how to do it. The facilitator allowed the

students to talk and discuss how they would proceed and only where necessary, gave them the required guidance to push them in the right direction. Where there was initial confusion about what was expected of the students, the facilitator was able to lead them in the right direction and explain what was expected of the student. The good facilitator did not tell the students how they had to achieve the outcome. The participants felt that the facilitators who came prepared, contributed positively to their experience:

> *Our facilitator was very well prepared. She helped us where it was necessary and she didn't want to give everything in one go. She didn't spoon feed us. She let us do for ourselves.*

These facilitators also did not overload the students with information, rather giving them only the information necessary to achieve the stated outcome for the session. The good facilitator was also identified as a person who communicated well and provided feedback after their sessions:

> *Another important part that I found was all the facilitators, the facilitators gave us feedback after the simulation.*

However, some participants felt that their facilitator was not helpful to their experience of the IPE, expressed by:

> *…she didn't have the personality to be a facilitator. It's very important because at the end of the day you're the catalyst of that…….So…..she's sweet and she tried, but if you're going to be a facilitator, then you need to be able to take control of it. 'Cause I feel like the students overpowered her, and then there was just either chaos or silence.*

The statement above shows how personal factors have an influence on good group facilitation and perhaps shows the need for identifying staff members who portray the qualities of good facilitators (see section 2.4). There is also a need for more training of the facilitators. As there were 20 groups requiring facilitators, most of the facilitators

that were used were volunteers from the various schools or departments and not necessarily those who were experienced in facilitating group activities.

Another negative experience was that of the facilitator not being at the IPE which resulted in two groups being debriefed together after the simulation. With more students in the group, the debriefing took longer which frustrated the participant:

> *I know in one of the other groups the facilitator didn't even pitch and that's very unprofessional I think, and then they had to go on on their own and then…I'm all for giving feedback but I mean, one or two people can give feedback, not how do you feel about it, how do you, how do you. It wastes time. Everybody says the same thing.*

Ponzer *et al.* (2004:735) and Curran *et al.* (2008:432) found that the facilitator of learning was one of the greatest contributions to the students' satisfaction with their IPE module. The facilitator's responsibility is to ensure suitable behaviour in groups (Earland *et al*. 2011:139) and to encourage students to learn in new, different ways in order to bring about change, so that a new culture of IP learning can be adopted throughout the healthcare system (Armitage *et al.* 2008:280). Students found that the facilitators were able to help them with problem-solving when they were unsure (Solomon and Salfi 2011:6), as was described by participants in the present study. However, there should be good training for facilitators of IPE (Earland *et al.* 2011:139) as facilitator skills (Solomon and Salfi 2011:8) and staff development influences IPE effectiveness and success (Hammick *et al.* 2007:740). Faculty members from the different healthcare professions should be encouraged to gather and learn about IPE and IPE teaching methods (Poirer *et al*. 2014:4).

The comprehensive feedback given to students by the facilitator is valuable to students (Solomon and Salfi 2011:6), as was found by the students in the present study. A study of the facilitators' perceptions of providing IPE noted that facilitators found that the IP nature of the groups was a far more complex and demanding task than that of facilitating uni-professional groups, due to the diversity of the students' needs (Lindqvist and Reeves 2007:404). The students' skepticism of the IPE module can also a barrier towards facilitating IPE sessions and reaching IPE outcomes (Lindqvist

and Reeves 2007:405), although none of the participants in this present study exhibited feelings of skepticism towards the IPE. Any stereotypical views that are voiced by the facilitator may influence the students negatively, limiting the outcome of collaborative practice (Nisbet *et al*. 2008:66) and facilitators should therefore be weary of voicing their own opinions during discussions with students. Unconscious or non-verbal cues that are negative towards IPE may also affect how the student perceives an IPE experience (Dallaghan *et al*. 2016:2). One aspect that needs attention is the notion that facilitators are role-models to students. Being a role model therefore requires professional behaviour. A facilitator who does not arrive for the scheduled IPE session could be seen as a poor role model.

> *…'cause it's very bad at first when we didn't have a facilitator. Just like making sure each group does have that.*

With regard to facilitation within the context of simulation specifically, the facilitator is responsible for the pre-briefing (orienting the students to the expectations, outcomes, the scenario etc.), for allowing students to manage the situation during the simulation, and for the debriefing (Franklin *et al*. 2013:19). The facilitator is required to provide guidance and support to the students during the simulation and assists in identifying the actions in the simulation that were good, those that need to be improved and how the simulation could be handled differently in future (Boese *et al.* 2013:22). The facilitator is also responsible for the debriefing which occurs after the simulation experience. Debriefing consists of the discussion that occurs when students who were part of a simulation interact with each other and the facilitator in order to reflect on their experience of the simulation. It is considered essential in order to facilitate the learning that takes place within the scenario (Dieckmann *et al*. 2009:287). The role of the facilitator is to stimulate deeper reflection of their practices, thereby helping students to learn (Dieckmann *et al.* 2009:288).

> *So I think that the facilitator can make a huge difference in the group*.

In general, the facilitator was seen by the students as a necessary, invaluable part of the experience. However, good skills demonstrated by the facilitator make a valuable contribution to the success of an IPE module (Solomon and Salfi 2011:8).

4.3.2.3 Outcomes

The main outcome of the IPE module was to enable students to work collaboratively among healthcare professionals by working in healthcare teams consisting of different healthcare professions (see section 2.2.1) and in so doing, enable them to develop a plan which will promote collaborative practice in a healthcare setting (Botma *et al.* 2014:5), based on the six key domains identified by RNAO (2013:6). Students were required to demonstrate shared decision-making and shared power through communication and collaboration with the healthcare team and the patient and their family. However, in the process of attending and participating in IPE, participants identified more needs with regards to being able to achieve this aim and being able to take the learned skill to their places of work.

Participants felt that they knew what the required outcomes were and so understood the aim of the sessions.

> *We knew why we were there, like, we want to create the ideal setting……I got the message quite clearly and it was an awesome idea.*

Although participants understood why they were there (to learn to work collaboratively with other healthcare professionals), and felt that they did achieve this outcome, participants identified that they had other needs too. These included that they wanted more professionals present (see section 4.3.3.3(b)), that they wanted more scenarios with different conditions (see section 4.3.2.5 (d)), and that they wanted to feel that there was a transfer of the experience into the clinical settings (see section 4.3.2.5 (c)) where they work.

> *We also understand that the classes weren't about the pathology but it would have been nice, 'cause now we all know what's going to happen with a stroke, but what if it was a child…*

Outcomes which balance the needs of all professionals and are suitable to the environment in which the learning occurs are necessary for successful IPE (Anderson *et al*. (2006:192). The outcomes of the UFS IPE module were reached, but participants felt other outcomes should be considered in addition to the existing one.

These desires are not limited to the current study, but appear in studies worldwide (Darlow *et al.* 2015:8; Earland *et al*. 2011:140).

4.3.2.4 Study guide

The category "Study guide" has three codes, namely:

- I used it and it helped.
- We never used it.
- Literature is redundant

a) I used it and it helped

A study guide issued to the students contained information regarding the case study as well as articles pertaining to CVAs. As the study guide contained detailed information for each session's activities, some participants found it helpful and used it.

> *It helped a lot, giving background. You can go back to the book and see what was wrong with the patient.*

The study guide was found to be informative and had all the necessary information pertaining to the IPE sessions. Some participants found that the information helped them in that it provided all the necessary information pertaining to the patient with regards to the medical findings as well as the necessary information regarding the patient's progress during rehabilitation. Participants were also able to refer back to the study guide:

> *I remember in our group we always referred to the book* (study guide).

A study guide is a book or document which aims to facilitate learning (Montemayor 2002:477). Anderson *et al.* (2006:184) made use of a workbook which contained similar information as the study guide used in the IPE module at the UFS. The learning outcomes, as well as the structure and organisation of the sessions were included in their workbook. Dilara *et al.* (2014:10) argue that study guides are important in providing students with direction in their learning, especially with the inclusion of the learning outcomes, as well as with encouraging self-directed learning. According to

Anderson *et al.* (2006:186), the patient case contained in the workbook contributed to the students learning the value of patient-centred care, as well as to the appreciation of the roles of other professionals in patient care. The workbook was used to gain clarity on expectations and was found to be helpful (Anderson *et al.* 2006:188).

b) We never used it

Participants were not all agreed on the fact that the study guide was helpful. For some, it was just another study guide that was put in a bag and forgotten about.

> *…we didn't really use our study guide in our groups. The facilitator had it then she told us what she wanted us to discuss in each group and we did it.*

> *I know mine* (study guide) *just chilled in my bag.*

Some participants found that the information contained in the study guide was verbally repeated by the facilitator at the beginning of each session and therefore found themselves not making use of it. The study guide was deemed unnecessary. The study guide was often not even brought to class as the IPE module was seen as an 'extra' and was not foremost in their thoughts. Some participants felt that by printing a guide for every student, money was being wasted. These participants felt that if there were students who felt the guide was helpful, the guide could be provided in an electronic format on the university's learning management system (BlackBoard).

> *Make it optional if you want it you can get it. If you don't want it…. or put it on Blackboard or something like that.*

Some of the participants felt that by making the study guide available electronically, paper could be saved, seeing this as a "greener" option.

> *Just save some paper. Let's be green.*

The generation to which the participants in this study belong are commonly known as the Millennials, and refers to persons born after 1982 (Robb 2013:301). Millennials

are comfortable with using technology to engage in their studies and technology forms part of their preferred learning style (Robb 2013:302). Montemayor (2002:473) explains that electronic study guides are becoming more popular than print versions. Various reasons are given for the popularity of electronic study guides, namely that the study guide is readily available to students, that an electronic study guide allows the incorporation of videos and other visual material, and that it allows students to multitask. There are fewer limitations on content with an electronic format.

As mentioned, Anderson *et al.* (2006:188) made use of a workbook that was provided to students at the beginning of their IPE module. While some of the students in Anderson *et al.* (2006:188) were happy with the workbook and found it helpful, 34 % of the students did not like the workbook, although the reasons for this are not stated. These were mainly medical and radiography students.

c) Literature is redundant

Articles pertaining to the team-based approach to a stroke and the role of the OT after a stroke, were included at the back of the IPE study guide.

> *…the book was a waste to me in terms of it just had a lot of information* (referring to articles in the back of the study guide) *which was un-neccessary and redundant.*
>
> *I'm sorry but none of us read this.*

The articles at the back of the study guide were deemed unnecessary and participants indicated that they did not read it or even refer to it at all. They felt once again that it was a waste of money to print these and also felt that if there were students who felt they would read it, that this rather be made available in an electronic format. Boruff and Storie (2012:22) found that students within healthcare professions prefer to use mobile devices such as mobile phones and tablets as resources to find the information they are seeking with regards to patients. They do not make use of library resources.

4.3.2.5 Simulation

The catergory of “Simulation” includes five codes, namely:

- Scenario was not inclusive.
- Fidelity of simulation.
- From simulation to reality.
- More variety of scenarios.
- Feedback from SP’s.

a) Scenario was not inclusive

The unfolding case-based scenario that was used in the IPE module was designed using the information of a real patient who presented with a CVA. However, it was seen by the participants to not be fully inclusive for all the professions involved in the IPE.

> *He* (biokinetics student) *struggled a bit ‘cause he said the patient, the case study, wasn’t really relevant ‘cause they only really get to see the patient after the physio has discharged them.*

> *….if we want to have a simulation then it should be a patient that can be treated by the whole team…..*

Although there were very few sessions attended by the dietitians, there was a role for them in the scenario. However, as a result of their absence, participants from the other professions were not very clear on what their role would have been. The optometry participants also felt that their input was limited due to the specific condition of the patient and the fact that they do not work in the hospital itself and therefore had a limited role in the specific scenario used in the simulation. The role of the biokinetics students was also limited by the patient’s condition and due to the fact that their scope of profession mainly makes use of exercise in the promotion of health and therefore they do not work in a hospital (acute care) setting.

Professions who thought their input with regard to their role was not needed due to the nature of the scenario, displayed less motivation for or participation in IPL. As in this study, Earland *et al.* (2011:140) found that dietetics students were unhappy about their

scenario as they felt the role of the dietitian was disregarded. It is recognised that scenarios which can include all the represented professions, with their professional needs, are difficult to develop (van Soeren 2011:439; Earland *et al.* 2011:141). The developers of scenarios should draw upon the experiences of qualified professionals, such as clinical educators, to introduce scenarios which will be viewed as applicable to all professions. However, it is well reported that for logistical reasons, not all professions are able to attend (Baker *et al.* 2008:378), even if the scenario was designed to accommodate all professions.

b) Fidelity of simulation

The fidelity of the simulation refers to how much realism is experienced in the simulation and is a vital component for achieving participant engagement in the IPE experience (van Soeren *et al.* 2011:439; Meakim *et al.* 2013:6; Dieckmann *et al.* 2007:190).

> *I'm sure it cost money to pay the people to be there but I don't know if it added that much value to the learning experience.*

> *The situation is just not really suitable for that because we only have one allocated room so we have to discuss everything so I think like in a hospital setting it would have been different.*

> *The one day we found our patients, okay it's a simulation, but the patients were walking and then suddenly it was a stroke so we were like, it's just going through the motions to do this…*

Participants felt that the fidelity of the simulation was not very good. They felt that they were only going through the motions, even though they had just seen the patient outside, obviously with nothing wrong. This affected how they reacted in the simulation. Participants did not get the feeling that this could be a real situation. This could be as a result of the standardised patients (SP's) who were used. Although the SP's were given training on how to portray the stroke patient and what to do or not do according to the unfolding scenario, they were not experienced in portraying this role. Most SP's were elderly men and women and aimed to please everyone, which at times

meant they did not want to mislead or confuse the students and made it “easier” on the students. There was also some disparity between the case study provided to the students in the study guide and the SP. The study guide introduced the patient as a male. However, as recruiting 20 male patients to be used as SP’s proved difficult, some female SP’s were used. This had an influence on how the students experienced the simulation.

A scenario which is realistic allows a participant to interact with other professionals by applying their own profession-specific knowledge, which assists in teaching others about their scope of profession and simulates how IP collaboration works (Van Soeren *et al*. 2011: 437). Where practical relevance to reality exists, lasting value is assigned to the learning (van Soeren *et al.* 2011:438). Learning is minimised when there is poor realism in the IPE experience (van Soeren *et al*. 2011:439). Hammick *et al* (2007:20) also suggest that good fidelity will enhance the effectiveness of an IPE module. All efforts should however be made to ensure that the fidelity of the simulation is high, especially with regard to age, gender, and general appearance of the SP (Chur-Hansen and Burg 2006:222). Unfortunately students did not experience the scenario in this manner, as they felt the fidelity was reduced.

c) From simulation to reality

Students are generally more interested in an activity if they find the relevance of the activity to real-life situations, or situations in which they may find themselves in a clinical setting. The participants, although they may have seen the relevance of the IPE to real-life, felt that very little of what they learnt was carried over into reality.

I don’t feel like there’s been an overflow into the hospital setting.

Earland *et al.* (2011:138) found that working in IP teams prepared the students for work in the clinical areas – there was carry over from the IPE setting (interactive online module) into their clinical work. However, in the present study the students felt that there was very little carry over into the clinical setting. This could be due to the isolated, discipline-specific education that is still the predominant form of training at South African universities, as well as the old notion of the doctor being in charge of the team (Whitehead 2007:1012). It could also be a result of the personnel (qualified

professionals) in clinical settings not being familiar with IP collaboration, as the IPE module is still only presented to the undergraduate students at the UFS and one gets the feeling that "*old habits die hard*", as quoted by a participant.

Students should be challenged by tasks with increasing difficulty, and D'Eon (2005:56) suggested making use of case studies with simulation first and then allowing the students to work collaboratively on real patients. This would allow the students to take the knowledge of what they learned during the simulation and use it to manage a real patient's health needs (experiential learning). This also came to light in Cameron *et al.* (2009:225) where students also voiced concern over how learning from IPE could be transferred back to working in practice, just as was found in this study. In Anderson *et al.* (2006:190) it was the facilitators who voiced their concern on how the learning that has taken place in the IPE module would be transferred to the students' clinical work.

d) More variety in scenarios

On the whole, Participants enjoyed the unfolding case study. However, they did feel that one case study was not enough and felt that more scenarios could have been used. Participants felt that there would be more opportunity for the inclusion of all the professions if there were more scenarios, with different patient conditions.

> *The scenario, that was good, but they could have given us more scenarios.*
>
> *I think it would be beneficial to have more than one scenario because you know, if we all see one thing that's all great and well, but if you have two or three different things from completely different backgrounds then everybody gets a clearer idea of what everybody's profession really entails….*
>
> *…having the opportunity or more than one opportunity to practice efficient IPE teamwork.*

The participants felt that a variety of scenarios would allow them to each have an opportunity to take the lead, and would also provide more opportunities for the students to practice working together collaboratively. In this way, the knowledge of each profession's role could also be enhanced.

Robertson and Bandali (2008:502) agree with the participants in the present study by reporting that an IPE curriculum for healthcare professionals should include a variety of scenarios which can give the students the experiences of different problems and settings. On the other hand, Pulman *et al.* (2009:238) suggest that fewer, more developed scenarios provide a better experience of IPE. In the present study, only one scenario was used, although it did progress from being an acute patient to a patient requiring rehabilitation and home-based care. Dietetics students who participated in a study in the UK also felt that by introducing more than one scenario, the roles of all professions could be equally represented, thereby providing all professions with a chance to teach others about their role (Earland *et al.* 2011:140).

e) Feedback from SP's

Immediately after the simulation of the grand ward round where the students had the opportunity to interact with the "patient" (SP), the SP gave the students feedback on how they had experienced the interaction. This included aspects of communication and professionalism, as well as how they had worked together as a team.

> *It was nice to get the feedback from the patient cause it was only a mock case….we had quite a nice patient and he gave us constructive feedback and we actually improved a lot on the second time when he was there as well.*

> *Then afterwards, it's very nice, the feedback from the person who was (the SP), 'cause she said to us but you weren't talking to me and we never realised that we had to do that.*

The participants experienced the feedback from the SP's very positively. They felt that SP's could accurately describe their faults regarding communication and interaction and found that this was a positive, invaluable experience. SP's also

reported on what they had done well. SP's reported on respect, professionalism (including the use of jargon) and patient communication regarding use of their voices and allowing each team member to have their turn to speak.

The only negative aspect mentioned by students was that the SP's did not have a medical background. This may have influenced some of the feedback given with reference to the treatment of the patient with a stroke. However, SP's were able to give their feedback from the point of reference of a patient with a specific condition.

> *It was really nice 'cause they couldn't critique what you were saying really but they gave you an honest human opinion and say, I'm a human too, you respect me, I'm part of this cause I'm here. Just because I can't speak doesn't mean I can't hear you…*
>
> *…..the feedback differed* (from group to group) *'cause the patients didn't all have a medical background….*

One important aspect that may have been missed is that a real patient does not necessarily have a medical background. The SP's feedback gave information on how they had made the patient feel, rather than arriving at a diagnosis or treatment. The SP's feedback was related to bedside manner, rather than medical diagnoses or treatments, which is important in modern day patient-centred care. Participants could have misunderstood the goal of the SP's feedback and should be made aware of it in future IPE modules.

Van de Ridder *et al.* (2008:190) formulated the following definition of feedback in the context of clinical education: Feedback is *'specific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance."* Feedback after participation in IPE is seen as important by students (Anderson *et al*. 2006:193) and the feedback which is directly from SP's is deemed trustworthy and precise (Bokken *et al.* 2009:205). Although in this sense, the feedback given by the SP's in the UFS IPE simulations was not according to a specific standard (no criteria were given to SP's), the aim was to provide students with information regarding their performance from the patient's perspective

(Bokken *et al.* 2009:207), whether individually or as a group, in order for them to improve it.

In conclusion, simulation played an important role in the IPE experience and included both positive and negative experiences. Positive experiences included that there was good feedback from SP's. However, there were more negative experiences, such as the need for more scenarios, more inclusive scenarios, increased fidelity and a transfer to reality.

4.3.3 Theme 3: General organisation of IPE

This theme consisted of the students' experiences of the general organisation of the IPE module. This included logistical aspects such as the time that was involved to be able to attend the IPE, the instructions that were given, the composition of the teams and the module content itself. It is noteworthy that organisational aspects are barriers to IPE implementation in all countries and at all healthcare institutions which implement IPE (Baker *et al*. 2008:378; Buring *et al*. 2009:7; Cameron *et al.* 2009:224).

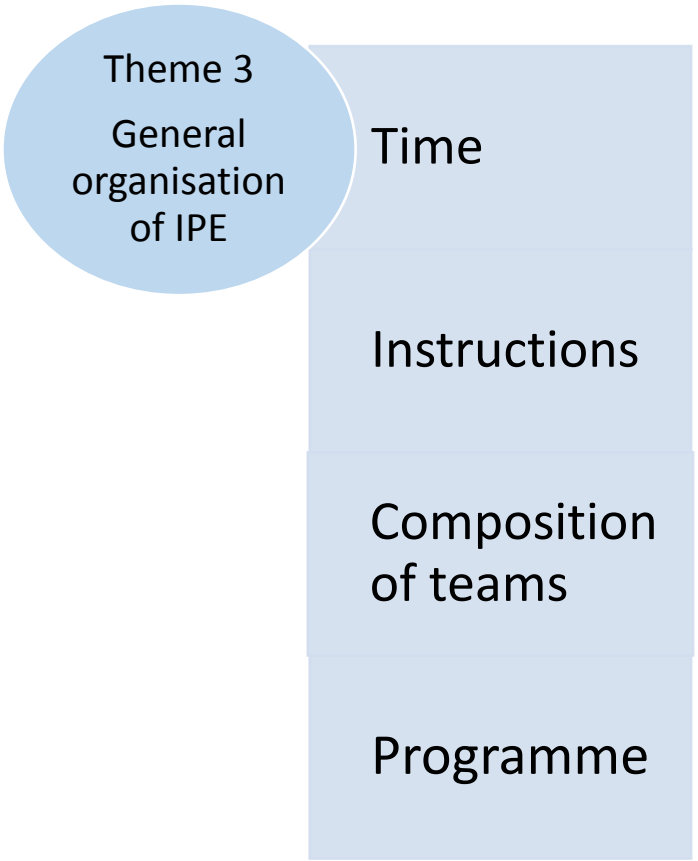

Figure 4.5: Theme 3: General organisation of IPE

4.3.3.1 Time

Two codes make up the category “Time”, namely:

- Takes extra time.
- Scheduled time not optimally used.

a) Takes extra time

The profession-specific modules that all the students follow are extremely time-intensive and have very full curricula and, therefore, anything that is seen by the students to be an “extra” is just that – not necessary, but rather something that could be beneficial if they have the time to attend. Students were very aware of the time that the IPE took, which could have been used on profession-specific education or for learning for assessments within their own modules. As a result of this, students may have attended only one session and then not returned for the follow-up sessions.

> *Students don’t like to do unnecessary things because how many people attended the first one (IPE session) and then ….I’m not doing it, I’m not coming back.*

Participants also felt that the IPE was not for marks, and therefore many of them felt that they did not want to use their time for something that was not contributing to their marks in any way (see section 4.3.2.1(a)).

> *….most of them didn’t actually want to take so much time there ‘cause they were like, “I don’t get any marks for this”*

Nursing participants also felt that the time spent on IPE took away time that they could have used to work in the clinical areas in order to make up their required clinical hours.

> *...so it did take away the nurses’ time to gain hours…*

Most IPE modules in literature have worked on a volunteer basis where students volunteered to be part of research into IPE (Nisbet 2008:67). In these reports, students volunteered to participate in IPE activities and completed questionnaires (Earland *et*

al. 2011:135) or took part in focus groups (Lie *et al.* 2013:35) or semi-structured individual interviews after the IPE activities (Nisbet *et al.* 2008:61). Rosenfield *et al.* (2011:475) found that students were very outspoken regarding attending IPE activities in addition to their already full curriculums, as attending IPE activities does take up extra time. Lehrer *et al.* (2015:3) and Palatta *et al.* (2015:994) also found that time was a major barrier in the attendance of IPE activities. The students were of the opinion that IPE activities should be integrated into their existing professional modules.

b) Scheduled time not used optimally

For some participants the issue of being at the IPE and the time it took was not a problem. Rather, they felt they were taking part in an activity valuable to their studies. However, they felt that the time that was scheduled was not used optimally and participants felt that they perhaps did not receive the maximum benefit that IPE could present.

> *I don't think we used the full time ever.*

As there were only two hours scheduled per week for four weeks, they felt that they were committed to this, but did not use the time effectively. Some suggested that as there was enough time, perhaps another scenario could have been provided in order to have all the professions present and have an active role in at least one scenario. Mashingaidze (2012:30) also reported that students were frustrated by the fact that the lecturers involved in their IPE did not fully make use of the scheduled time, often causing students to be there for the required hours, but with nothing to do. On the other hand, students in the study by Anderson *et al*. (2006:190) were concerned as the sessions often ran over time. However, participants in this study also noted that it takes time to get to know one another in a newly formed group and therefore time should be spent on this aspect in order for students to feel comfortable with each other. The difference between how participants experience the time aspect could be related to the personality traits for leadership, as described in section 4.3.1.2(b), most notably, those open to new experiences.

4.3.3.2 Instructions

The category “Instructions” consists of two codes, namely:

- We knew what to do.
- We want clearer instructions.

a) We knew what to do

Some participants felt that the instructions were clear with regard to what they were expected to do in each session.

> *It was clear. We never had to worry about what we were going to do ‘cause it was there* (in the study guide).

There could be a link between those who felt they knew what to do and what was expected of them and those that read the study guide due to the fact that all the information for the activities was in the study guide (see section 4.3.2.4(a)) (Appendix E). Those participants who may have read the study guide before attending the IPE sessions (as instructed to do so) may have found themselves understanding what they had to do and therefore found it easy to follow the instructions in the study guide. Another factor which could have played a role in the participants feeling they knew exactly what to do could be the role of the facilitator. Some participants felt that they had a facilitator (see section 4.3.2) who guided them through the process and therefore felt confident that they knew what they had to achieve.

The pre-simulation briefing, a period when students are told about the simulation before entering the room, is vital for successful IP simulations as it provides the students with the necessary information in order to achieve the stated outcome of the simulation session (Boet *et al*. 2014:855; Meakim *et al.* 2013:7). Students who see the value in and relevance of what they are going to do are intrinsically more motivated than those who see no value/relevance (Rust 2002:150). The pre-briefing shows them the relevance of the simulation.

b) We want clearer instructions

Some participants felt that they were not sure what they had to do, even though all the instructions were in the study guide (Appendix E).

I just think that what they expect from us is a little bit uncertain.

The instructions to the students were in the study guide, but not all students were familiar with them as they did not read the study guide. Students were instructed to simulate a ward round with all the professions (in their own groups) in attendance in order to manage the patient further. I think that the students were not all familiar with this as they do not all attend ward rounds on a regular basis, if ever. As this was not familiar to them they felt uncertain and felt they needed more instructions on how to go about holding the ward round. However, the learning that occurred from the first chaotic, simulated ward round resulted in a great improvement in IP collaboration in the second simulated ward round, which indicated that learning had taken place.

Similarly to the present study, Mashingaidze (2012:34) also reported students felt unsure what the purpose of IPE was, leading them to feel that they needed more orientation of what was expected of them. Anderson *et al*. (2006:188) found that some students felt uncertain of what was expected of them during their IPE module (case studies, not simulation), even though all their instructions were in their workbook, as was the case in the present study. Rudolph *et al.* (2014:341) are of the opinion that there may be inconsistency between facilitators and students regarding what the students were expected to do in a simulation experience, leading to students' feelings of uncertainty. The facilitator may have a good idea of the aims of a simulation experience, but they may not be the same as those of the students. Some students may also not be familiar with the use of simulations in healthcare and therefore feel that instructions need to be clear, thereby providing the students with a feeling that they are in control and are more likely to engage in the simulation experience (Rudolph *et al.* 2014:341). Earland *et al.* (20011:140) also recognised that facilitators needed to be well prepared in order to assist students with their learning through good guidance (see section 2.4).

4.3.3.3 Composition of teams

The category “Composition of teams” has two codes, namely:

- All from beginning to end.
- Include other professions.

There is overlap between the categories of “Composition of teams” and “Simulation” (more variety of scenarios). There are critical differences in that the variety of scenarios refers more to there being a role for everyone in the team, whereas the composition of teams refers more to who is in the team and that they are always there to participate.

a) All from beginning to end

One of the frustrations voiced by a participant was that there was no consistent group in which all the members were there for all the sessions.

> *….it was very bad for me in the third session, new students came into our group. So you got to know all the other students, then there’s these two new students that, they don’t want to talk because they’re new and they feel strange and that was bad…..they didn’t want to participate like the others did.*

The changing group composition seemed to disrupt the group in that there were members who felt they had to get to know the group again, or that members who did not come to the first IPE session, but joined later, did not contribute as much as they could have due to them not knowing the group members and not feeling comfortable to speak up. As discussed below in section 4.3.3.4(b), some participants were dissatisfied with the first session in which the groups discussed values and this may have affected their attendance of the sessions to come as there were students who attended only the first session.

Solomon and Salfi (2011:9) found that students were initially unnerved when having to communicate with a new group, even if they had previous experience with IPE. This could be even more so in the students who have had no previous experience of IPE. Small, unchanging groups lead to IPE activities being perceived as effective for IP

learning and are more successful (Olson and Bialocerkowksi 2014:239). Students enjoy learning from each other in small groups (Curran *et al*. 2010:47). Good interaction between professions is promoted by having equal number of each profession in a group (Curran *et al.* 2010:49), however in the FoHS there are not equal numbers of each profession and so this was not possible. In some instances, professions were only represented by one student (biokinetics, dietetics, occupational therapy, physiotherapy, optemetry) and at times, those professionals were not there. In the study by Gjessing *et al.* (2014:345) the same was found, where some departments (e.g. nursing) had bigger numbers than others, which may affect whether a student experiences the IPE as effective or not.

b) Include other professions

Participants were disappointed that other professions were not included in their groups, or when students from some of the professions did not attend the groups, for whatever reason.

> *It was a bit bad for me that not all of the health professions were there, like the dietitian. I know they weren't there.*

> *There's always a social worker, and a psychologist a lot of the time* (in the clinical settings).

> *I think it's important for the next sessions* (next year) *to definitely have social workers as well.*

Due to the small number of dietitics, optometry and biokinetics students, not every group included one of all of these professions. Students felt that they would like to have all the professions in their groups in order to learn from them too.

> *If it's possible to make sure that every group has someone of every profession.*

Students felt that the presence of other health professions could improve their experience of the IPE module. The students in the study by Anderson and Thorpe

(2010:24) felt that more healthcare professionals were needed in their IPE groups (it was not stated which professions were involved, only that each group consisted of 2-5 professions). Earland *et al*. (2011:138) found the same, also stating that it would be beneficial to have social workers involved. Social workers are often called upon to work with other healthcare professionals to access necessary services for patients (Olenick and Allen 2013:158) and therefore could form a vital part of an IP team. Psychologists require opportunities to learn to work in IPE teams too (Cubic 2012:91) and therefore, inclusion of psychologists into IPE endeavours would be beneficial to all professions involved. Curran *et al*. (2010:48) also found that students had a need to interact with other professions which were not included in their IPE module. On the other hand, Dallaghan *et al*. (2016:3) found that when a profession was present but did not have a role to play in the scenario, group members felt they had nothing to add to the discussion (see section 4.3.2.5(a) and (d)). Therefore, when adding professions to the group there should be opportunities for them to contribute to the discussion.

One of the biggest challenges to IPE in composing teams which include all the professions, is one of scheduling across professions (Cameron *et al.* 2009:224; Dallaghan *et al.* 2016:1). This scheduling applies to the students participating as well as to faculty members who can act as facilitators. This is also the experience at the UFS where it proves difficult for seven different professions to come together at once.

4.3.3.4 Module

The category “Module” consists of two codes:

- First and last session were the same.
- Values session.

a) First and last session were the same

Two of the four IPE sessions involved more theoretical work. In session one, students had to develop a diagrammatic representation of what they understood by the term collaborative practice. Students could use the information obtained from a short presentation, as well as information contained in their study guides. The students were also required to develop their group’s own value statement. In the last IPE session students were required to develop a plan in which to introduce and encourage

collaborative practice in a new clinical setting (where there was currently no collaborative practice). However, many participants felt that the final IPE session was just a repeat of the first IPE session. One participant felt it was

> *just a re-cap of the first one.*

> *I realise we have to work through the theory, um, but it was not, um, not valuable to go through that again in the last session because the last session was like a repeating of the first session.*

It is important for students to clarify what the concepts are that they will be working with, and so I feel that the first IPE session was important in aligning the students to what would follow. However, perhaps the reason they felt that the final session was only a repeat is that they did not fully understand the activity given to them. This involved the development of a plan to initiate and encourage collaborative practice in a clinical setting which does not make use of collaborative practice. Once again, poor guidance from the facilitator could also have been a factor due to IPE and collaborative practice still being relatively new concepts for many faculty members. This final activity also had to incorporate what they may have learned from the simulations, as well as from the feedback given by the SP's and facilitators during debriefing sessions. Perhaps the students found it difficult to incorporate all these aspects and mostly used the information from the first IPE session to develop their plans, instead of thinking wider. This could have lead to a feeling that the final session was only a repeat of the first.

The literature is varied on the type of IPE activities that are presented to students, with online sessions (Earland *et al.* 2011:136), clinical education wards (CEW) (Ponzer 2004:728) and problem-based learning (Maeno *et al.* 2013:10) being some examples. Very little information is given regarding the information that is provided to students or the activities that are done in IPE. However, Thistlethwaite (2015:299) states that it is important that there is integration of theory and practice in IPE, which is what the last session aimed to do (Botma *et al.* 2014:5).

b) Values session

The reference to the values session is the activity in the first session of the IPE module in which students had the task of developing their own value statement by which they would conduct the rest of their group activities. The time allocated for this activity was 30 minutes. The students were required to read the vow of graduands (the vow spoken during their graduation ceremony) from the FoHS and discuss the values found within them. They were to use these values and develop their own group value statement which would be used as a basis for conflict resolution, as well as be used as a guide for students' behaviour during discussions and the simulated ward rounds.

> *I think there's a significant part of the IPE experience that can be left out with regards to speaking about values for an entire session and making posters about values.*

Although the students were only given 30 minutes in which to complete the task regarding the values statement, for some participants it felt as if the whole session consisted of the value clarification.

> *Although it's important we can maybe have a half an hour discussion instead of two hours dedicated to that (values discussion) and making posters….*

The first session also included allocated time to get to know group members as the students had never worked together with so many other professionals before and required time to get to know who they were and what their professions were. This was done by means of a simple ice-breaker. Students who are familiar with each other are able to engage in role-play simulation and show improved attitudes towards the learning experience (van Soeren *et al*. 2011:438). Building up trust, recognising skills and developing mutual respect are vital to team work and can form by taking time to get to know other team members (Weller *et al.* 2011:485). However, not all participants appreciated this ice-breaker activity as shown below.

And I understand it's ice-breakers and some people might enjoy it, but I felt like the first session was a waste and I didn't gain anything out of it.

Walsh *et al.* (2005:235) are of the opinion that an IP team member should interact with other team members while practising understanding of and respect for the culture, beliefs and values of others. This positive interaction is one of the ethical capabilities that is fostered through IPE. Respect is vital in order for collaboration between healthcare professionals to be successful (Matziou 2014:532). Where there is a difference in the values and/or beliefs of the different healthcare professionals regarding patient care, there is a breakdown in communication between professionals, leading to compromised patient care (Matziou 2014:531). When professionals feel that they are equal members in a team, collaboration is improved and shared decision-making occurs (Matziou 2014:531). Bridges *et al.* (2011:6041) suggest that IPE can be successful where students are able to practice and share the traits of responsibility, autonomy, mutual trust and respect, accountability and good communication. In light of these literature references, a session in which a group has to develop their own value statement is important as it sets the tone for how they will function as a group. It assists with conflict resolution and problem-solving. There could have been a misunderstanding from the students on why they were required to clarify values, as the whole IPE experience was new to them. If students understand the purpose of what they are doing, they are more meaningfully engaged. It is interesting to note that there were students who did not attend the IPE sessions following the first session (not those in the focus group). Perhaps the feeling that this first session was too long and drawn out, not enjoyable or feeling that it was not a valuable exercise affected their attendance.

Although the first and last sessions were not designed to be the same, the participants' expression of the experience indicates that they felt the last session was a repeat of the first. Participants did not enjoy the values session, but perhaps this could be due to them being uncomfortable with their colleagues from other professions as they did not know them.

4.3.4 Theme 4: Other benefits

Theme four consisted of the benefits that the students revealed which were not necessarily those that the module set out to achieve, as well as those benefits which were not directly related to the outcome of being able to work collaboratively with others to achieve patient-centred care. These included that students felt they were able to promote their own professions, that they were able to see an ideal future, that they were able to meet other colleagues and that they were able to challenge stereotypes.

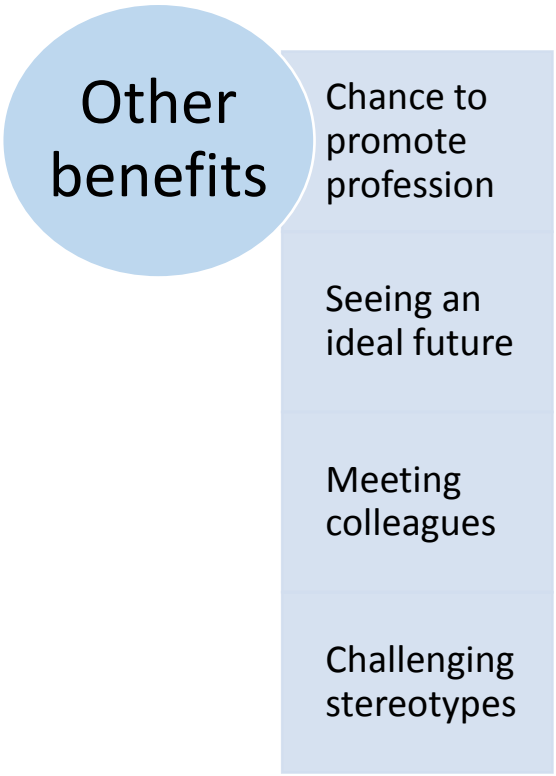

Figure 4.6: Theme 4: Other benefits

4.3.4.1 Chance to promote profession

Although many studies have identified that students gained knowledge about the role of their own profession, as well as that of the other professions, this study only identified that participants learned more about other professions. Participants were confident in their knowledge of their own professional roles, but did, however, feel that the IPE module gave them an opportunity to promote their own professions.

> *…it was really nice to work as a team because then we could all give experience from real practical experience we've had in clinical.*

They don't know what we do or what we can provide or where our scope goes. So they were surprised at the things we do and said or ask questions about, like, why are they asking about that. 'Cause it's relevant to intervention.

Participants were able to promote their profession to the other group members by informing them of the treatment they were able to provide in certain situations. Participants were not aware of all the modalities available to the allied health professions and that they can be fully involved in patient care from the very acute phase of patient care too. During discussions, medical students were informed of how allied health professionals could treat the acute CVA (stroke) patient, which the medical students were unaware of. They also helped the medical students by explaining what information they should provide on the referral forms. Participants felt that they were able to explain what their professions did by answering the questions that other group members had. This is similar to findings by Earland *et al*. (2011:140) where students felt they were able to go to new clinical placements being able to share their own professional role with others. Lie *et al.* (2013:40) also found that during an IPE experience, their participants recognised that there was a need to make others more aware of their own professions and educate them in their professional role.

4.3.4.2 Seeing an ideal future

This category consists of two codes, namely:

- IPE is not implemented in practice
- The seed has been planted

a) IPE is not implemented in practice

Category two of theme four consists of being able to see an ideal future and the vision of possibility. The seed has been planted, so to speak, and the possibility of working in IP groups in clinical placements is left in the back of the students' minds, perhaps stimulating them to find ways to work together.

One real concern that the participants had was that, although they go through four weeks of education regarding collaborative practice, this practice is nowhere to be seen in clinical areas.

> *So for me what I've found strange how they* (doctors) *implement something* (IPE) *to students, but they don't implement it in practice.*

One participant was particularly disappointed in the qualified health professionals as during her training she is placed in various clinical areas. Her disappointment stemmed from the fact that she had worked with some of the doctors that were now advocating for IPE to improve collaborative practice, however, they were not actively attempting to use it in practice. Thistlethwaite (2012:64) also found that students are confronted with poor teamwork on a clinical placement, resulting in students feeling disconcerted by the difference in what they are taught and what they see on that clincal placement. Thistlethwaire (2012:64) reminds us that faculty members are important role models for students, where students look to qualified professionals for guidance on professionalism and the development of attitudes. A role model needs to display knowledge of and respect for other professions as well (Herbert 2005:3). Students need to observe qualified heatlh care practitioners who work interprofessionally and if possible, work with IP teams in clinical settings (Thistlethwaite 2012:66).

Another issue which influenced how participants saw the future was that there are too many qualified practitioners who have been in the healthcare system (governmental institutions) for too long and are fairly set in their ways. They have not received training in IP collaboration and therefore do not see the value of working with others to achieve holistic, patient-centred care.

> *I just think it's gonna take a long time to really implement this multidisciplinary team 'cause I think like, first of all we need to get like, not to get the old people out but……I think we need to get the old way of doing things out before we can implement this new, um, thing that we, yes.*

The state of the health systems in South Africa leave a lot to be desired and this affected how positive the students were towards healthcare. Unfortunately hospitals are often left understaffed, underfunded and under-equipped (with regard to equipment and consumables). This leads to healthcare practitioners who are constantly working under pressure to achieve results with minimal resources, leaving little time to think about collaborating with other professionals. Some students felt that once the health systems were better managed, IP may improve.

> *I think it's just where we are situated, where we are functioning and once that is sorted, or better, then we will be able to do interdisciplinary.*

This statement suggests that the participant feels there is hope for improvement within the current healthcare students.

b) The seed has been planted

Students do their clinical work in various government institutions in Bloemfontein, as well as in the southern Free State. It is common knowledge in South Africa that the national health department faces huge financial problems. Due to national shortages in medical personnel (only 2,28 doctors per 10 000 of the population in 2007 (Breier 2007:12)), necessary medical equipment, as well as consumables such as gloves and masks (amongst others) and medication (eNCA 2014), students are exposed to the reality of the barriers to care that exist in some state run institutions. Students are forced to make do with the available resources and often are required to adapt their plans for patient care according to what resources are available. As a result of this reality, students are often disheartened by the care a patient may receive, although there is often nothing they can do about it. The IPE module, however, planted a seed in the minds of the participants of how the human resources in an institution can be pooled to care for the patient's needs.

> *I think the seed* (of working together in IP teams) *was planted and* (if you) *at least attended one of the four sessions and not even all of them. But I think when the seed is planted the process got started in our brains.*

By attending the IPE sessions, participants felt that they had been given the tools to be able to work collaboratively in future:

> *I think for future purposes we will know what to do when, I think that was a positive for us.*

By taking part in the ward rounds during the simulations where all the health professionals were in attendance, participants got the feeling of how patient care can be achieved. This contributed to them seeing a future where working together may be the norm:

> *It was nice to get the experience of how they want things in the hospital to work, although it doesn't always.*

This was a very important realisation that the participants came to and it makes me hopeful for the future of healthcare in our country. As a result of the IPE, they know how things can and should be done and they are seeing a vision of possibility, where all the professions have an equal standing in the IP team, where every member gets to be heard and wants to make a contribution. As the students go through their clinical work, in the back of their minds they have this vision and are making use of the opportunities presented to them to work interprofessionally. Darlow *et al.* (2015:8) believes that by providing IPE we are investing in the future of healthcare professionals who will strive toward collaborative practice, as the provision of quality healthcare in the future involves functioning in teams (Dallaghan *et al*. 2016:5).

4.3.4.3 Meeting colleagues

The category "Meeting colleagues" consists of two codes, namely:

- Counters isolation.
- Less intimidating in clinical areas.

a) Counters isolation

Isolation of one profession from other professions may occur naturally in a FoHS in which there are so many different learning modules for healthcare professionals. This

may be due to the full curricula which each profession is subjected to, once again in the 'silos' (see section 2.1), as well as the geographical distance between the various departments/schools (Goldman *et al.* 2010:371). For example, the SAHP (excluding the departments of Exercise and Sport Science and Optometry) is housed in a building that is separate from the SoN or the SoM, while the Department of Optometry is not housed on campus, as are all the other departments/schools withing the FoHS.

> *I think it also helps build our relationships with other departments, just don't become isolated in your own department.*

The IPE module gave the participants the opportunity to meet students from other professions and interact with them. There are very few opportunities for students to interact with other students from the FoHS but from different professions. One participant expressed the feeling of isolation at a clinical area that was alleviated when another student from another profession joined her:

> *What was also very nice for me was I got to know her through IPE and then we got, I was working at Pasteur all alone as an OT, feeling sorry for myself and then physios come and then she was there, …….then it was like, aaaahhh, we've kind of worked together before……*

Participation in the IPE helped the participant to feel less isolated when treating patients, allowing for discussion with other professionals treating the same patient. This was especially true for the allied health professions who often feel intimidated in talking to medical students or doctors.

One medical participant expressed how they had been able to meet colleagues who were from the English class of medical students. This is due to the large number of medical students and possibly the isolation between the language groups.

> *…because I met a few people I didn't even know before, even in the English medicine class there were quite a few people that I didn't know…*

Students are able to meet and interact with colleagues whom they would not normally talk to and in so doing, share experiences (Cameron *et al.* 2009:225). Each profession is trained in isolation from the next and therefore little contact between the professions occurs (Hallin *et al*. 2009:156; Delunas and Rouse 2014:100). Nisbet *et al.* (2008:59) found that IPE provided the students with an opportunity to interact with other professions and in so doing, there was improved understanding of each other as well as positive attitude changes.

b) Less intimidating in clinical areas

Speaking to students from other professions can be intimidating to some. The interaction that they experienced during the IPE sessions was valuable in helping participants realise that, although they were all experiencing feelings of intimidation when having to talk to other professions, they were all on the same level; equal members of the team. The feeling of intimidation was alleviated by working together.

> *But in the clinical area I'm not so intimidated by the students anymore 'cause now I know them, they've been with us. And sometimes go speak to them and be like, what are they saying about this patient, what's going on and we'll talk about it then.*

Participants found that they felt more comfortable in approaching students of other professions when they were working in a clinical environment. This was a direct benefit of the IPE as they were able to meet these other professionals in a non-threatening enviorment and felt that the students from other professions were "*also human like I am*". They felt that they were more open to discuss the patient when they met in a clinical setting, feeling at ease to ask questions regarding the condition of the patient or the treatment thereof.

Nisbet *et al.* (2008:62) found that students were intimidated by doctors and did not always discuss patient care with them if these discussions were likely to result in conflict. However, the IPL that these students were involved in made them realise their responsibility to the patient, which resulted in them feeling less intimidated and more likely to advocate for the patient. Earland *et al.* (2011:139) found that students approached other professionals as a result of the IPE, feeling that they were able to

be more assertive in approaching other healthcare students (Mashingaidze 2012:41). Student relish the opportunities in which they can meet and interact with each other in a relaxed, stress-free environment which is still, to a small degree, a realistic environment (that of working with other healthcare practitioners) (Solomon and Salfi 2011:8). IPE provides such an environment.

4.3.4.4 Challenging stereotypes

The category "Challenging stereotypes" consists of two codes, namely:

- Improved communication.
- Learning to appreciate each other.

a) Improved communication

Stereotyping occurs in all spheres of life. When it comes to healthcare professions, stereotyping is rife and professionals find themselves put into "boxes" of what their profession involves or what type of person enters a specific profession. Participants experienced this type of stereotyping, but found that this opened the channels of communication and in so doing, found that they were able to give accurate information, thereby contributing to the educational aspect of the IPE.

> *I was just really sad when one medical student……I asked her 'please tell me what you think a physio and the occupational student do' and she was like, the physios work only with the lower limb and the OT's only work with the upper limb and I was, I was shocked. So I was glad I could actually teach her something.*

Participants found that their participation in the IPE module encouraged them to talk to students that they did not know, and also to professions whose roles they did not know or understand. Participants were able to discuss roles in a non-threatening environment and felt that they were able to disagree with each other in a respectable manner,

> *…I think it's* (communication) *the key to all multidisciplinary teams, talking and not being afraid to share your opinion if someone is wrong,*

'cause that happened one or two times in our groups but no-one took offence. But hopefully that will be the same in the future…

Participants felt that by openly communicating, patient care may be improved as they could discuss the patient's needs and goals. They felt that by participating in the IPE module, students could be more open to observing each other treating patients in their clinical work, especially where two or more professions were involved in the same patient's care. By communicating with each other, it was felt that the level of comfort in talking to each other was much improved, expressed in the following,

….it's important to reiterate to the students that like, you should work together and if you and I are treating the same patient then why don't we have a conversation about what we're doing with the patient……go and ask and see what's happening and in that way you're going to learn to be more comfortable around each other…..

There were participants who reported that they had already been able to use the confidence they gained from the IPE module to communicate with another professionals and were able to treat a patient together in a clinical area. In this way, albeit small, the IPE module was immensely valuable and helped two students to comfortably work together.

Through the communication between the various professions in each group, one medical student participant expressed the following:

I just wanted to say something about stereotypes. I do think it was a very sobering experience also for us, especially for the medical students who think that their course might be more difficult than some of the other medical professions just to sit there and to realise, okay, but wait, these guys (allied health professions) know much more about how to handle this patient than we do so, um, I think that was very necessary for some of the students just to realise what our place is but that the other professions definitely have their place, and its none less than us.

Solomon and Salfi (2011:7) found that during an IPE communication skills initiative, stereotypical beliefs regarding professional roles and responsibilities were dismissed. In their study, Nisbet *et al.* (2008:66) found that negative attitudes were expressed by students towards doctors and where there were feelings of intimidation, open channels of communication were limited. This can severely impair patient safety and quality of care. Communication, especially when teamwork occurs, is identified as a main outcome of an IPE programme (see section 2.2.2).

Rice *et al.* (2010:358) found that physicians were used to giving orders and having them carried out without any discussion, and this negatively impacted the communication between the various professionals working with the patient. Therefore, once again the traditional hierarchy of the doctor at the top of the pyramid can have a negative impact on collaborative communication.

b) Learning to appreciate each other

Due to the still prevalent approach of teaching in 'silos' (see section 2.1), little interaction occurs between professions during their undergraduate years. As a result students know little about each other's roles, as discussed previously. One aspect that came out during the participants' discussions about their IPE experiences was that of appreciation. Participants felt that they could now appreciate what other professions did.

> *…but I appreciate what she's done 'cause it actually helped me with my patient.*

> *….everything overlaps and that's where we can……where we can make each other stronger…*

There was an expression of appreciation for the roles of other professions. I think having the opportunity to work together in teams, learning about the scope of profession and the capabilities of other professions resulted in the participants expressing an appreciation of the others. They felt that they appreciated what each profession could bring to the table and felt that they could make each other stronger. According to Schmitt *et al.* (2013:285), opportunities in which learning takes place in

IP teams by interactive means leads to appreciation of all health professionals, and there should be an appreciation of each other (MacDonald *et al*. 2010:240). Earland *et al.* (2011:141) and Cameron *et al.* (2009:225), found that one of the most important outcomes of their particular IPE module was that students learned to appreciate the expertise that each student could bring to the IP team. This appreciation was also a key learning point noted by students in Anderson *et al* (2006:190). The contributions of each team member were valued, which is an important characteristic of an effective team (Mickan and Rodger 2000:206). Pecukonis *et al*. (2008:) speak about a professional culture, which is the way in which a profession is moulded according to values, educational experiences, dress, symbols and definition of success. By interaction with other professions in a group setting, existing beliefs of a profession are challenged. Stereotyping is prevented by face-to-face interaction and appreciation of the roles and expertise of other professions is fostered.

4.3.5 Summary of main findings

Participants were satisfied with the learning that took place during the IPE experience. The IPE module contributed to greatly improved knowledge of the scope of profession of other professionals, and in so doing, provided the participants with the ability to refer patients appropriately and timeously. The IPE module also emphasised the importance of good leadership within a team environment. From the literature it is clear that the training of leadership skills is overlooked in health professions education. General educational aspects such as the assessment of students in IPE and the development of the scenario for the simulation are important issues which need to be addressed as participants were not satisfied with these aspects. Concerns were noted about the method of assessment, as well as whether the assessment mark formed part of their formal marks within their individual modules. The role of the facilitator is central to the experience and provides invaluable input in the experience. However, further training in facilitation skills may be necessary.

Logistically the IPE module has many challenges, but even so, efforts should be made to present this information to students to produce healthcare professions who are ready to engage in collaborative practice. Scheduling difficulties remain a challenge which negatively affects the composition of groups and time allowed for IPE.

Even though challenges are present in such a module, many perceived benefits are found. Students enjoy the interaction between the different professions which occurs on a more social level. Meeting students from other professions allowed for communication across professions and engaged the students in dialogue regarding their roles and responsibilities in clinical placements. It also made participants feel more comfortable with each other and resulted in participants feeling less intimidated by other professions, especially by doctors and medical students. The most positive thing for me was that participants could identify working together for the good of the patient as important, and although they see limited collaboration in their clinical placements, somewhere in the back of their minds they are aware of the possibilities, and may possibly be looking for opportunities to collaborate with other professions.

A short IPE module such as the one that was presented at the UFS is able to teach students the value of collaborative practice. Although this study did not look at attitudes, it is apparent from the participants' comments that there was a positive shift in attitudes after the IPE and a feeling that IPE is valuable to their education. Whether there are long term changes is questionable, as no literature has shown long term effects. However, participants have been provided with a foundation for the required changes in behaviour which will be necessary for providing patient-centred care in a collaborative way.

In closing, this quotation sums up the importance of IPE:
"Those who train in interprofessional teams will be well prepared to work in interprofessionals teams for the benefit of all patients." (Dallaghan et al. 2016:5).

CHAPTER 5
RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

This chapter provides recommendations which can be considered when adapting the current IPE module for the next implementation. It also provides recommendations for further research. Any limitations that were identified in the study are discussed and a conclusion is made.

5.1 PRACTICE POINTS FROM THIS STUDY

Table 5.1 shows the practice points that can be taken from this study.

Table 5.1 Practice points from this study
Group Composition There is a strong desire from students to have a great variety in professions attending IPE modules and therefore group composition is important when planning any IPE activity.
Case Study It is important to choose the case study carefully so that all the professions who will be attending the IPE activity have a role to play in the management of the patient.
Transfer to reality We strive to transfer the learning that has taken place in a simulated IPE activity back to the clinical areas in which the students work. However, we are not quite there yet and this aspect of IPE still requires attention.
Socialisation The IPE experience allowed students to interact socially in a less threatening environment. This contributed to the feeling of being more comfortable in speaking to each other and lessening the feelings of intimidation, especially when required to speak to a doctor.

5.2 RECOMMENDATIONS

During the literature search and data analysis, recommendations for the improvement of the UFS IPE module were identified, as well as recommendations for further research linked to IPE, at the UFS and in general.

5.2.1 Recommendations regarding education

5.2.1.1 Students

The assessment of students' contribution and participation needs to be re-evaluated as students felt that the assessment used was not fair. Either marks need to be awarded purely for attendance, or assessment of a product, such as their collaborative plan, needs to be considered. Students should be able to see what their mark is in order to provide them with feedback on their performance. Schmitt *et al.* (2013:286) agree that evaluation of IPE modules needs more emphasis. Methods of assessing whether IPE outcomes are achieved need to be developed (Liaskos *et al*. 2009:44).Therefore, there should be further discussions within the team which designs the IPE at the UFS to determine what it is that needs to be assessed. For example, is it the contribution of each participant that is assessed, is it the level of group functioning that needs to be assessed, or is it the fact that students were able to develop a plan of how to promote collaborative practice in a clinical area that needs to be assessed. The assessment mark needs to be made to count somewhere, with the same implications for all the various professions.

Leadership skills should be taught to all healthcare professionals in order to prepare them for their roles in clinical practice. Concepts of shared leadership, i.e. how to hand over and take leadership where, and when, appropriate, need to be emphasized. As this is a usually forgotten-about topic it is rarely address in undergraduate healthcare education. Improved leadership skills, especially with regards to shared, changing leadership, will improve group functioning as well as have benefits for the patient in improving the quality of patient care (Kiesewetter *et al*. 2013:14). This may result in improved functioning of groups when engaging in IPE activities and will ultimately result in effective group functioning in qualified healthcare practitioners, especially when engaged in collaborative practice. Modules that have good student leadership help to improve the sustainability of IPE modules provided to the students (Hoffman

et al. 2008:654). The opportunities for leadership within the FoHS should be investigated and the role of leadership could be emphasised during the IPE module.

5.2.1.2 Module

Efforts should be made to improve the fidelity of the simulation as students questioned the authenticity of the experience. Improved SP training as well as providing SP's with more information regarding which aspects they should be providing feedback about could be helpful. Fidelity of the simulation would also be improved if the students did not see the SP's before the simulation begins. Some individuals are able to step into the scenario and see it as real, while others are not, which could be a personality trait that affects the fidelity of a simulation. Unfortunately, logistical issues are always a problem in developing modules for large groups and this needs to be taken into account.

The number of scenarios used in the IPE simulations could be increased in order to provide students from all the represented healthcare professions to have an active role to play. In this way, students will be exposed to more of a variety of scenarios with the chance to learn even more about other professions. This will also improve the students' knowledge and understanding of the professions which felt that they were not able to make as big a contribution in the current scenario (CVA). However, the logistical implications of increasing the number of scenarios needs to be recognised and considered within the budget of such a module.

Not all students made use of the study guide provided at the beginning of the IPE module. In this day and age where information is easily accessed via tablets and mobile phones, students suggested that the study guide be made available in an electronic format on the university's learning management system, BlackBoard, commonly used at the UFS. This is a cost friendly, as well as an environmentally friendly alternative to a printed study guide.

The possibility of moving at least one session to a hospital to treat a real patient in a group should be investigated. Students had a strong need to see IPE implemented in practice in the areas in which they work. By including this aspect, students will be provided with an opportunity to use what they have learned and apply it to real-life

situations. Once again, this poses many logistical problems and would have to be thoroughly investigated before such a session may be implemented.

5.2.1.3 Faculty

There needs to be "buy-in" from the whole FoHS for IPE to be successfully implemented and to result in carry over to the clinical areas. The whole FoHS needs to recognise and acknowledge the importance of IPE in training professionals who are able to work effectively in teams to provide optimal patient care. This also requires positive attitudes from faculty members (Dallaghan *et al*. 2016:3).

During the planning of IPE at the UFS, all departments within the FoHS should meet to determine the dates of the planned activities in order to allow enough time for all the healthcare professionals represented at the FoHS at the UFS to take part. In this way, scheduling conflicts could be minimised, allowing all professions to participate. This will allow students to learn about roles of all the professions. The possibility of including psychologists and social workers, who are not included in the FoHS, but are trained at the UFS, can be investigated as these were two professions that students felt could make a valuable contribution to the overall IPE experience. Members of the FoHS should also look out for opportunities where students can engage with students from another profession in order to learn interprofessionally (Dallaghan *et al.* 2016:5).

5.2.1.4 Educators (facilitators)

Although facilitators are provided with training, many facilitators are not experienced in facilitating IP groups as IPE is relatively new in the FoHS at the UFS. As there are more than 300 students involved in the IPE module, the number of facilitators needed is large. Facilitators should be encouraged to take part on a yearly basis in order for the FoHS to provide good quality facilitation and to develop experienced facilitators. Additional training may increase educators' confidence with facilitating IPE, as well as improve their willingness to be involved in IPE as facilitators (Lash *et al*. 2014:2).

5.2.2 Recommendations regarding practice

Faculty members should be encouraged to attend CPD activities regarding IPE and collaborative practice in order for these concepts to form part of their daily work, thereby strengthening collaborative practice in the clinical areas in which our students

work. Better communication regarding IPE events or opportunities for IP collaboration is required as faculty members have been shown to have positive attitudes towards IPE but are not always aware of when these events do take place (Dallaghan *et al*. 2016:1).

5.2.3 Recommendations regarding further research

As a result of my involvement in this IPE module and in doing the present study, the following recommendations are made for further research:

Research should be performed to evaluate whether students have been able to incorporate what they have learned from the IPE into their clinical placements, i.e. did the desired outcomes reflect in their clinical practice. In addition, there could be an investigation into how the IPE module influenced the working of teams which treat patients in the service learning area of Springfontein/Trompsburg in the Southern Free State. From the beginning of 2016, interprofessional teams were allocated patients in this area and were required to treat these patients in groups. In this way, the impact of the IPE on the students, and therefore the impact on the patients' quality of care, could be determined. By evaluating the students later in their studies, transfer of learning into the clinical areas could be determined.

As shared, changing leadership was identified as a category and was commented on frequently, leadership opportunities that students are provided with within their professional modules could be investigated to determine whether these opportunities are sufficient to teach leadership skills. The styles of leadership could be investigated, especially related to value-driven leadership necessary in IPE. Questions that arise include: Do the students make use of the opportunities provided to them and what are their thoughts about leadership and leadership training? How can leadership training be incorporated into IPE?

The facilitators' experience the IPE module could be determined. Their needs can be investigated, especially with regards to their need for training with regards to simulation and group dynamics.

The IPE module should be re-evaluated after recommended changes have been implemented to determine what the students' experiences of the adapted module are. There are very few studies which make use of randomised controlled studies or controlled before and after studies and therefore, Reeves *et al*. (2008b:8) call for more of these types of studies to determine whether IPE interventions are more effective than uniprofessional interventions. Studies with rigorous study designs are necessary to achieve this (Reeves *et al.* 2008b:8).

5.3 LIMITATIONS OF THE STUDY

A number of limitations were identified in this study.

1. As this study made use of a small sample (22 participants) it is not possible to generalise the findings to other populations. The findings are also contextual and therefore, information obtained is specific to the conditions at the UFS. However, in similar contexts with similar populations, findings may be generalized as data saturation was reached during focus groups.
2. Focus groups were held two to four months after the conclusion of the IPE module. This was due to logistical reasons in that I attempted to have all six professions in a focus group. The other reason for the delay was that students were not available to participate in May 2015 as they were writing examinations. This may have had an influence on their recall of their experiences.
3. All the students came from the UFS and therefore, these results are specific to students at the UFS. As the IPE module is not standardised across South Africa, it would be difficult to apply any findings to other South African populations at other universities.
4. I was part of the design and implementation of IPE at the UFS. Although I did not facilitate the focus groups or analyse the data independently, bias may have taken place. I did, however, attempt to remain unbiased at all times. I did not participate at all in any focus groups, only attending as an observer. No student from my own group (the one I facilitated during the IPE module) took part in the focus groups.
5. Although all attempts were made, I was unable to create a focus group in which all six professions who attended the IPE module were present. This was largely due to huge academics demands on students, as well as their full

curricula. However, I made sure that during every focus group, at least three professions participated and interacted.

5.4 CONCLUSION

There is no doubt that an IPE module has immeasurable value for undergraduate students within a healthcare profession. When individuals from different healthcare professions can come together and work together collaboratively, the achievement of optimal, patient-centred care is easily attained. Individual healthcare professional education modules do not allow for interaction between professions, and as individuals are expected to work with other professionals once they are qualified in their healthcare professions, it is essential for students to receive some training or education in this aspect. Although it may be believed that students will intuitively know how to do this, this has not been the case. It is therefore vital for educational institutions to provide the information and opportunities for interprofessional collaboration in order to benefit the professional, as well as the patient or community.

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