



**READINESS FOR INTERPROFESSIONAL EDUCATION FOR HEALTH
PROFESSIONALS: PERSPECTIVES OF FACULTY IN THE UNIVERSITY OF MALAWI**

By

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**A THESIS SUBMITTED TO THE FACULTY OF NURSING UNIVERSITY OF MALAWI IN
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Certificate of approval

I, Caroline Gillian Chitsulo declare that this thesis is an original report of my research, written by me. It has not been submitted, in whole or in part, for any other degree or professional qualification except as specified. The work contained herein is my own, except where explicitly stated otherwise in the text, by reference or acknowledgment.

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Declaration

We declare that this thesis is the student's own work and effort and that where she has used other sources, acknowledgments have been made explicitly. Hence, the dissertation is submitted with our approval on behalf of the University of Malawi, Kamuzu College of Nursing, Lilongwe.

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Dedication

I dedicate this thesis to the memories of three beloved people who have meant and continue to mean so much to me, my late husband Overs, and my late mother and father.

To my children Vivian, Thekhwane, Gomezga, and to my grandson Khumbolawo, I say thank you for your untiring support and understanding. To God be all the glory for His faithfulness and abundant grace.

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Abstract

This was a qualitative, exploratory, descriptive study, whose purpose was to explore faculty perspectives on readiness for interprofessional education (IPE) in the training of undergraduate health professionals at Kamuzu College of Nursing (KCN) and College of Medicine (COM), University of Malawi. Maximum variation sampling, a type of purposive sampling, was used to obtain heterogeneity in the sample, and to gain an understanding of how readiness for IPE was perceived and understood among different faculty members from the nursing, midwifery, medicine, and pharmacy programs at KCN and COM. The sample included 36 faculty members, heads of departments, and deans. Face-to-face, in-depth interviews and focus group discussions were conducted using semi-structured interview guides. Data analysis was done using content analysis.

Findings revealed the following key themes: perceptions of IPE; perceived readiness characteristics for IPE; perceived needed skills for IPE; and proposed strategies for implementing IPE. Generally, participants expressed a positive attitude towards IPE and various forms of understanding of the concept of IPE. Additionally, IPE benefits and challenges related to IPE implementation were perceived. Most participants perceived themselves to be ready for IPE. However, differences emerged regarding institutional readiness for IPE. Participants perceived that institutions were ready in some areas, but not in others. The study also identified skills perceived needed for successful IPE implementation, with strategies for successful implementation being proposed. Even though the study revealed that most faculty members had a positive attitude toward IPE and that participants felt ready for IPE (self-perceived), the need for adequate preparation for IPE implementation was emphasized. It is therefore recommended that faculty development programs for IPE should be put in place before IPE can be implemented effectively. It is also important to obtain the views of key stakeholders about IPE.

Keywords: readiness for IPE, faculty perceptions, IPE benefits, IPE challenges, content analysis

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Abbreviations

APTR	Association of for Prevention Teaching and Research
CP	Collaborative practice
CAIPE	UK Center for the Advancement of Interprofessional Education
CAQDAS	Computer-assisted qualitative data analysis software
COM	College of Medicine
COMREC	College of Medicine Research Ethics Committee
CINAHL	Cumulative Index to Nursing and Allied Health Literature
HEI	Higher Education Institution
HINARI	Health Inter-Network Access to Research Initiative
HRH	Human resources for health
IPE	Interprofessional education
IPC	Interprofessional collaboration
IPL	Interprofessional learning
IT	Information and technology
ICT	Information communication and technology
KCN	Kamuzu College of Nursing
LUANAR	Lilongwe University of Agriculture and Natural Resources
WHO	World Health Organization

Chapter 1

1.0 Introduction and Background

1.1 Introduction

The World Health Organization (WHO)'s "Global Strategy on Human Resources for Health Workforce 2030" recognizes the importance of Interprofessional education (IPE) and collaborative practice (CP) as part of transformative strategies to scale up health worker education to improve long-term care for older patients and enhance both the capacity and satisfaction of healthcare workers. Additionally, WHO identifies IPE and CP as innovative strategies that can play important roles in mitigating the challenges faced by the health systems worldwide. By working collaboratively, health workers can positively address current health challenges; strengthen the health system and improving health outcomes. This is expected to lead to better team performance and the delivery of cost-effective patient-centered care (World Health Organization, 2016; World Health Organization, 2010). The major challenges that are faced by health systems globally include a severe shortage of adequately trained health personnel across all professional cadres; a shortage of drugs and other medical supplies and inadequate financing (World Health Organization, 2010).

Additionally, the need for coordination and integration of health care through a collaborative approach has become essential due to the increasing number of older and disabled people resulting in the changing demographic and health needs of the population. This has consequently, caused the complexity around health care delivery to grow. Thus, it is apparent that meeting the needs of patients/clients distinctively requires the involvement of expertise from more than one profession. Patient-centered care can only be achieved with collaborative practice and effective teamwork. Interprofessional collaboration can only be made possible through IPE (World Health Organization, 2010).

IPE occurs when students from two or more professions learn about, from, and with each other to enable effective collaborative practice, quality care, and improved health outcomes (Bennett et al., 2011; World Health Organization, 2010). The UK Center for the Advancement of Interprofessional Education defined IPE as a pedagogical strategy of which interaction among a group of healthcare students coming from two or more health professions to learn with, from, and about each other to promote a culture of collaboration that can be translated into practice settings (Barr et al., 2016a; Barr & Low, 2012; Buring et al., 2009). CAIPE qualifies this definition further, explaining that IPE includes: “all such learning in academic and work-based settings before and after qualification, adopting an inclusive view of professional; “education is defined by the occurrence of learning ‘with, from and about’ which necessitates active learning and implies learning based on some type of exchange; the main aims of IPE are to improve collaboration and consequently improved patient care. IPE is therefore not just about a mixed group of health professionals acquiring the same knowledge or developing the same clinical skills (Freeth, 2010). Furthermore, The Interprofessional Education for Collaborative Practice-Centered Practice defines IPE as learning together to promote collaboration, and it illuminates three components to IPE; 1) socializing health care professionals to work together; 2) developing mutual understanding and respect for various disciplines, and 3) imparting collaborative practice competencies (Olenick et al., 2010). IPE stresses the need for explicit interprofessional interaction between health professionals. Olenick et al. further explain that professions that participate in IPE include but are not limited to the following: nursing (including nurse practitioners or nurses with advanced degrees), medicine, pharmacy, social work, nutrition, physical therapy, occupational therapy, counseling, physician assistant, dentistry, emergency medical services including paramedics, radiology professionals, and respiratory care professionals. This also includes any medical or allied health professional that engages in patient assessment, care, and or management. It is

argued that interactivity promotes the development of the competencies required for effective collaboration. It has been suggested that IPE start in the pre-qualifying programs and form part of an individual's ongoing professional development (Reeves, 2016). In addition to defining and describing IPE, it is also important to elucidate what IPE is not. Interprofessional education is not a passive pedagogy; it does not involve students seated in a lecture hall together without interacting, nor is it a faculty member; from another profession talking to a group of learners without incorporating an interactive piece (Buring et al., 2009).

IPE is a necessary step in preparing “collaborative practice-ready” health care professionals who appreciate each other's roles, responsibilities, strengths, and limitations in health care settings. According to the Framework for Action on IPE and CP (World Health Organization, 2010) collaboration occurs when two or more individuals from different backgrounds with complementary skills interact to create a shared understanding that none had previously possessed or could have come to on their own. It is important to understand that collaboration is not only about agreement and communication, but about creation and synergy. Participation in IPE is the only way health workers can achieve an understanding of how collaboration applies to health care and enable them to become collaborative practice ready. A collaborative practice-ready workforce includes workers who have received effective training in IPE. Core IPE competencies relate to teamwork; roles and responsibilities; interprofessional communication; learning and critical reflection; relationship with, and recognizing the needs of the patient; values, and ethical practice (Barr et al., 2016a; Borduas et al., 2006a; D'Amour & Oandasan, 2005; World Health Organization, 2010). Acquiring IPE competencies helps health professional students to be better prepared to deliver an integrated model of collaborative healthcare after entering practice. IPE also helps to break down stereotypical views that health professionals hold about one another.

Additionally, these health professionals are better prepared to respond to local health needs (Rajiah & Maharajan, 2016; Curran & Sharpe, 2007; World Health Organization, 2010). Furthermore, evidence has shown that when interprofessional practice is aligned with interprofessional education, it promotes broad levels of expertise; collaborative practice; team-based care; and maximizes the strengths and skills of each contributing health professional that ensures quality patient-centered care (Curran & Sharpe, 2007; Reeves et al., 2008; World Health Organization, 2010). Above all, collaboration in interprofessional education and practice is a step in moving health systems from fragmentation to a position of strength (Curran & Sharpe, 2007; World Health Organization, 2010).

The use of the principles of adult learning and learning methods that enable interactivity such as problem-based learning, seminar-based learning, simulation-based learning, observation-based, practice-clinical placement learning, e-learning such as online discussions and blended learning are a key feature of IPE (Reeves, 2016; World Health Organization, 2010). Additionally, effective IPE implementation requires the use of learning methods that reflect the real-world practice experiences of students and ensure interaction among students. For example, the use of cooperative learning and experiential learning approaches is very effective in promoting learners to work in teams. Learners develop positive interdependence, interpersonal and small group skills (Barr et al., 2016a; Buring et al., 2009). It is therefore important to ensure that the curricula link learning activities, expected outcomes, and assessment methods, in order to establish an effective and sustainable IPE.

IPE has received increased attention worldwide in the past 20 years due to the significant impact it has shown on improving the quality of care and it is well established in some western countries such as Canada, United States, United Kingdom, and Australia. The concept of IPE is emerging in Middle Eastern countries (Harden, 2015). However, there is

limited evidence is available from low-income countries. In Africa specifically, the Sub-Saharan region, South Africa has shown some progress in IPE (Botma & Snyman, 2019). IPE approaches are a new concept when it comes to the training of undergraduate health professionals in Malawi. It was therefore in the interest of the researcher to conduct a study to explore faculty readiness for IPE, in relation to education of undergraduate health professionals in Malawi.

1.2 Background

IPE has mostly been implemented in high-income countries such as Canada, the United States of America (USA), and Sweden. Evidence from the countries suggests that IPE has the potential to foster interprofessional cooperation, improve health professionals' satisfaction, and improve patient care (Sunguya, Hinthong, Jimba, & Yasuoka, 2014). Further evidence about IPE's efficiency, challenges, and barriers to planning and implementation has also been documented from developed countries. However, there is limited information on IPE and its implementation from developing countries. The Malawi health system, like many other health systems worldwide, is fragmented and uncoordinated due to various challenges. The major challenges include a severe shortage of adequately trained health personnel across all professional cadres; shortage of drugs and other medical supplies; inadequate financing; and weak financial reporting. Other challenges include the lack of effective monitoring and evaluation of health services and limited multidisciplinary research largely due to the lack of highly qualified and experienced indigenous researchers (*Malawi Health Sector Strategic Plan 2011-2016; Malawi Health Sector Strategic Plan 2017-2022*).

Despite interventions to address the shortage of staff implemented by the Malawi Ministry of Health, the human resource challenges remain both acute and complex (*Malawi Health Sector Strategic Plan 2011-2016; Malawi Health Sector Strategic Plan 2017-2022*). The shortage of health workers in all categories, in combination with the other challenges,

results in the delivery of fragmented health care and contributes to poor health outcomes. Furthermore, insufficient collaboration between the health and education sectors creates a crippling mismatch between professional education and the realities of health services delivery (Curran & Sharpe, 2007; Frenk et al., 2010; World Health Organization, 2010). The World Health Organization (2010) further recommends that health and education systems must work together to ensure that health workforce planning and policymaking are integrated to fully support IPE and collaborative practice.

The Malawi health system can effectively deal with these challenges by promoting a collaborative culture and practice among healthcare professionals through the incorporation of IPE in the education of all health professionals. Many benefits of IPE have been reported in the literature, such as educational benefits and health policy benefits (World Health Organization, 2010). For example, IPE approaches offer opportunities for universities to collaborate, thereby improving the efficiency of resource allocation while more effectively preparing students for a collaborative practice-ready workforce. Collaborative practice in turn optimizes health services, strengthens health systems, and improves health outcomes (Rajiah & Maharajan, 2016; World Health Organization, 2010).

However, the traditional structure of health professionals' education in Malawi has largely used a uniprofessional approach. Using this type of education structure, health professionals are educated in relative isolation to one another whereby the curriculum content and structure follow strict disciplinary lines (Borduas et al., 2006; Ryland, Akers, Gowland & Malik, 2017). Additionally, the uniprofessional-based education structure is associated with problems such as mismatch of competencies to patient and population needs; poor teamwork; narrow technical focus without broader contextual understanding; persistent gender stratification of professional status; episodic encounters rather than continuous care; and weak leadership to improve health system performance (World Health Organization, 2010).

Although evidence increasingly suggests benefits of IPE, implementation of IPE across university communities faces administrative, resource, structural, intellectual, and cultural challenges (Borduas et al., 2006; Ryland, Akers, Gowland & Malik, 2017; World Health Organization, 2010). Interprofessional education is a new concept in Malawi. As such, academic institutions that are involved in the training of health professionals may not be ready to implement it. The Framework for Action on IPE and CP indicated that IPE and CP can be difficult concepts to explain, understand and implement (World Health Organization, 2010). In view of this, the researcher conducted a study to explore faculty readiness for IPE regarding the training of undergraduate health professionals in Malawi.

1.3 Problem Statement

The complexity of the health care environment, coupled with diverse patient care needs calls for the interprofessional practice among providers in order to promote the delivery of quality health care and improved health outcomes (World Health Organization, 2010). Therefore, nurses and other health professionals must demonstrate broad levels of expertise and competencies that are responsive to changing health needs. The health system in Malawi is fragmented due to various challenges such as shortage of staff in all cadres of health professionals and lack of collaboration in the provision of health care (*Malawi Health Sector Strategic Plan 2011-2016; Malawi Health Sector Strategic Plan 2017-2022*). This results in the delivery of fragmented health services and poor patient care outcomes.

IPE is one strategy that promotes a collaborative culture among health professionals that leads to the delivery of collaborative care, development of a safer patient care environment, and improvement of health outcomes (Hudson, Sanders, & Pepper, 2013; World Health Organization, 2010). However, the current health professional education structure in Malawi is largely based on a silo approach. Evidence suggests that although uniprofessional education programs are highly effective in producing competent practitioners in their

respective professions, they do not explicitly teach students to work collaboratively with other professions (Borduas et al., 2006a). These professional programs do not place great emphasis on IPE in their curricula. Students are taught to focus on their specific roles while content is limited to their scope of practice. Thus, the education of health professionals does not reflect their interdependent roles (Bennett et al., 2011; Borduas et al., 2006a; Smith et al., 2009).

Moreover, many faculty members have been trained in different educational systems and learning contexts that have inculcated different values and attitudes. As a result of this, some faculty members either may have insufficient knowledge to teach using the principles of IPE or may be uncomfortable with this approach to teaching. Curran and Sharpe (2007) suggested that diverse attitudes and values that prevail amongst health sciences faculty members and students could be fundamental barriers to interprofessional teaching and learning. Furthermore, limited studies on IPE have been conducted in Malawi. In view of this, it was important to conduct a study to explore the readiness of faculty members for interprofessional education regarding the training of undergraduate health care professionals at Kamuzu College of Nursing (KCN) and College of Medicine (COM), constituent colleges of the University of Malawi.

1.4 Significance of the Study

The study will provide rich in-depth information that can clarify perceptions of IPE among health professional faculty members, and the feasibility of initiating IPE in the training of health professionals at the undergraduate level in Malawi. IPE approaches promote the preparation of students for a collaborative practice-ready workforce. Collaborative practice, in turn, optimizes health services, strengthens health systems, and improves health outcomes. Understanding the perceptions of faculty towards IPE can also provide useful information for policymakers and educational planners to plan, design, and implement IPE initiatives that can be incorporated in the training of undergraduate health professionals in Malawi. Furthermore,

the findings from the study can also be used as a pilot for future research in order to further explore and understand the concept of IPE within the Malawi social context. It is hoped that the findings of the study will help to extend the base of IPE knowledge in the Malawian context.

1.5 Objectives

1.5.1 Broad objective

To explore faculty perspectives about readiness for interprofessional education (IPE) in the training of undergraduate health professionals in the University of Malawi, KCN, and COM

1.5.2 Specific objectives

1. To describe faculty perceptions of IPE in the training of undergraduate health professionals at KCN and COM
2. To describe faculty perceptions about their readiness attributes for IPE in the training of undergraduate health professionals at KCN and COM
3. To determine faculty perceptions about their knowledge and skills for IPE in the training of undergraduate health professionals in Malawi at KCN and COM
4. To analyze faculty perceptions about institutional support for IPE in the training of undergraduate health professionals at KCN and COM

Chapter 2

2.0 Literature Review

2.1 Introduction

This chapter includes an overview of the literature that is most relevant to the topic under study. A review of the literature regarding change readiness, organizational change, interprofessional, multidisciplinary, and interdisciplinary education, collaborative practice, interprofessional learning, health professionals' education, and facilitation was conducted to inform and support this study. Conducting the review provided insight into and a better understanding of the perspectives of faculty about IPE in relation to the training of undergraduate health professionals. Scholarly articles, research literature, and journal were gathered by a systematic search from Kamuzu College of Nursing library using various electronic databases such as Pub Med, Cumulated Index to Nursing and Allied Health Literature, Google Scholar and EbscoHost, and Health Inter-Network Access to Research Initiative. Literature from the disciplines of nursing, medicine, allied health, health professional education, pharmacy, and social work was reviewed. Content searches for the headings were performed in a number of ways including the following areas: the concept of readiness in relation to initiating IPE, attributes, knowledge, and skills of faculty as facilitators of IPE, IPE benefits, IPE challenges/ barriers, conceptual framework, and institutional support for IPE. The search included literature from 2009-2019. Conducting a literature search using a variety of sources assisted in the identification of gaps in the literature concerning interprofessional education.

2.2 The Concept of Readiness

Readiness is one of the most important factors involved in employees' initial support for organizational change initiatives. Initial readiness is particularly important in influencing the successful implementation of system-wide change (Holt & Vardaman, 2013). Readiness is

an ubiquitous term associated with change and has been conceptualized as either a state or a process. The degree of readiness to change may determine whether change is supported or resisted. Oxford's English Dictionary (2013) defined readiness in three principal ways; first, as the willingness to do something or inclination; second, as movement, the quality of being immediate such as promptness or quickness; and third, the state of being fully prepared for something such as preparedness, accessibility, and availability. Holt and Vardaman (2013) defined readiness as the degree to which those involved are individually and collectively primed, motivated, and technically capable of executing the change. The concept of readiness is also defined as the extent to which existing conditions within the institution are conducive to change (Lee, Hyman, & Luginbuhl, 2007; Rusly, Corner, & Sun, 2012). According to Holt, Armenakis, Harris, and Feild (2007) readiness is described as a state of mind about the need and a cognitive precursor to behaviors of either resistance or support. Many conceptions of readiness for change postulate that readiness is a more active, engaged willingness and ability to adopt a new practice and not simply a lack of resistance (Howley, 2012).

Readiness as a unique construct has been embedded within several theoretical models of the process through which change unfolds (Holt & Vardaman, 2013). Thus, the concept of readiness is very much associated with the implementation of planned change in organizations. Howley (2012) explained that there are varying perspectives about the levels at which readiness for change is conceptualized. Some view readiness as an individual psychological state however, for some observers, readiness for change is an organizational structural, or collective characteristic. Still, other perspectives approach readiness for change as both an individual and organizational or collective notion (Rafferty, Jimmieson & Armenakis, 2013). Additionally, Holt & Vardaman (2013) argued that conceptually, readiness for change is comprised of both individual difference and structural factors, reflecting the extent to which the organization and its members are inclined to accept,

embrace and adopt a particular plan to purposely alter the status quo. Individual readiness for change has been described as an individual's beliefs, attitudes, and intentions regarding the extent to which change is needed and the organization's capacity to undertake that change successfully (Rafferty et al., 2013). Individual readiness includes the individual and structural factors that influence successful change implementation. The individual factors reflect the extent to which individuals hold key beliefs regarding the change, recognize that a problem needs to be addressed, and agree as to which changes individuals and the organization must take. Structural factors reflect the circumstances or the conditions within the organization under which change is occurring, and the extent to which these circumstances enhance or inhibit the implementation of change.

Individual change readiness can be influenced by cognitive and affective elements. The cognitive component of change readiness is composed of two beliefs as key components of change readiness. These are the belief that change is needed and the belief that the individual and organization have the capacity to undertake change. These beliefs are further expanded into five beliefs underlying an individual's change readiness which include First, a change message must create a sense of discrepancy or a belief that change is needed; secondly, an individual must believe that change is an appropriate response to a situation; a change message must create a sense of efficacy, which refers to an individual's perceived capability to implement a change initiative. Fourthly, principal support which an individual's belief that his or her organization that is seniors and peers will provide tangible support for change in the form of the needed resources and information. This belief contributes to an individual's sense of efficacy about his or her capability to implement change. Valence is the final change belief which is concerned with an individual's evaluation of the benefits or costs of a change for his or her job and role. If an individual does not believe that change has benefits, then it is not likely that he or she will have a positive overall evaluation of his or her

readiness for change (Oreg et al., 2011; Rafferty et al., 2013). Affective components of change readiness state that affect consists of discrete, qualitatively different emotions such as love, hate, delight, sadness, happiness, annoyance, calmness, excitement, boredom, relaxation, anger, acceptance, disgust, joy, and sorrow. Affective reactions to change may result from currently experiencing an emotion such as hope due to the prospect of a desirable or undesirable future event. Additionally, positive emotions may result from imagining the experience of certain emotions in the future once certain events have occurred (Rafferty et al., 2013).

Readiness for change at the organizational level, relevant beliefs relate to organizational members' collective commitment and collective efficacy (Holt & Vardaman, 2013; Rafferty et al., 2013). Collective commitment refers to organizational members' shared resolve to pursue courses of action that will enable them to successfully implement change. Collective efficacy refers to organizational members' beliefs in their conjoint capabilities to organize and execute the courses of action required to implement change successfully. These are similar to the psychological, individual-level dimensions in that they acknowledge that readiness has a perceptual (versus a structural) element.

Initial readiness is particularly an important factor that influences the successful implementation of system-wide change (Holt & Vardaman, 2013). It is essential to view change readiness from a multilevel perspective and as a multidimensional construct to understand the individual and organizational implications of change readiness (Holt & Vardaman, 2013; Rafferty et al., 2013). It is, therefore, important that faculty and administrators' (deans and heads of department) readiness for IPE be explored before considering future IPE initiatives. This exploration will help to identify and analyze the influencing factors so that specific change readiness interventions can be effectively designed and implemented.

2.2.1 The Transtheoretical Model

Howley (2012) stated there are several models that represent attempts to understand the human components of change. The transtheoretical model is one of the models which has been adapted from psychotherapy literature to clarify the organizational change by researchers in child welfare, health, and mental health (Howley, 2012; Prochaska & DiClemente, 1986). To promote readiness for change, the transtheoretical perspective suggests that change agents remove barriers to change and increase motivators, elements that may be structural or psychological. Furthermore, the model attends to the role of uncertainty toward change, taking note that period of readiness may be followed by periods of resistance or disengagement. Readiness for change in this perspective does not inhere in individuals but rather in the interactions between individuals and their organizations and other relevant contexts. The model suggests that change is a process taking place over the course of six stages. It is based on the premise that individuals wishing to change their behavior move through a series of discrete stages. These stages include the precontemplation, contemplation, preparation, action, maintenance, and termination stages. In the precontemplation, there is no desire or interest in undertaking change and individuals do not intend to make a change in the foreseeable future. According to Clark (2013), several processes occur during this phase of organizational change. There is dramatic relief where people express feelings such as fear of not, or excitement about, making change; self-evaluation which involves people start recognizing that change is important for one's values or sense of self; and it is also the time they start thinking about commitment. In the contemplation stage, people intend to undertake change within six months. During this stage, individuals consider the benefits and disadvantages of pursuing change and may decide to pursue change or not. The next stage is the preparation stage. In the preparation stage, people plan to undertake change in the immediate future after they have considered the rationale, processes, and anticipated

outcomes of change and made a decision to engage in change. They work with others to prepare for change. This stage is followed by the action stage. The action stage involves raising consciousness (making people gain awareness about a problem and its solutions); counterconditioning (substituting alternative behaviors and patterns of thinking); and making a commitment. People make specific behavioral changes and actively pursue change throughout the action stage. The maintenance stage follows the action stage. The maintenance stage involves stimulus control (modifying the environment to discourage old behaviors and encourage new ones), helping relationships (using social support for a change) and reinforcement management (identifying intrinsic or extrinsic rewards for changing). At the maintenance stage, individuals strive to avoid resuming old behaviors, thus internalization and institutionalization of change occur. Sustaining change includes incorporating it into the institutional culture, value system, and norms. Additionally, there is a need to ensure a stable balance between internal and external forces for change to be maintained. The final stage is the termination stage. At this stage, people no longer worry about resuming old behaviors as the new behaviors have become a habit (Clark, 2013; Howley, 2012; Prochaska & DiClemente, 1986). A transtheoretical approach to organizational change that both recognize that change occurs in stages and tailors individual strategies for change based on where various individuals, groups, and academic units are in terms of their context and readiness for change is needed to move the development, implementation, and continuation of IPE efforts forward in higher education institutions (Clark, 2013).

2.3 The Interprofessional Education (IPE) Concept

2.3.1 History and Development of IPE

Interprofessional education is not a new concept although it remains a trendy topic in today's health professionals' education. Several countries such as Canada, Australia, Nordic countries, the United Kingdom, and the United States have been pioneers in IPE. Courses and

programs in IPE have been created in higher education institutions where health and social faculties are working together to provide interprofessional research opportunities for their students (Bennett et al., 2011; Reeves, 2016). For over three decades, globally, health policy makers and multiple health care leaders have identified the key role of IPE in improving health care systems and patient outcomes (World Health Organization, 1976, 2010). But during the past ten years, IPE has particularly been at the forefront of much research, policy, and regulatory activity on an international level (The National Academies, 2013). IPE is broadly defined as a teaching and learning process that fosters collaboration between two or more health care professions (Olenick, Allen, & Smego, 2010). IPE occurs when students from two or more professions learn about, from, and with each other to enable effective collaborative practice, quality care and enhance improved health outcomes (World Health Organization, 2010). According to the Center for Advancement of IPE (CAIPE) and Barr et al. (2016a) IPE occurs when students learn with, from, and about each another to improve collaborative practice and quality of care. This definition of IPE encompasses pre-qualification as well as post qualification learners. This type of learning occurs in academic and work-based settings before and after qualification, adopting an inclusive view of professions. However, health science educators continue to debate the optimal timing for introducing IPE into the academic training of health professionals (Olenick et al., 2010). IPE strives to improve the skills and knowledge of health care teams in the management of complex care through effective communication and collaboration. Advocates of IPE have suggested that there are two important components to IPE; the building of a shared action that accounts for the complexity of patient needs and the creation of a cohesive team that integrates the views of each profession in which team members respect each other (Reeves et al., 2012; World Health Organization, 2010). The need for IPE stems directly from the complexity and multifaceted nature of patients' health and social care needs which require

effective coordination of services (The National Academies, 2013). It also stems from research demonstrating that effective collaboration amongst multiple health care providers is essential for the provision of effective and comprehensive care (Reeves et al., 2012). The other reasons for considering the IPE direction include increasing efficiency in the provision of patient care, improving patient care outcomes, and promoting effective communication among the health care team. Thus early IPE efforts were largely based on the premise that teamwork and collaboration not only help to better meet the needs of patients but also help resolve tensions between professions practicing in close proximity (Fransworth et al., 2015). Problems with communication and collaboration amongst health and social care professionals continue to exist and are a concern as they can comprise the delivery of patient care. Literature, cited above, shows a collective view that health and social professionals need education and training to provide them with the attitudes, knowledge and skills needed to work effectively together, to deliver safe, high quality patient care.

Globally, IPE document policies have been developed to support the need for IPE to help improve collaborative competencies. Recently the World Health Organization developed the Framework for Action on Interprofessional Education and Collaborative Practice and re-enforced its commitment to IPE; highlighting the importance of this form of education to develop the skills needed to be ready for collaborative practice in order to help improve fragmented and struggling health systems throughout the world including all low, medium and high-income countries (Reeves, 2016). The framework for Action on IPE and collaborative practice stipulates that IPE and collaborative practice are about people such as the health workers who provide services and work together to ensure patients and the community receive the best treatment as efficiently as possible; the educators who understand the importance of bringing together students from a range of disciplines to learn about, from, and with one another; the health leaders and policy makers who strive to ensure there are no

barriers to implementing collaborative practice within institutions; and most importantly, the individuals who require and use health services, trusting that their health workers are working together to provide them with the best service possible (World Health Organization, 2010). Additionally, the CAIPE developed seven principles to guide the provision, commissioning, development, and evaluation of IPE. The seven principles are based on the vision that effective IPE encourages professions to learn with, from, and about each other; works to improve the quality of care; focuses on the needs of service users and carers; involves service users and carers; respects the integrity and contribution of each profession; enhances practice within the profession; and increases professional satisfaction (Freeth, 2010). Other organizations that have advocated for IPE and have initiatives involving the development and incorporation of IPE into educational and practice areas include the Interprofessional education for Collaborative Patient-Centered Practice (IECPCP), the National Health Service, and the Association of for Prevention Teaching and Research (APTR) Furthermore, according to Olenick et al (2010) accrediting bodies and organizations concerned about health professional education are among the powerful forces behind the promulgation of IPE; for example, American Association of Colleges of Nurses which specifically state guidelines and essentials for IPE which specifically state guidelines and essentials for IPE. While research in IPE is growing, at present the evidence-base for the impact of interprofessional education, interprofessional collaboration and teamwork is limited (Reeves, 2016)

Interdisciplinary education and multidisciplinary education are concepts that are most closely related to IPE and people use them interchangeably. However, multidisciplinary and interdisciplinary education is not the same as IPE. Multidisciplinary education is normally taken to be occasions when members or students of two or more professions learn side by side but separately and without substantial interaction because they have a common need to address particular content (Freeth, 2010; Olenick et al., 2010). Examples of multidisciplinary

education include shared lecturers and shared clinical skills sessions. The difference on emphasis within a multidisciplinary approach may be an obstacle to teaching or practice effectiveness (Freeth, 2010). Merriam-Webster defines interdisciplinary as the involvement of two or more disciplines that share information and decisions. Interdisciplinary education lacks a clear process and coordination of education of the disciplines since, despite the disciplines practicing together; they are not truly collaborative and integrated with a priority focus on the patient. In an interdisciplinary approach, there is an interaction between professionals but little if any, sharing of values or knowledge.

According to Olenick et al. (2010) shared learning is a term that is sometimes incorrectly used to mean IPE. The term implies that students learn together but it does not specify the manner in which learning occurs. In contrast, Olenick et al. (2010) described IPE as a teaching and learning process that fosters collaboration between two or more health care professions. Furthermore, in their analysis of the IPE concept, Olenick et al. (2010) proposed IPE as an andragogical, interactive, experiential learning, and socialization process, where two or more members of a health care team (who either participate in either patient assessment and/or management) learn with, from, and about each other as they collaboratively focus on patient-centered care and achieving optimal health outcomes. IPE implies shared goals, shared values, shared knowledge, and a common learning process, coordination of teaching efforts, and shared decision-making and accountability. IPE is a transparent blend of disciplines coming together with shared goals and all disciplines working in concert with one another (Olenick et al., 2010).

2.3.2 Theoretical Foundations in IPE

Learning theories are important in understanding the design or evaluation of the IPE initiative (Hean et al., 2009). Olenick et al. (2010) presented a combination of different learning theories that apply to IPE. These include cognitivism, constructivism, and humanism.

However, according to Hean et al (2009), two wide families of learning theory have been recognized in relation to IPE namely behaviorist and constructivist approaches. The Behaviourism approach focuses on the outcomes of learning which are expressed as behavior - interprofessional competencies and are less interested in thought processes and how learning has occurred. Furthermore, the behaviorist believes that; learning occurs through experiencing the consequences of one's behavior; trial and error may be part of such learning; students' own activity in obtaining these outcomes is often central to learning (Armitage et al., 2003). They further believe that all behavior is learned, and all learning involves an observable change in behavior. IPE practitioners must understand the part behaviorist approaches have taken in understanding the nature of interprofessional learning, IPE curriculum development, and evaluation. An IPE curriculum developer, who follows Behaviorism, will create, design, and develop an outcome-based IPE curriculum. This is in line with current trends in most curriculum development in higher education where establishing key learning outcomes is central as it is with the behaviorist tradition (Hean et al., 2009).

The constructivism approach posits that meaning and knowledge are created from experience through discussions and shared problem-solving. In contrast to a behaviorist, theory constructivism takes account of the process of learning. The constructivist family encompasses both cognitive constructivist and socio-constructivist (Hean et al., 2009; Olenick et al., 2010). Cognitive constructivism is concerned with the processes experienced by learners. The key features include the cognitive structures and high order skills such as problem-solving and the development of insights (Piaget, 1973) as well as the learner activity in learning and self-direction in his / own development. Furthermore, the theory of cognitivism posits that information is processed and thoughtful decisions are made by stimulating cognitive processes. A typical example of the cognitive constructivist approach

applied to IPE would be to use the stage or development theories developed by Piaget to explore learning and the acquisition of knowledge in children. Piaget (1973) proposed that children's cognitive development progresses with age (maturation) beginning with basic sensory-motor functioning and progressing to formal operational stages of development. Based on the tradition of stage development, (Piaget, 1973) also proposed two processes involved in knowledge acquisition, namely assimilation and accommodation. Assimilation is the process where the learner a student will take in and filter information from their environment. The information interacts or comes into conflict with existing held by the individual. This interaction between the existing and new knowledge is important in learning and has led to the recognition by educators that teaching must take account of learners' existing knowledge. Hean et al. (2009) observed that although the cognitive constructivist theories are not commonly utilized in IPE literature shows that adult learning theories, in contrast, to be widely used in the field. Hean et al. (2009) explained that adult learning theory in this context appears as a collection of pedagogical approaches and is described variously as self-directed, experiential, problem-based learning and discovery-based. It is important to understand that the wide number of adult learning particularly experiential learning and inquiry based have their origin in constructivism. This is reflected in some of the key assumptions of adult learning theory that holds that adults: are independent and self-directing; have accumulated vast experiences which are rich resources for learning; value learning that integrates with the demands of daily lives; are more interested in immediate problem-centered approaches than in subject – centered ones; are more motivated to learn by internal drivers as opposed to external drivers (Knowles, 1990).

Social constructivism is the other form of constructivism, the premise of social constructivism is that learning is not purely individually constructed process and social constructivists view learning as being mediated by the environment. Curriculum developers

who take the social constructivist perspective focus on collaborative, interprofessional, and situated learning (Hean et al., 2009). Social constructivism in contrast to cognitive constructivism emphasizes how social encounters influence learners' meaning and understanding. The learner is more actively involved in constructing new meaning in a collaborative enterprise, particularly with the facilitator. Social constructivism is best characterized by the theory of socio-cultural learning theory which is based on the idea that cognitive functions are the products of social interactions (Hean et al., 2009). The socio-cultural theory further postulates that human development is a socially mediated process in which children acquire their cultural values, beliefs, and problem-solving strategies through collaborative dialogues with more knowledgeable members of the society such as facilitators, tutors. According to this theory, student learning is perceived to be mediated through socio-cultural tools such as language. (Hean et al., 2009; McLeod, 2018; Vygotsky, n.d.). The theory stresses the fundamental role of social interaction in the development of cognition and places a strong belief that community plays a central role in the process of making meaning. Vygotsky's socio-cultural theory further places more emphasis on culture affecting cognitive development and holds the following assumptions: assumes cognitive development varies across cultures; places considerably more emphasis on social factors contributing to cognitive development; cognitive development stems from social interactions, from guided learning within the zone of proximal development as children and their partners' co-construct knowledge; places more emphasis on the role of language in cognitive development and that cognitive development results from an internalization of language; adults are an important source of cognitive development that is adults transmit their culture's tools of intellectual adaptation that children internalize (McLeod, 2018).

The application of Vygotsky's social-cultural learning theory to IPE relates to the collaborative nature of learning which forms the foundation of IPE. According to social-

cultural learning theory, collaborative learning occurs through the construction of knowledge through social negotiation. The theory further stipulates that everything is learned on two levels namely, first through interaction with others and secondly the integration into the individual's mental state.

According to Olenick et al (2010), the theory of humanism posits that meaning contributes to learning because it corresponds with personal needs and goals. The processes that are required to achieve effective IPE include cognitive processes, reflexive processes, problem-solving, critical thinking, development of trust relationships, and fostering of curiosity. Olenick et al. (2010) explained further that the components of interprofessional learning are experiential and social learning. In experiential learning, knowledge is created through the experiences the students have while in social learning, learning occurs through social activity. The IPE approach to education suggests that the insights and skills acquired by participants from an interprofessional experience are the learning itself. The preferred approach to IPE is the andragogical one where students learn in a nonhierarchical de-centered environment mostly utilizing interactive teaching methodologies such as problem-based learning, simulation, role-play, and small group learning. Reeves (2009) recommended that combining the different interactive learning methods in an IPE initiative can make the experience more stimulating, interesting and can contribute to a more profound learning experience. IPE content may include diverse topics such as communication among professionals and knowledge about specific health care professions and culturally sensitive and or ethical issues. The Framework for Action on IPE and CP (World Health Organization, 2010) recommends the following interprofessional learning domains; teamwork; roles and responsibilities; communication; learning and critical reflection; relationship with, and recognizing the needs of the patient; ethical practice. The content may either be embedded into the curriculum (intracurricular) or exist outside of regular class hours (extracurricular).

Evaluation in IPE can be evidenced by a change in knowledge, attitudes, behaviors, beliefs, and /or skills. Since the focus of IPE is on interaction rather than specific content, and reflection, journals, or concept maps are some of the examples of how interprofessional learning may be evaluated (Olenick et al., 2010; World Health Organization, 2010).

However, regarding the most effective time for introducing IPE into the academic training of health professionals, evidence has shown that there is continued debate on the optimal timing (Olenick et al., 2010; Reeves, 2016; World Health Organization, 2010). Differing views have emerged on when IPE should be introduced into the training of health professionals. Others have suggested that the best time to introduce IPE is at the undergraduate level because delivering IPE at this time may play an important role in diminishing the negative effects of professional professionalism such as hostile stereotyping. In contrast, others have suggested that post-qualification IPE is more effective because participants have a firmer understanding of their own professional identity and role (Reeves, 2016). It is further suggested that IPE should form a part of an individual's ongoing professional development, starting in their pre-qualification programs and continuing throughout their careers. This approach seems appropriate given that the objectives and nature of an IPE initiative will differ depending on the stage of learning (Reeves, 2009; World Health Organization, 2010).

2.3.3 Mechanisms for developing and Implementing IPE

A number of mechanisms shape how IPE is developed and delivered. The WHO Framework for Action on IPE and CP (World Health Organization, 2010) groups these mechanisms into two categories: educator mechanisms and curricular mechanisms. Educator mechanisms focus on the process of developing IPE curricula and sustaining IPE. This is a complex process and requires involving staff from different faculties, work settings, and locations; supportive institutional policies and managerial commitment; good communication among participants; enthusiasm for the work being done; a shared vision and understanding of

the benefits of introducing a new curriculum; a champion who is responsible for coordinating education activities and identifying barriers to progress. For most educators, teaching students how to learn about, from, and with each other is a new and challenging experience therefore careful preparation of instructors for their roles in developing, delivering, and evaluating interprofessional education is very important.

Curricular mechanisms mainly focus on the interprofessional curricula considering that health care and education around the world are provided by different types of educators and health workers who offer a range of services at different times and locations. Effective IPE relies on curricula that link learning activities, expected outcomes, and an assessment of what has been learned. It is important to remember that expected outcomes will be influenced by the students' physical and social environment as well as their level of education. Well-constructed learning outcomes assume students need to know what to do (i.e., knowledge); how to apply their knowledge (i.e. skills); and when to apply their skills within an appropriate ethical framework using that knowledge (i.e. attitudes and behavior). According to (Ho et al., 2008). IPE curricula must address pragmatic issues such as shared space, timetabling, and equipment used in addition to opportunities for cooperative learning as IPE often requires professionals to be physically proximate.

Developing IPE focuses on three stages of mobilization, implementation, and institutionalization (Clark, 2013). The stage of mobilization incorporates elements of recognizing the need for change, promoting understanding of it, acknowledging that change can be positive and important and important, galvanizing support and mobilizing leadership, and making a commitment to change. Developing insight into how academic disciplines may inhibit needed changes is of utmost importance at this stage. In addition, it is important to recognize the critical role of the champion in providing effective leadership in initiating change and mobilizing the resources needed in support of IPE. One of the essential factors for

achieving IPE and CP during the mobilization stage at the micro-level is the presence of leaders and champions who are skilled communicators, passionate about interprofessional education and collaborative practice, and are able to both disseminate information and elicit institutional support (Ratka, 2013; World Health Organization, 2010, 2013). The Concise Oxford English Dictionary describes a champion as a person who vigorously supports or defends the cause of something (Concise Oxford English Dictionary, 2011). The literature further indicates that in educational contexts, a champion can be educators and role models who positively, influence and encourage students and learners across different professions to take an interest in understanding others' roles, which in turn, helps promote the IPE ethos and practice (Ho et al., 2008). According to the WHO Framework for Action on IPE and CP (World Health Organization, 2010), advocates for IPE and CP recognize that the health system is not ideal or sustainable in its current form and that one of the ways to strengthen it is to build a collaborative health workforce. This is possible through the introduction and implementation of IPE approaches in the educational programs of health professionals. The transition from the current uniprofessional education structure to interprofessional education approaches requires faculty members who can take on the role of champions and have the ability to take up and push forward the IPE agenda. Evidence has shown the significant role that a champion plays in advocating for and facilitating change in the direction of IPE (Clark, 2011; Ho et al., 2008; Ratka, 2013; World Health Organization, 2010). There is a need for identifying key champions in selected departments who can be encouraged to advocate for IPE programs and culture. Bennett et al (2011) underscore the importance of leadership for the successful implementation of IPE. In the study that was conducted at a university in Australia with faculty members involved in IPE, participants described leadership and commitment from the executive level as being fundamental to the success of IPE initiatives, without which it would not be possible to ensure participation by the various health

departments or schools. Similarly, Derbyshire et al (2015 and Hoffman et al (2008) emphasize the importance of transformational leadership and champions in furthering IPE. Champions play very a unique role in pushing for the change towards IPE. The role of a champion according to Clark (2011) is described as most often that of being a catalyst for change in the direction of IPE. In addition, as required for this initial stage of mobilization, the champion plays a unique leadership role in framing the mission of the IPE program and enlisting others to achieve it. In addition, Ho et al (2008) indicated that these individual champions can carry out the following culture-changing actions: engage, lead, and participate in research that contributes to the body of knowledge that IPE improves care; foster opportunities for building on evidence through practice-based research; utilize research and engage institutional colleagues involved in this research as powerful persuasions toward implementing interprofessional collaboration in the education and practice environments; build enthusiasm, celebrate successes, and build advocacy through academic venues, such as conference presentations, and publications, and community venues, such as town hall meetings and dialogues at the local community level, to recognize community members' and practitioners' central contributions; apply effective communication and foster a community of IPE academics and practitioners toward sustaining IPE programmes through individual and collective commitment.

It is important that IPE champions understand that moving towards a fully integrated IPE philosophy and the related curricula development and implementation work is an incremental process that takes a number of years (Graybeal, Long, Scalise-Smith, & Zeibig, 2010). Faculty members who have transitioned into the IPE champion role can become positive role models for students, faculty members, and others, to be involved in classroom-based, experiential and post-graduate IPE. Clark (2011) warns against underestimating the impact of local champions because some of them are particularly committed to the idea of

interprofessional working and their expertise and enthusiasm can encourage others to collaborate, overcome passive and active resistance to change, and remove organizational obstacles to progress. However, it is advisable to identify and cultivate a wider circle of champions as the collaborative effort grows, expanding partnership capital and building the overall movement in order to replace the champions that might have moved to other institutions, retire or die resulting in the reduced or lost motivation and momentum toward the IPE mission. The transition of faculty members to their new roles and responsibilities requires specific faculty development programs, resources, and institutional support. These faculty development programs are important as they provide adequate knowledge, skills for IPE and help faculty to develop positive attitudes towards IPE. Adequate knowledge, skills, and a positive attitude towards IPE are needed for faculty to develop effective strategies that will support the successful design and implementation of IPE curricula, coordinate IPE activities, and lead others in IPE endeavors. In addition to having knowledge and skills in IPE, the transitioned IPE champions should possess unique characteristics (Ratka, 2013). These unique characteristics include: most of all having determination and extraordinary interest in the adoption; implementation and success of IPE; having an appreciation of the value, benefits, and importance of IPE in health care; a deep understanding of and respect for other health professionals' skills and contributions to health care; have interprofessional education knowledge and understanding accompanied by adequate pedagogical skills and value for diversity and understand the importance of bringing together students and faculty members from a range of disciplines, to learn about, from, and with one another. Furthermore, successful IPE champions should have the ability to create novel learning environments; innovative teaching methods, and diverse active-learning activities. As educators, IPE champions should be well prepared to facilitate and mediate students' learning; have expertise

in group dynamics, team teaching, and assessment of team performance; and have excellent skills in conflict resolution and consensus-building. According to Clark (2011)

a champion is an individual that has a high intrinsic motivation and works to develop the social capital in a partnership founded on relationships. Greater social capital can help the champion expand the motivational circle based on the intrinsic factors and provide resources that can be utilized to counter and overcome opposition. Thus above all, champions of IPE are highly expected to have the ability to effectively share their vision and lead others in advancing the IPE agenda and implementing IPE (Clark, 2011; Ratka, 2013). According to Health Organization (2013), underscores the critical role that champions play in facilitating the successful IPE. It is clear from reviewed literature that whether champions are students or faculty members, they are essential for promoting and sustaining interprofessional initiatives.

During the mobilization stage, at the meso level, which includes the faculty and school levels, senior administrators play the role of providing support to a system that recognizes the work of faculty members participating in IPE for promotion and tenure (Clark, 2011).

Furthermore, faculties and schools must have the capacity to allocate appropriate funding for IPE program start-up and sustainability. It is also necessary to facilitate cooperation among faculties and schools within an academic institution, starting with senior faculty and school leaders and infiltrating through various levels of leadership. This is important in order to influence the institutional culture that will facilitate the participation of both students and faculty in IPE courses and initiatives. Clark (2011) further recommends the following important roles that faculties and schools must carry out in order to support IPE initiatives in the mobilization phase; provide support to faculty member and professional development initiatives at the individual faculty or school level that foster building an interprofessional community, including curriculum on effective communication and intercultural understanding; give support to individual-level change and leadership by valuing

commitment and contributions toward IPE (e.g., remuneration, recognition among peers, and the public awards); build and promote mechanisms for reflective practice and research that take a critical approach to social construction of professional roles and systems; provide support to teams in practice through promoting shared vision and effective, distributive leadership versus reifying top-down hierarchical leadership; build and promote mechanisms that create safe spaces for discussing and dealing with issues of power in education and practice settings within faculties and schools. These recommendations concur with El-Awaisi et al (2020) who in their study done in Qatar which aimed at exploring faculty perspectives and experiences in delivering IPE found that participants perceived having the dedicated committee for IPE in Qatar as an enabler for IPE implementation. In addition, the World Health Organization Framework for Action on Interprofessional Education and Collaborative Practice states that having a shared vision is essential in developing IPE curricula, and therefore constitutes an important educator mechanism.

The phase of implementation involves creating new structures, policies, and processes to support reform such as resources and rewards for new ways of working and social supports for reformers. Governance and management structures are some of the structures that must be put in place to support the successful implantation of IPE (Clark, 2011; World Health Organization, 2010). Furthermore, (Clark, 2011) adds that the establishment of mutual trust and altruistic leadership and the development of organizational structures that promote change are particularly important in this regard. Altruism means looking beyond one's own interests, even giving up some of one's own resources to support a collaborative project such as IPE. It includes the desire to pursue a broad collective good, even if one does not immediately or directly benefit. However, Clark (2011) warns that academic administrators and faculty members who often seem to be stuck in the academic mindset of competition may find it challenging to adopt this type of leadership style as its acquisition entails a shift from a more

traditional management style of coordination and control to more visionary leadership. Transformational leadership is more ideal as opposed to the more transactional leadership style. Evidence suggests that successful IPE initiatives require a form of leadership described as a steward or servant having qualities associated with attending to the needs of the partnership members, building a shared vision or culture and fostering a learning environment based on mutual respect and trust. This concurs with Derbyshire et al (2015) who conducted a study to explore university educators' perceptions of the knowledge and skills needed for their role adequacy as interprofessional learning. The findings showed that role adequacy for interprofessional learning facilitation appeared to be maximized when facilitators could use transformational leadership skills to place themselves as core to the process, creating a shared interprofessional vision, coping with complexity and unpredictability arising from professional differences. Furthermore, transformational leadership skills are essential to underpin adequacy for interprofessional facilitation in order to role model a positive attitude towards interprofessional working. Additionally, as indicated by (Clark, 2011) the establishment of mutual trust among interprofessional partnership members plays a significant role in the successful implementation of IPE initiatives. Trust is the foundation of relationships and partnership thus it is an especially important element in building academic or learning partnerships, in which a certain discipline is required. Developing trust is an important element in creating a context that supports learning in collaborative relationships. Lack of trust is one of the core reasons that many interprofessional projects fail. It is therefore important to understand that the success of a partnership depends on building relationships, and trust is the linchpin of a relationship. To implement IPE successfully, academic trust must be established among the different faculty members and other health professionals.

The governance and management structures should offer a collaborative environment for all participating disciplines such as greater joint curricular development; prudent and

economic use of resources; promotion of educational changes that accord with those occurring in the workplace. In addition to that, the governance structure should make it imperative that faculties recognize and contribute to solutions that overcome traditional faculty barriers (D'Amour & Oandasan, 2005). A study conducted by Khabaz Mafinejad et al. (2013) whose aim was to explore effective factors in designing and implementing IPE in the health of Iran from the perspectives of faculty members, revealed that faculty members, perceived the structure of the educational system as one of the most important factors influencing the design and implementation of interprofessional education. Other facilitating factors reported included reforming the current curricula, continuing medical education policy based on strengthening the sense of collaboration among health team members, the possibility of designing interprofessional education in various forms. Furthermore, the participants perceived several forms of designing and implementation of interprofessional training programs as facilitating factors to a successful implementation of IPE. Thus, continuing medical education was to be considered as one of the opportunities for the implementation of interprofessional education.

According to Barr et al. (2016b) the best way to implement IPE is that planning should be done jointly at every level closely involving educators from all the relevant professions with practitioners, managers, students service users, and carers. This approach allows each planning group to find its own solutions allowing time and opportunity to reconcile differing expectations. The use of outcome-led curricula is recommended because such curricula provide educators and students with an opportunity to develop teaching and learning content and methods in response to their particular needs and interests a range of learning methods have been adopted and adapted from professional education for interprofessional learning to meet students' evolving needs from which educators choose. (Barr et al., 2016b; World Health Organization, 2010). Educators must ensure that whichever, methods are selected must

be active, interactive, reflective, and patient-centered (Barr et al., 2016b). IPE should also provide for interprofessional practice learning. In this regard, university-based educators should work together with educators and practice-based educators to identify and make available IPE placement experiences in the necessary numbers and to the required standards. Together educators can generate collaborative and team-based opportunities for co-located students. A well-planned sequence of placements should progress from observation to hands-on, team-based practice. It is also important to note that technologically enhanced learning such as the use of virtual communities and simulation where students comprising an interprofessional team practice their respective interventions together around a manikin has been widely used. However, educators must be careful not to replace practice-based learning with technologically enhanced learning no matter how hard it may be to find enough suitable clinical placements (Barr et al., 2016b). Assessment of students in IPE can either be formative or summative. However, according to Barr et al. (2016b), students and educators are more likely to value assessment that is summative towards professional qualifications. Assessing students' interprofessional learning should be based on demonstrated collaborative competencies (Barr et al., 2016b; World Health Organization, 2010). Students' collaborative competencies should center on team organization and function; assessment and optimization of team performance; intrateam communication; conflict resolution and consensus building; leadership; and ability to set common patient care goals. It is also important that procedures, criteria, and credits should be consistent across professions and courses (Barr et al., 2016b; Buring et al., 2009)

Ho et al (2008) state that at the macro level, the educational institution can drive IPE and advance its sustainability primarily through promoting collaboration between institutions and spearheading policy decisions and changes nationally. Further some recommendations for institutions include; setting accreditation requirements for different professional training

programs to ensure that IPE is a component of the core curriculum; recognize and reward collaborative efforts by providing funding support and formal recognition for evaluation and sustainability; develop, promote, and implement system-level incentives and rewards for local action; invest in collaborative evaluation strategies to contribute to strong evidence linking IPE to better collaborative, patient-centered practice and patient outcomes; Promote the generation of evidence that IPE improves care; foster opportunities for building on this practice-based research and implementation; partner with decision-makers and research institutions to monitor the efficacy of policy through evaluation. IPE and CP Framework for Action (World Health Organization, 2010) state that politics and policy can play a huge role in advocating for change; identifying and supporting IPE and CP champions; ensuring that appropriate IPE and CP-friendly policies are in place.

2.3.3.1. Facilitators and Barriers to IPE Implementation

There is growing evidence that has discussed various facilitators/enablers and barriers that shape the development and implementation of IPE. Enablers provide the stimulus from which IPE success and sustainability can be promoted within higher education institutions (HEI) health professional education. The following facilitators have been identified and are recognized as critical to the successful implementation and maintenance of IPE; leaders and champions; administrative, institutional and work culture support; a shared vision or mission; an enabling built environment; relationships; collaboration and teamwork; roles and responsibilities, benefits of IPE (Borduas et al., 2006b; D'Amour & Oandasan, 2005; Lawlis et al., 2014; Margalit et al., 2009; World Health Organization, 2013).

Several barriers to successful IPE implementation and achieving positive outcomes are indicated in the literature. They are related to professional cultures and stereotypes; inconsistent language; curriculum barriers; lack of interprofessional knowledge. Evidence shows that academic cultures and disciplines can hinder IPE initiatives. Clark (2013) suggests

the strength of different professional cultures and the blind spots or cognitive limitations they make on recognizing the importance of perspectives other than their own are major barriers to IPE efforts in higher education institutions. Academic disciplines shape assumptions about what is to be known and how, work to be performed and its assessment, expectations for scholarly productivity and professional interaction, and social and political status. Loyalty to one's own discipline can create a substantial barrier to the intellectual and social openness of faculty and administrators to collaborating across departmental boundaries (Clark, 2011). To address this barrier requires that the whole academic institution should adopt an attitude of openness and flexibility in structures and processes, the development of centers and programs that enable faculty and students to cut across disciplinary boundaries, and methods to encourage and reward faculty who undertake interdisciplinary efforts. In order to successfully institute IPE initiatives there is need for the IPE implementers to recognize these barriers and develop appropriate strategies to overcome these barriers. Similarly, Baker et al (2011) found that professional cultures function as barriers to IPE and CP. This is so because the process of professional training and socialization hinders collaboration. From the study that they conducted with health professionals engaged in a large multi-site IPE in North America focusing on the socialization process and how it shaped how they view their roles within a health care team findings revealed that physicians described themselves as leaders and decision-makers while nurses, social workers, therapists, and other health professionals labeled themselves as team players. It is difficult to achieve collaboration in a hierarchy that invests power in some health professions and treats others as subservient. Furthermore, this perception of physician dominance in decision-making can function as a significant barrier to collaboration. While physicians play a significant role in a successful interdisciplinary team, this hierarchy must be broken down and the knowledge of all health professionals valued and considered. Evidence shows that one of the areas that need to be considered to overcome

barriers in implementing IPE is establishing faculty development programmes (Anderson, Thorpe, and Hammick, 2011) .

2.4 Faculty Perceptions of IPE

Successful implementation of IPE requires multiple levels of support within educational institutions. The need for IPE support at both the individual (Micro) and institutional (Meso) levels within the educational system has been emphasized in the literature. At the individual level, individual different characteristics such as faculty's value for IPE, attitudes, and beliefs towards IPE, can greatly influence their perceptions towards IPE and consequently their readiness (Anderson, Thorpe, & Hammick, 2011; Dallaghan, Hoffman, Lyden, & Bevil, 2016; Ho et al., 2008; Sunguya et al., 2014). Attitudes are multi-faceted and consist of three components: the cognitive component (what we believe); the affective component (what we feel); the behavioral component (what we do) (Anderson, Thorpe, and Hammick, 2011; Sunguya et al., 2014). Furthermore, attitudes and stereotypes held by faculty members are a key influence on how people interact in groups and can be barriers to IPE success. The attitudes of individual faculty members can be reflected in their personal biases towards different professions, and this can hinder successful implementation of IPE. Preferences of trainers of faculty towards their own professions can undermine the learning process for students who belong to other professions. Furthermore, negative attitudes within the faculty may also lead to lack of participation by other faculty members who can threaten implementation and advancement of interprofessional educational programs. Additionally, negative attitudes held by faculty can be communicated to students through unconscious cues and non-verbal behaviour, resulting in altered perceptions of IPE in students, potentially undermining the need for embracing and supporting IPE. Evidence has also shown that negative attitudes and stereotyping inhibit role construction (Dallaghan et al., 2016; Dalrymple, Martin, & Smith, 2013; Sunguya et al., 2014). A study conducted by Ho et

al. (2008) found that the attitudes of senior academic administrators were key determinants of IPE success. The implementation of IPE requires administrative decisions and support from senior administrators such as associate deans, heads of departments, and associate directors. Senior academic administrators must hold a positive attitude towards IPE since they have the authority to decide on educational policies and control resources. It is therefore important that the views of faculty and academic administrators be explored before initiating and implementing an IPE program.

It is further indicated that the medical profession is usually perceived as dominant to other professions. As a result, medical doctors tend to over-value their cadres. In most cases, other professions wait for medical doctors to make decisions about or to lead in the delivery of patient care. This is not healthy for interprofessional teamwork because it creates classes among professionals and impedes collaboration and teamwork to implement IPE. It is therefore very important that strategies are put in place to manage professional stereotypical attitudes in order to successfully implement IPE and achieve the intended learning outcomes (Baker, Egan-Lee, Martimianakis, & Reeves, 2011; Sunguya et al., 2014). Sunguya et al. (2014) underscored the need to put in place faculty development strategies before implementing IPE to minimize the effects of professional stereotypes. This can also increase the appreciation of the importance of IPE for teamwork and collaboration among different cadres of health professionals.

2.4.1 Perceived IPE Benefits

Evidence has indicated many potential benefits of IPE relating to faculty members, students, health professionals, and patients (Barr, Gray, Helme, Low, & Reeves, 2016b; Bennett et al., 2011; Gilbert, 2010; Mendez, Armayor, Navarraz, & Wakefield, 2008; World Health Organization, 2010). According to Gilbert (2010), IPE can play an important role in mitigating many of the challenges that health systems are facing around the world. These

challenges include workforce shortages; skill mix imbalances; maldistribution of professionals; fragmented healthcare; unmet health needs; new infections; an increase in non-communicable diseases and emerging technological innovations. Evidence has shown that the implementation of IPE can bring the following potential benefits: reducing the human resources for health (HRH) crisis in developing countries; facilitating task shifting; promoting collaboration and teamwork; increasing motivation and promoting the retention of workers and helping to ease the problem of poor HRH retention, especially in hard to reach areas, caused by the lack of incentives, motivation, and interest of health workers (Barr et al., 2016b; Gilbert, 2010; World Health Organization, 2010). IPE also enables health professionals from different disciplines to acquire some of the skills of the other. Such skills and knowledge transfer can enable one to perform some of the tasks of another. This allows the burden of patient care to be shared among available team members in times of health worker shortages. As IPE promotes collaboration, working in a team can also help reduce the burden on individuals and increase their motivation towards their clinical work. The positive results of such collaborations may further foster the spirit of teamwork. Cant, Hood, Baulch, Gilbee and Leech (2013) found that participants perceived IPE to be more engaging than uniprofessional education approaches, even though it was challenging. They viewed interprofessional learning (IPL) as helping to break down professional silos in healthcare, through close personal contact among the disciplines and the sharing of communication on a one-to-one basis. This can lead to improved performance of health workers and patient care outcomes (Bennett et al., 2011).

Potential benefits of IPE to faculty and higher learning have also been reported (Bennett et al., 2011; World Health Organization, 2010). The World health Organization (2010) reported the following key benefits to faculty and institutions: promotion of interprofessional research; improved understanding and cooperation between educational and

research institutions; more effective allocation of resources; and consistency in curriculum design. Participants in a study reported by Bennett et al. (2011) perceived that IPE had the potential to improve alignment for educational programs between schools; increase communication and collegiality; equalize power, and improve research opportunities within faculty and with industrial partners. Evidence has also shown that IPE has potential benefits for students (Cant et al., 2013; Sunguya et al., 2014; World Health Organization, 2010).

Implementation of IPE can offer the following benefits to students: the ability to, share knowledge and skills collaboratively; improve interprofessional communication; learn and develop an understanding about another's role; generate new roles; enhance competency in teamwork and change in students' attitudes; and remove compartmentalized curricula, which reduces stereotyping. Cant et al. (2013) reported similar potential benefits of IPE for students. Findings from their study indicated that all teachers held positive views of IPE sessions and of the benefits to learning for students. They observed that students were able to practice their communication skills with someone from another discipline, a precursor of what would be required in future practice. Further, that students gained knowledge and skills and developed a different perspective through seeing clinical tasks from the point of view of another discipline; learned about another's role and had a better understanding of the skills of other professions and where the various professions' tasks fit into overall care. Furthermore, teachers thought there was value for students in working together because this would reduce artificial barriers between professional groups through becoming more familiar with representatives of other professions as individuals. Findings from a project of an annual inter-university, multi-department simulation exercise developed to promote collaboration, collegiality, and communication within a healthcare setting that students reported the following interprofessional learning benefits; increased knowledge about how the other disciplines work, their role within healthcare, and what they do within their job descriptions;

improved overall communication skills, communication skills with patients, and communication with each other (both interdisciplinary and interdisciplinary) ; increased understanding of the cultural and psychosocial issues that were integrated throughout the scenarios; reliance on other disciplines in relationship to being part of the whole rather being burdened by meeting the patients' needs independently; as a team member - they had others with special expertise to assist them in providing quality care for the patient and family; increased knowledge of disease processes and treatments from the other disciplines' point of view. It was further reported that one unexpected benefit was discovering many commonalities between the respective professions, particularly between nursing and social work (Paris et al., 2021). According to Olenick et al. (2010) through IPE students gain negotiation skills, leadership, teamwork, and improved communication skills; they become better able and prepared to exchange knowledge and information, share decision making, manage conflict and provide patient-centered care through a better understanding of respective roles. Furthermore, interprofessional students have improved self-esteem, improved self-confidence, and improved competence in practice. In addition, IPE fosters mutual respect and mutual trust between health care professionals, improves quality of care and makes health care teams cohesive by relinquishing stereotypes. Lifelong learning and personal growth are also benefits or consequences of IPE. Ultimately, the most desired consequence of IPE is collaborative practice

As regards potential IPE benefits to patients, Sunguya et al. (2014) stated that in developing countries, IPE can improve professionals' medical and clinical knowledge, skills, and professional practices, consequently improving the quality of care and boosting patients' satisfaction. Collaborative practice can improve access to and coordination of health services; appropriate use of specialists; clinical resources; and health outcomes for people with chronic diseases. Patients report higher levels of satisfaction, better acceptance of care, and improved

health outcomes after being managed by a collaborative team in both acute and primary care settings (World Health Organization, 2010). Having knowledge of the potential benefits of IPE may promote the development of positive attitudes towards IPE among faculty and enhance their readiness for IPE. However, almost all these potential IPE benefits have been reported from studies done in developing countries and there is limited data on studies done in developing countries including Malawi. It is therefore important to determine what faculty members know about the potential benefits, which are associated with the implementation of IPE approaches.

2.4.2 Perceived IPE Challenges

Although the benefits of IPE are increasingly described, implementation of IPE across university communities faces administrative, resource, structural, intellectual, and cultural challenges. Common reported challenges to revolve around the following themes: IPE curriculum, leadership, resources, stereotypes and attitudes, variety of students, IPE concept, teaching, enthusiasm, professional jargon, and accreditation. (Bennett et al., 2011; Berger et al., 2017; Cant et al., 2013; Graybeal et al., 2010, 2010; Ho et al., 2008; Khabaz Mafinejad et al., 2016; Olenick et al., 2010). Sunguya et al. (2014) argued that there is scarce evidence on IPE conducted in developing countries. However, examples of challenges and barriers encountered from both developing and developed countries can help guide planning, initiating, and implementing IPE in other developing countries. The most common challenges in developing and implementing IPE stem from the demands of creating a fundamental cultural shift and dealing with resistance from faculty who see IPE as either irrelevant or threatening in some way (Graybeal et al., 2010). Resistance to curricula changes has been reported as one of the most common challenges in the initiation and implementation of IPE (Bennett et al., 2011; Berger et al., 2017; Graybeal et al., 2010). According to Berger et al. (2017), some of the reasons for resistance to curricula changes were due to factors such as

uncertainty triggered by changes to traditional roles, concern about increased workload, and didactic challenge for staff who were unaccustomed to teaching students from different health professions together (interprofessional groups). Resistance to curricular change was also due to a packed curriculum with much of the curricular content prescribed by the various accreditation agencies resulting in limited flexibility, with little room for innovation or expansion (Berger et al., 2017; Graybeal et al., 2010). Logistics is another reported major challenge regarding the planning, initiating, and implementing of IPE. This includes resources (human, material and financial) and time scheduling (Berger et al., 2017; Cant et al., 2013; Graybeal et al., 2010). Berger et al. (2017) reported barriers to IPE at the logistical level despite the provision of high-level support such as scheduling IPE seminars into timetables. The already densely packed undergraduate curricula and competition for existing teaching spaces due to the large and growing student body made it difficult to schedule IPE seminars into timetables. Logistical difficulties such as arranging for students from different disciplines to be in the same class at the same place at one time, given their timetables, and difficulties in gaining the release of students from disciplinary placement for IPE sessions have also been reported (Cant et al., 2013; Graybeal et al., 2010). Logistical factors can markedly limit the implementation of IPE. Thus, it is important to ensure that institutions look into all logistics regarding the planning, initiating, and implementing of IPE. Other major barriers to IPE are, the relationship of power among health professionals, attitudes, and stereotypes held by faculty members (Baker et al., 2011; Dallaghan et al., 2016; Ho et al., 2008; Sunguya et al., 2014). There is scanty information about studies done on IPE in Malawi. It is therefore important to understand the views of faculty members about what they perceive as potential IPE challenges in relation to its implementation. Their perceptions about potential IPE challenges can have negative implications on their readiness for IPE.

2.5 Faculty IPE Readiness, Knowledge, and Skills

The implementation of IPE approaches requires educators to have adequate role preparation through tailored professional development opportunities so that they gain a range of interprofessional knowledge and skills (Anderson, Cox, & Thorpe, 2009; Egan-Lee et al., 2011; Freeman et al., 2010). IPE facilitators should have a range of attributes such as a commitment to IPE and practice, credibility within one's interprofessional community, a clear understanding of core IPE and IPC principles, and confidence and flexibility to manage professional differences (Anderson et al., 2009; Egan-Lee et al., 2011). The UK Centre for the Advancement of Interprofessional Education (CAIPE) has outlined certain key knowledge areas and skills that IPE teachers/facilitators need to possess. IPE facilitators must have knowledge of group dynamics, an in-depth understanding of the interactive learning methods and confidence in their application, and a commitment to IPE and practice. They must also have credibility in relation to the particular focus of the IPE to which the educator contributes positive role modeling, inner conviction, and good humor in the face of difficulties. Furthermore, facilitators must have the ability to value diversity and unique contributions and balance the needs of individuals and groups (Anderson et al., 2009). These competencies will enable the educators not only to understand the content but also to gain an awareness of the importance of the process when teaching mixed student groups.

Evidence suggests that faculty commitment to IPE is an essential prerequisite for successful facilitation (Derbyshire, Machin, & Crozier, 2015; Egan-Lee et al., 2011; Lindqvist & Reeves, 2007). A study by Lindqvist and Reeves (2007) indicated that commitment to improving interprofessional collaboration in order to promote better clinical practice was the main reason why facilitators decided to engage in IPL. Neophyte facilitators of IPE programs expressed a high level of enthusiasm and commitment about their new roles (Egan-Lee et al., 2011). Role modelling for interprofessional education and collaboration was another attribute

that was mentioned to be important (Derbyshire et al., 2015; Lindqvist & Reeves, 2007). Participants pointed out the need for a facilitator to be a positive role model for students to demonstrate expected interprofessional behavior. Furthermore, role modelling was also viewed as an important transformational leadership skill requiring a range of personal attributes such as motivation, creativity, enthusiasm and importantly, an awareness of how their own behaviour can influence others (Derbyshire et al., 2015).

Other personal attributes such as openness, honesty, and sensitivity (Dalrymple, Martin & Smith, 2013) were described by some participants as essential to demonstrating an interprofessional reflexive approach that engages individuals in a professionally inclusive way. Additionally, facilitators felt that they needed to display a range of attributes such as enthusiasm, humor, and empathy to be effective in their IPL role (Lindqvist & Reeves, 2007). In general, participants reported that despite enjoying their work, their role in IPL was a demanding one, particularly that it involved working with interprofessional student groups. It was a more complex activity than facilitating uniprofessional learning. This is due to the diversity of the students and the range of their different learning needs (Derbyshire et al., 2015; Lindqvist & Reeves, 2007). The perception about the complexity of the IPE facilitation role was also reflected in the findings reported by Egan-Lee et al. (2011). Participants felt they were underprepared for the IPL facilitation role. Although they had entered the IPE project feeling confident about their role as facilitators, many felt rather under-prepared for small group facilitation work during post-program interviews. Thus, they noted that further interprofessional faculty development would have been extremely beneficial for the small group facilitation work. Facilitation of interprofessional learning activities (IPLAs) is an essential element of IPE (Derbyshire et al., 2015; Ruiz, Ezer, & Purden, 2013). During IPLAs, the educator takes an explicit facilitation role, leading the group process to meet diverse learning needs and professional expectations beyond those found when working

unprofessionally (Freeman et al., 2010). To be effective in the facilitation role, facilitators require the opportunity to gain knowledge and skills necessary for IPE facilitation (Derbyshire et al., 2015).

Prior facilitation experience was one of the attributes that enhanced the facilitator role adequacy (Derbyshire et al., 2015; Egan-Lee et al., 2011). Although the participants had several years working and teaching in different contexts, in general, their experience in facilitating IPE was very limited. This previous general educational experience, as teachers within their own professions, resulted in them feeling both positive and confident about their new facilitation roles (Egan-Lee et al., 2011). However, this did not equate to confidence and skills in an IPL context. Similarly, Derbyshire et al. (2015) found that even participants with several years of experience of teaching their own professional groups described a transition period before feeling confident in the IPL role. It was also indicated that experience in IPL was useful in building confidence for the IPL facilitation role.

Regarding the knowledge and skills required for effective facilitation of IPE, an understanding of key interprofessional principles were mentioned as very important in implementing IPE effectively (Derbyshire et al., 2015; Egan-Lee et al., 2011). All facilitators who participated in a study by Egan-Lee et al. (2011) acknowledged that they benefited from attending the faculty development course by gaining a better understanding of the fundamentals of IPE and interprofessional collaboration (IPC). Nevertheless, many of the participants continued to have difficulty defining IPE and IPC.

In another study by Derbyshire et al. (2015) participants expressed the importance of developing a clear understanding of interprofessional learning (IPL) principles, theory, and policy alongside a good understanding of the curriculum. This would help them to gain awareness of a broader learning context and help students to understand those links. Facilitators as leaders of change felt readier and more adequately prepared for their leadership

role in instilling in students the need for positive interprofessional working values when they understood the broader context of their learning. However, the findings indicated that, due to unfamiliarity with key principles of IPE and lack of experience in facilitating interprofessional groups, a number of teachable moments were overlooked and students disadvantaged (Derbyshire et al., 2015; Egan-Lee et al., 2011). For example, a participant explained that due to facilitators' uncertainty of interprofessional concepts, it was difficult to describe them. The facilitators resolved this issue by avoiding defining interprofessional terms. They encouraged learners to evolve their own understandings using scenarios and little clips of movies. It was also argued that more experienced facilitators could have identified prickly instances as opportunities to examine and challenge potential biases, perceptions, and frustrations relating to various health professional groups. In view of this, participants valued others with IPL facilitation experience and preferred to co-facilitate with a practiced experienced colleague so that students were not disadvantaged (Anderson et al., 2009; Derbyshire et al., 2015). Participants also perceived that the role of facilitation required them to have transformational leadership skills. Effective transformational leadership would enable them to foster an IPL culture, manage group dynamics, relationships and behavior. Furthermore, flexibility, establishing trust, and building relationships were mentioned in association with transformational leadership skills (Derbyshire et al., 2015).

Participants (facilitators) also indicated that creating a supportive learning environment was important for students to learn effectively (Ruiz et al., 2013). Participants used a variety of strategies in a conscious attempt to help students feel comfortable in participating in the discussions. Furthermore, facilitators were observed always using a respectful tone of voice, answered questions, listened attentively to comments, and did not dismiss opinions expressed by students. Their non-verbal communication showed openness to students' comments by having their arms open and leaning towards students. Most of the

facilitators set the tone at the outset of the discussions by reminding students to listen, respect all ideas and opinions, and speak at one time.

Similarly, Loversidge and Demb (2014) reported that faculty indicated that embedding authentic collaborative experiences into pre-licensure education allowed students to deepen their understanding of other health professionals' roles and ensured access to faculty mentors. Participants implemented pedagogical strategies to promote a supportive learning environment.

2.6 Institutional Support for IPE

Although employee attitudes are critical to the successful implementation of planned change, other factors that create uncertainty within the organization's context can be a barrier. These factors include organizational culture, resources, economic and political factors (Hamilton, McLaren, & Mulhall, 2007; Rafferty et al., 2013). Institutions in which new initiatives such as IPE are planned to be implemented should develop organizational structures that will support the implementation of the initiative.

A study by Ho et al. (2008) from five Canadian IPE programs described some of the key factors that facilitate transformational change within institutional settings towards successful IPE implementation. The successful start of an IPE program was one of the areas explored. Participants stated that champions were crucial in the successful initiation of the IPE programs. They explained that their IPE programs would have not started without champions who brought energy, dedication, persistence, and a substantial time commitment to the cause. Some of the champions such as deans, associate deans, department heads and directors were well established in the university hierarchy, whereas others were at the start of their careers. The attitudes of senior academic administrators are key determinants of IPE success since these are the people who have the authority to decide on educational policies and to control resources. The decisions and support from these senior administrators are

therefore crucial for the effective implementation of IPE initiatives (Derbyshire et al., 2015; Ho et al., 2008). These champions put IPE on the agenda in their institutions and developed influential links and support with senior levels of the university administration. Additionally, the champions facilitated the establishment of connections among the learners in different professions by providing opportunities to interact through various learning contexts. This led to an internalization of the professional ethos and a commitment to helping promote the program's initiatives (Ho et al., 2008). The ongoing involvement of champions is a key factor for overcoming structural barriers to successful organizational change (Ho et al., 2008).

Participants also indicated the importance of developing organizational structures that facilitate and coordinate interprofessional collaboration and common objectives among stakeholders to support the implementation of IPE programs (Ho et al., 2008). Governance and management structures should offer a collaborative environment for participating disciplines, including interprofessional curricular development, the management of collective resources, and the promotion of educational changes that are in accord with those occurring in the larger workplace. The importance of dialogue with all stakeholders in promoting the program's initiatives was also emphasized (Ho et al., 2008). Furthermore, funding allocation by faculties was mentioned as an important underpinning for the implantation and sustainability of IPE initiatives. Funding provided human resources and infrastructure to help with both IPE coordination and program development.

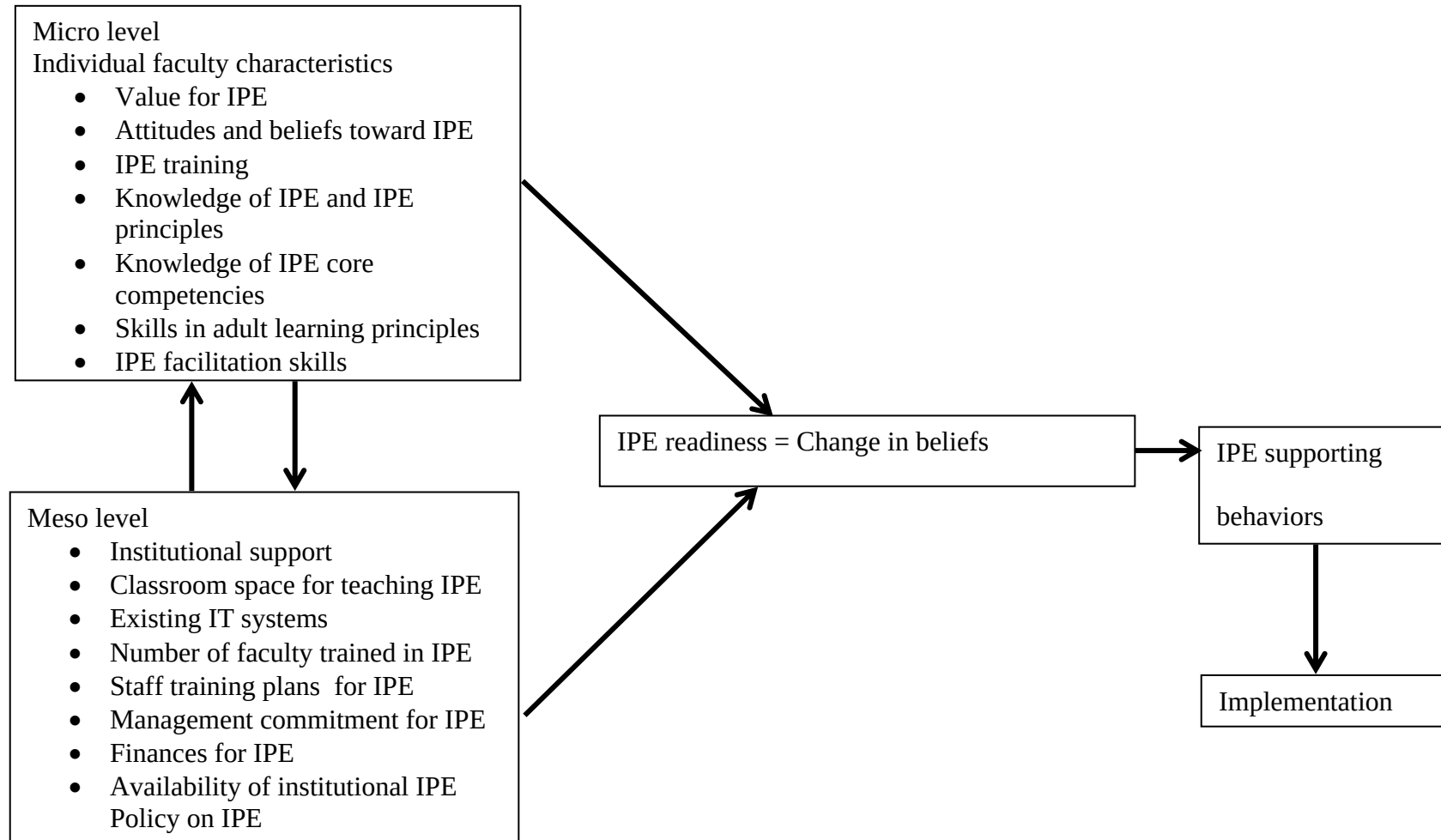
Findings further indicated that participants recognized the key role that professional development for faculty plays in encouraging participation and faculty buy-in to IPE initiatives (Derbyshire et al., 2015; Egan-Lee et al., 2011; Ho et al., 2008; Lindqvist & Reeves, 2007). Comprehensive faculty development programs are an important means by which an institution can move towards implementing and sustaining IPE. Thus, these programs should encompass both individual and organizational development. At the

individual level, faculty development should address attitudes and beliefs that impede or facilitate successful IPE and collaborative, patient-centered practice. At the organizational level, faculty development should include the creation of cooperative learning opportunities, the support of teams, the recognition and reward of collaborative practices, and the addressing of factors that might impede IPE (Ho et al., 2008).

2.7 Conclusion

Readiness for change is a complex and multidimensional construct influenced by both individual and organizational factors (Ho et al., 2008; Holt et al., 2007; Rafferty et al., 2013). It is therefore important to assess readiness for change at the individual and organizational levels before implementing any new initiatives in the organization. Literature has shown that IPE has mostly been implemented in developed countries. Additionally, limited evidence is available in developing countries based on the assumptions and tools derived from developed countries (Sunguya et al., 2014).

2.8 Conceptual Framework for IPE Readiness



Adom et al (2018) described a conceptual framework as a structure that the researcher believes can best explain the natural progression of the phenomenon to be studied. It presents an integrated way of looking at a problem under study and it helps the researcher to explain how the research problem would be explored. Polit and Beck (2012) stated that a conceptual framework highlights the reasons why a research topic is worth studying and helps the researcher to present his/her asserted solutions to the problem. Furthermore, a conceptual framework broadly presents an understanding of the phenomenon of interest and it assists the researcher in identifying and constructing his/her worldview on the phenomenon to be investigated (Grant & Osanloo, 2014; Polit & Beck, 2012).

The conceptual framework guiding the study was developed after an extensive review of literature on readiness for organizational change, interprofessional education, and collaborative practice (Curran & Sharpe, 2007; D'amour & Oandasan, 2005; Holt et al., 2007; Holt & Vardaman, 2013). Holt and Vardaman (2013) stated that organizational readiness for change incorporates three broad dimensions; psychological factors (characteristics of those being asked to change); structural factors (circumstances under which the change is occurring and the extent to which these circumstances enhance or exhibit the implementation of change); and the level of analysis (individual and organizational). Psychological and structural factors occur at the individual as well as the organizational level. At the psychological, individual level, the relevant dimensions relate to individuals' beliefs. These beliefs include; whether or not individuals: feel a change is appropriate (i.e., appropriateness); believe management supports the change (i.e., principal support); feel capable of making the change successful (i.e., change efficacy); and, believe the change is personally beneficial (i.e., valence. When people feel that success is out of reach, little effort is put forth and efforts to participate in change are abandoned as obstacles are encountered. Research findings have indicated that these perceptions are more salient during taxing situations like those that come

as change is being introduced (Holt et al., 2007; Holt & Vardaman, 2013). At the structural, individual level, relevant dimensions relate to the individuals' knowledge, skills, and ability to perform when change is implemented. When contemplating to implement change, leaders must consider to what extent will people's knowledge, skills, and abilities match their revised jobs or roles (Holt & Vardaman, 2013). At the structural, organizational level, relevant dimensions relate to human and material resources, communication channels, and formal policy. Key dimensions discrepancy, support climate, and facilitation mechanisms. Discrepancy refers to a significant difference between the current state of practice and a more desirable state (a performance gap). Support climate reflects the tangible such as funding, reward, and incentive systems aspects of the organization that facilitates implementation as well as the prevailing culture and climate most notable to leadership style and power balance (Holt & Vardaman, 2013). The framework for Interprofessional Education for Collaborative Patient-centered Practice refers to the individual level as the Micro-level and the institutional level as the Meso level (D'Amour & Oandasan, 2005).

The conceptual framework for readiness for IPE shows that readiness for IPE is assessed at both the individual (Micro) and institutional (Meso) levels within the educational system. At the individual level, the different individual characteristics such as faculty's value for IPE, attitudes, and beliefs towards IPE, training in IPE, knowledge of IPE and IPE principles, core competencies, skills in adult learning principles, and IPE facilitation skills can affect readiness for the implementation of IPE initiatives by individual faculty at the institution.

The assumption is that individual faculty readiness for IPE will be demonstrated through positive attitudes and beliefs regarding the need for, appropriateness, and value for IPE. Additionally, readiness for IPE is bolstered when individuals have the skills to perform the tasks successfully and activities that are associated with IPE. The absence of the

individual characteristics mentioned above will affect the faculty's individual readiness as well as the institution's readiness for implementing IPE initiatives. Furthermore, lack of faculty readiness can impact negatively the teaching of IPE.

At the institutional (Meso) level, readiness for IPE is influenced by the level of institutional support for IPE implementation. Institutional support includes infrastructure such as classroom space for teaching IPE, as well as information and communication systems. Additionally, the institution must have a number of faculties trained in IPE, staff training plans for IPE, and an institutional IPE policy. Above all, there must be management and leadership commitment to provide human, material, and financial resources required for such programs. The individual characteristics and structural factors at the micro and meso levels may simultaneously influence the readiness for IPE hence both must be present for the organization to achieve readiness to implement IPE initiatives.

Readiness for IPE is attained when there is a change in beliefs that the faculty and academic administrators hold regarding IPE. This is facilitated by the presence of both individual characteristics and structural factors at the micro and meso level of analysis. The change in general beliefs leads to behaviors that adopt and support IPE. Holt, Armenakis, Harris, and Feild (2007) stated that a general set of beliefs shapes readiness and provides the foundations for resistance or adoptive behaviors.

Chapter 3

3.0 Methodology

3.1 Study Design

The study followed a qualitative research approach. Qualitative studies are conducted to gain insight and discover meaning about a particular experience, situation, cultural element, or historical event. Additionally, qualitative studies tend to draw from the naturalistic inquiry which purports a commitment to studying something in its natural state to the extent that is possible within the context of the research arena. The purpose of qualitative research is to obtain an in-depth understanding of a purposefully selected sample and not the generalization of the findings (Marshall & Rossman, 2011; Munhall, 2012). Qualitative research, according to Bengtsson (2016) contributes to an understanding of the human condition in different contexts and of a perceived situation.

A qualitative exploratory descriptive study was conducted to explore and build an understanding of faculty perceptions of their readiness for IPE. According to Bradshaw, Atkinson, and Doody (2017) qualitative descriptive research studies are those that represent the characteristics of qualitative research rather than focusing on culture as does ethnography, the lived experiences as in phenomenology or building of theory as with grounded theory. They seek to discover and understand a phenomenon, a process, or perspectives and worldviews of the people involved. A qualitative study design with its emphasis on capturing the complex dimensions of phenomenon allowed the researcher to fully explore how participants (faculty members, heads of department, and deans) perceived IPE. Furthermore, the use of a qualitative descriptive research approach is particularly relevant when information is required directly from those experiencing the phenomenon under study, and when time and resources are limited. The study design was appropriate because the researcher did not identify any literature regarding studies on IPE in relation to undergraduate healthcare

professionals' education in Malawi. Additionally, IPE is a new concept in the education of undergraduate health professionals in Malawi. The qualitative descriptive method permitted the researcher to focus on faculty views about their readiness to implement IPE in the training of undergraduate health professionals. The qualitative method gives voice to participants, without manipulation or forced influence about a matter that directly concerns them (Bradshaw et al., 2017; Creswell, 2013; Strauss & Corbin, 1990).

3.1.1 Philosophical Assumptions

Philosophical perspectives dictate what constitutes knowledge and how phenomena should be studied, thus assisting researchers to refine and specify the types of evidence necessary, and how it should be collected, interpreted, and used. Furthermore, philosophy shapes how researchers formulate their research problem and research questions to study and how they seek information to answer the questions. The qualitative descriptive exploratory approach utilizes a naturalistic inquiry, with a focus on perception rather than experience (Bradshaw et al., 2017; Dalrymple et al., 2013). Qualitative descriptive research lies within the naturalistic approach. The naturalistic approach allows the researcher to study the phenomena in their natural context. However, researchers must keep in mind that they cannot avoid affecting the phenomenon being studied. In addition, the naturalistic approach creates an understanding of phenomena through accessing the meanings, which participants ascribe to them.

The constructivist paradigm informs qualitative research which assumes that reality is not a fixed entity but rather a construction of the individuals participating in the research; reality exists within a context, and many constructions are possible (Polit & Beck, 2012). In social constructivism, individuals develop subjective meanings of their experiences; meanings directed toward certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrow the meanings into a few

categories or ideas (Creswell, 2013). Thus, researchers in constructivist traditions emphasize the inherent complexity of humans, their ability to shape and create their own experiences, and often address the processes of interaction among individuals. They also focus on the specific contexts in which people live and work to understand the historical and cultural settings of the participants. Additionally, the constructivist paradigm assumes that knowledge is maximized when the distance between the inquirer and those under study is minimized. Constructivist researchers recognize that their own background shapes their interpretation and they position themselves in the research to acknowledge how their interpretation flows from their own personal, cultural, and historical experiences. Thus findings from a constructivist inquiry are the product of the interaction between the inquirer and the research participants which for this study comprise the faculty members, heads of department, and deans (Creswell, 2013; Denzin & Lincoln, 2011; Polit & Beck, 2012).

The ontological position of naturalistic research is relativism, which holds the view that reality is subjective and varies from person to person (Parahoo, 2014). Ontology is the study of being (Crotty, 1998). It is concerned with what constitutes reality, what the real world is, and what can be known about it (Denzin & Lincoln, 2011). Realities are influenced by senses and emerge when consciousness engages with objects, which already have meaning for the individual. What follows is that there are many realities and no one reality can exist as individuals ascribe their own interpretation and meaning to the phenomenon. In addition, the use of language actively shapes and molds reality. Thus, the reality is constructed through the interaction between language and aspects of an independent world where people's descriptions of a phenomenon can be seen as either a proxy or literal description or a combination of both (Bradshaw et al., 2017; Crotty, 1998). According to Parahoo (2014) there can be no reality without understanding language and acknowledging the researcher's preconceptions, and only through subjective interpretation can this reality be truly uncovered.

Qualitative descriptive research strives for in-depth understanding, but with emphasis first on literal description (Sandelowski, 2010a) and then, on the understanding of human phenomena through analysis and interpretation of meaning people ascribe to events (Bradshaw et al., 2017). In this study, the researcher sought to describe the views of faculty members about IPE and understand the meaning each individual attached to the phenomenon under study.

The epistemological position of qualitative research is subjectivism, which is based on real-world phenomena; that is, the world does not exist independently of our knowledge of it. Epistemological assumptions relate to how knowledge can be created, developed, and communicated (Denzin & Lincoln, 2011). Subjectivism accepts the reality of all objects, relies entirely on an individual's subjective awareness of it, and stresses the role and contribution that the researcher plays, and this is congruent with the qualitative description approach to research. The qualitative descriptive approach accepts that many interpretations of reality exist and that what is offered is a subjective interpretation strengthened and supported by reference to verbatim quotations from participants (Bradshaw et al., 2017). Knowledge of reality from a naturalistic perspective as is the case with qualitative description research is socially constructed, not only by the participants obviously but also by the researchers. Thus it is therefore recognized that an objective reality cannot be discovered or replicated by others (Bradshaw et al., 2017; Denzin & Lincoln, 2011; Streubert & Carpenter, 2011).

3.2 Study Setting

The study was conducted at the Lilongwe and Blantyre campuses of the KCN and the Blantyre campus of the COM. These institutions of higher learning were chosen because they are the major colleges that provide higher education to health professionals and have a leading role in the training of nurses, medical doctors, and pharmacists in the country. They are fundamental in guiding future IPE initiatives in relation to the training of undergraduate

health professionals in Malawi. Additionally, they have the ability to influence policymakers as regards the education of health professionals. It was, therefore, crucial to assess faculty readiness for IPE by conducting this study.

3.3 Study Period

The study was conducted from September 2016 to December 2017.

3.4 Population and Sample Size

The total population included 94 faculty members including deans of faculties and heads of departments. The target population included 69 nursing and midwifery faculty members (KCN), and 25 pharmacy and medicine faculty members (COM). These faculty members were purposely selected because they had the requisite knowledge about the phenomenon under study, hence they could provide the required information. Deans and heads of departments also work as academic administrators as such, they are responsible for making decisions concerning resource mobilization and allocation, and hence they can influence the institution's readiness for IPE. Availability of resources for IPE programs in the institution plays a very important role in supporting IPE initiatives.

The three common non-probability sampling techniques applied in qualitative research are purposive or purposeful sampling, network or snowball sampling, and theoretical sampling. These sampling methods enable the researcher to select specific people who would provide extensive information about the phenomenon, event, or situation being studied (Marshall & Rossman, 2011). In this study, purposive sampling also sometimes referred to as purposeful, judgmental, or selective sampling techniques were used to select the specific faculty members, heads of department and deans to provide the needed information about their perceptions of IPE (Grove et al., 2012; Moule et al., 2017). According to Munhall (2012), the Purposive sampling method is used in qualitative research to gain insight into a new area of study or to obtain in-depth understanding of a complex experience or event.

Patton (2015) identified several strategies that can be employed in purposive sampling, including extreme or deviant case sampling (extreme and unusual cases), typical case sampling (average or typical cases), and criterion sampling (cases where pre-determined criteria exists). When using the purposive sampling method, the researcher selects individuals and sites for study because they can purposefully inform an understanding of the research problem and the central phenomenon in the study. IPE is a new concept in Malawi and there is limited literature about this phenomenon thus purposive sampling technique was appropriate for the study.

A type of purposive sampling, specifically maximum variation sampling, was used to recruit participants into the study to obtain heterogeneity in the sample. Maximum variation sampling aims to document unique variations and obtain an understanding of how the phenomenon is viewed and understood among different people, in different settings, and at different times. Furthermore, it involves determining in advance some criteria that differentiate the sites, or participants, and then selecting sites or participants that are quite different on the criteria. Thus, the advantage of this sampling technique is that it allows the researcher to maximize differences at the beginning of the study which increases the likelihood that the findings will reflect differences or different perspectives (ideal in qualitative research). Furthermore, the principle behind maximum variation sampling is that it enables the researcher to gain greater insights into a phenomenon by looking at it from all angles such as a wide range of attributes, behaviors, experiences, incidents, qualities, situations, and many others. This helped the researcher to identify common themes that were evident across the sample (Creswell, 2013; Lincoln & Guba, 1985; Polit & Beck, 2012). Initially, the researcher planned to recruit a sample of 40 faculty members, including deans and heads of departments from nursing, midwifery, pharmacy, and medical programs at both institutions. However, the researcher encountered some challenges at the Faculty of Medicine

at COM, and only 36 participants, including 5 deans, 11 department heads, and 20 faculty members from nursing, midwifery, pharmacy, and medical undergraduate programs were recruited into the study. Nevertheless, this number was adequate to achieve data saturation. Furthermore, qualitative samples tend to be small because of the emphasis on intensive contact with participants and the principle of data saturation has become an accepted standard to determine sample size within qualitative designs (Bradshaw et al., 2017; Creswell, 2013). According to Creswell (2013) one general guideline for sample size in qualitative research is only to study a few sites, or individuals but also to collect extensive detail about each site or individual studied. Krippendorff (2004) stated that in qualitative research it is common that data are based on 1 to 30 informants however, the sample size should be determined based on informational needs so that the research question can be answered with sufficient confidence.

The use of maximum variation sampling enabled the researcher to gain an understanding of how different faculty members from the nursing, midwifery, medicine, and pharmacy programs at KCN and COM perceived and understood readiness for IPE. Furthermore, the researcher was able to capture a wide range of perspectives on faculty readiness for IPE and as a result, gained greater insight into the phenomenon. Additionally, maximum variation sampling allowed the researcher to explore the common and unique manifestations of a target phenomenon across a diverse group of participants (Sandelowski, 2010b). Thus, the researcher was able to obtain unique as well as common descriptions of readiness for IPE from the faculty members. This facilitated a broader understanding of the phenomenon under study, which led to the identification of practical solutions as regards perceived barriers to IPE initiation within the Malawian context.

3.4.1 Inclusion Criteria.

Participants included faculty members of Malawian nationality, who had a master's degree and had work experience in full-time positions teaching the undergraduate programs

for not less than 2 years with no previous experience in using IPE approaches. It was assumed that work experience of at least 2 years as educators, would allow them to have a better understanding of the existing education program structure for undergraduate health professionals in the country. Hence, it was anticipated that they could provide rich data about the phenomenon under study. Heads of departments and deans of nursing, midwifery, pharmacy, and medical programs with work experience of 1 year were also recruited into the study.

3.4.2 Exclusion Criteria.

Faculty members who were not Malawian nationals did not have a master's degree and had taught for less than 2 years were excluded from the study. Deans and heads of departments who had worked for less than 1 year in their respective positions were not recruited into the study.

3.5 Data Collection Instruments and Procedures

Data collection instruments were developed by the researcher. A conceptual framework for IPE guided the development of the data collection instruments. A focus group interview guide (See Appendix VI) was developed to collect data from faculty members and a semi-structured interview guide (See Appendix VII) was developed to collect data from deans and heads of departments. The researcher pre-tested the data collection instruments at KCN. Pre-testing the data collection instruments before the actual data collection was important as it assisted the researcher to assess the clarity of some words and evaluate the content in the interview guides. According to Polit and Beck (2012) pretesting a data, collection package serves many purposes. The purposes include the following: to see how much time it takes to administer the entire instrument package; to identify parts of the instruments package that are difficult for participants to read or understand or that may have been misinterpreted; to identify questions that participants find questionable or offensive; to assess whether the

sequencing of questions or instruments is sensible; to evaluate training needs for data collectors, and to determine if the measures yield data with sufficient variability. The information helped the researcher to revise and improve the guide. Pre-testing also enabled the researcher to get familiar with the interview guide before embarking on data collection (Holloway & Wheeler, 2010; Polit & Beck, 2012). Following the pre-testing, the interview guides were adjusted and amended accordingly. This helped the researcher to be familiar with the guides and contents.

Introductory letters, describing the purpose of the study and requesting permission to conduct the study were given to deans of various faculties (See Appendix II and III). After obtaining permission from the deans, individual participants through their heads of departments were approached to seek their permission to participate in the study (See Appendix I). Participants were invited to participate in the study by face-to-face, phone, or e-mail contact to ask if they were willing to participate in the study. The participants were also asked if they had participated in facilitating IPE learning activities before. Only those who said they had no experience were asked to participate in the study. Once the participant agreed to take part in the study, an appointment to conduct in-depth individual interviews was scheduled. It was then arranged with participants so that data were collected at the most convenient time for both the researcher and participants. Department heads helped to recruit participants for focus group interviews and to arrange the venues for the interviews. Data were collected over 4 months.

The primary sources of data collection qualitative descriptive research are often semi-structured in-depth interviews, but other methods are not discounted (Bradshaw et al., 2017; Creswell, 2013; Polit & Beck, 2012). Additionally, Bradshaw et al (2017) stated that other data collection methods in qualitative descriptive designs can include focus groups, observation, or document review. However, the use of interviews enables the researcher to

explore issues with participants through encouraging depth and rigor, which facilitates the emergence of new concepts or issues (Doody & Noonan, 2013). Semi-structured interviews are the most common type of interviews used in qualitative descriptive designs and involve the use of predetermined questions where the researcher is free to seek clarification (Holloway & Wheeler, 2010). An interview is described as a dialogue that is conducted one-way, provides information for the researcher, is based on the researcher's agenda, leads to the researcher's interpretations, and contains counter control elements that holds information (Creswell, 2013). A total of 16 semi-structured individual interviews were conducted, using a semi-structured interview guide to collect data from deans and heads of departments (See Appendix VII). Each participant had one interview lasting 40 to 50 minutes. Prior to the interview, the researcher developed and established rapport with the participant by stating the purpose of the interview, actively listening, and restating the interviewee's comments. The interview guide included semi-structured questions on perceptions towards IPE, IPE readiness characteristics, appropriate skills for IPE, perceived peer and self-readiness for IPE, and institutional support for IPE. The interview began with an ice breaker question asking participants to describe their current role in education and what they knew about IPE and then proceeded with the following questions: describe their views about IPE in relation to the training of undergraduate health professionals in Malawi; what characteristics should a faculty member have to be considered ready for IPE? What are your views about the skills of faculty in your department in relation to using IPE approaches in the training of undergraduate health professionals? How do you view the existing infrastructure (classroom space, IT systems) at the college regarding IPE training of the undergraduate health professionals? How do you view management's commitment for IPE in relation to the training of undergraduate health professionals? The use of the interviewing method of data collection allowed the researcher, to probe the individual participants' responses, observe

their reactions and decrease the possibility of vague answers. The other advantages of this technique are that it allows the researcher to encourage the participants to talk freely about all the topics on the guide and to tell stories in their own words. Thus the technique also ensures that the researcher will obtain all the information required and it gives the people the freedom to provide as many illustrations and explanations as they wish (Polit & Beck, 2012).

Focus group interview sessions are another method used by researchers to collect data in many qualitative research traditions (Creswell, 2013; Lincoln & Guba, 1985; Polit & Beck, 2012). To elicit ideas and thoughts about attributes, knowledge, and skills for implementing IPE approaches, focus group interviews were conducted with faculty using a focus group interview guide (See Appendix VI). Initially, four focus group discussions, two at each institution each comprising six faculty members were planned to be conducted to produce valid results. However, the researcher only managed to conduct one focus group discussion at COM due to some logistical challenges with the Faculty of Medicine. In total, three focus group interviews were conducted; (one at KCN Lilongwe; one at KCN Blantyre, and one at Pharmacy COM Blantyre). The focus group discussions conducted at KCN Blantyre, and Pharmacy COM Blantyre had six participants each while the one at KCN Lilongwe campus had eight participants. Each focus group lasted about 60-80 minutes. participants were asked to say what they knew about IPE to explore the participants' knowledge of IPE, and IPE principles; participants were asked to say their views about IPE in relation to the undergraduate training of health professionals in Malawi to understand their attitudes and beliefs about IPE and value for IPE; Participants were also asked to identify characteristics that they perceived a faculty member should have to be considered ready for IPE; what approaches they would use to teach when implementing IPE; whether they had the skills to enable them to implement IPE initiatives; what were their views regarding COM and KCN to implement IPE considering the existing infrastructure support, management support, and IT

systems support. The major advantage of this data collection method is that it is efficient in that it allows the researcher to obtain the perspectives of many people in a short time. Moreover, focus groups capitalize on the fact that members react to what is being said by others, thereby potentially leading to deeper expressions of opinions. Focus group interviews are also usually stimulating to respondents. In addition, to focus group interviews, in-depth interviews were conducted with two faculty members from the Faculty of Medicine. The individual and focus group interview guides were both conducted in English. The researcher audio-recorded all the interview sessions and wrote detailed field notes during each interview in order not to miss any important information and to capture nonverbal communication (e.g., gestures and body language and/or emphasize a particular point). According to Polit and Beck (2012) audiotaped interviews and field notes are major data sources in qualitative studies. Using multiple methods of data collection and sources of information, the researcher was able to obtain a rich description of the faculty perceptions of IPE readiness from a diverse group of participants.

3.6 Data Management

The researcher kept safely both electronic and physical data resources throughout the data collection and analysis period to control its access by unauthorized persons. Interviews were transcribed in a private room by the researcher and unauthorized people were not allowed to listen to the transcriptions. All the raw data were that included notes from interviews, the researcher's written thoughts, transcriptions, and documents were placed in a study database. This allowed the researcher to return to the raw data for continuous review or additional analysis (Creswell, 2013). Additionally, data were kept in the electronic files and flash disks saved to the cloud and Google drive to avoid losing it. To ensure the safety of the data, a password only known by the researcher was used to access the files. Flash disks were locked up in a cabinet to ensure confidentiality and privacy. At the end of each day, all the

transcripts and field notes were revisited to avoid losing valuable information and ensure accuracy.

3.7 Data Analysis

Data analysis was done simultaneously with data collection where both influence each other; the ongoing findings affect what types of data are collected and how they are collected (Lincoln & Guba, 1985). The researcher transcribed the interviews verbatim immediately following the interviews. For example, any emerging patterns from the data analysis can direct the researcher on the type of information that is needed to be collected (Vaismoradi, Turunen, & Bondas, 2013). The researcher modified some questions in the interview guide based on what emerged from the initial data analysis to collect the desired information. The purpose of data analysis is to organize, provide structure to, and elicit meaning from data (Polit & Beck, 2012). The process of data analysis involves organizing the data, conducting a preliminary reading through the database, coding and organizing themes, representing the data, and forming an interpretation and themes (Creswell, 2013). Qualitative content analysis was used to analyze data from both in-depth interviews and focus group interviews. NVivo 11, a computer-assisted qualitative data analysis software (CAQDAS) was used to support and facilitate the data analysis process. The software enabled the researcher to find patterns in the data and explore hunches. Additionally, the researcher was able to display and analyze relationships in the data (Polit & Beck, 2012).

3.7.1 Data Analysis Process

Polit and Beck (2012) noted that qualitative data analysis is a process of fitting data together, making it invisible obvious, linking and attributing consequences to antecedents. It is further described as a process of conjecture and verification, of correction and modification, of suggestion and defense. According to Creswell (2013), the process of qualitative data analysis comprises steps that are interconnected and form a spiral of activities related to the

analysis and representation of the data. The activities involve organizing the data, conducting a preliminary read-through of the database, coding and organizing themes, representing the data, and forming an interpretation and themes.

Qualitative content analysis was used to analyze data from both in-depth and focus group interviews. Vaismoradi et al. (2013) described content analysis as a systematic coding and categorizing approach used for exploring large amounts of textual information unobstructively to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication. Furthermore, this technique is reflective and interactive and allows the researcher to continuously modify how the data were treated to accommodate the emerging data and new insights about those data (Magilvy & Thomas, 2009; Vaismoradi et al., 2013). Furthermore, this research method of analysis provides a systematic and objective means to make valid inferences from verbal, visual, and written data to describe and quantify specific phenomena. The goal of content analysis is to link the results to their context or the environment in which they were produced. Furthermore, it is a research method, which provides a systematic and objective means to make valid inferences from verbal, visual, and written data to describe and quantify specific phenomena (Bengtsson, 2016). Krippendorff (2004) defined content analysis as “a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use” (p.18). Using this data analysis technique, the researcher presents data in words and themes which makes it possible to draw some interpretation of the findings.

According to Bengtsson (2016), there are two forms of qualitative content analysis and these are manifest analysis and latent analysis. A manifest analysis allows the researcher to describe what the informants said, using the word themselves, to stay very close to the text, and describe the visible in the text (Bengtsson, 2016; Elo et al., 2014; Vaismoradi et al., 2013). In contrast, latent analysis is extended to an interpretive level in which the researcher

seeks to find the underlying meaning of the text. For this study, the researcher specifically, used manifest analysis because the study used an exploratory descriptive study to explore and build an understanding of faculty perceptions of their readiness for IPE. Content analysis entails a four-stage process which comprises the decontextualization, recontextualization, categorization, and compilation stages. These main stages of analysis are the same for both manifest and latent content analysis. Each stage must be performed several times to the quality and trustworthiness of the analysis (Bengtsson, 2016). In the decontextualization stage, the researcher familiarizes herself or himself with the data by reading through the transcribed text to obtain the sense of the whole, before it can be broken down into smaller meaning units. According to Bengtsson (2016), a meaning unit is the smallest unit that contains some of the insights that the researcher needs. It is the arrangement of sentences or paragraphs containing aspects related to each other answering the question set out in the aim. Each identified meaning unit is labeled with a code, and this is referred to as the open coding process. Assigning codes to each meaning unit helps the researcher to identify concepts around which the data can be assembled into blocks and patterns. Codes can either be inductively or deductively generated depending on the study design. The second stage which is called recontextualisation requires the researcher to check whether all aspects of the content have been covered in relation to the aim. This is done following the identification of the meaning unit. The researcher re-reads original texts alongside the final lists of meaning units. Different shades of colors are used to distinguish each meaning unit in the original transcript. During this stage the researcher stays close to the data however, it is important that he or she must allow let go of the unimportant information that does not correspond to the aim of the study. The third stage is the categorization process. In the categorization process, the researcher identifies themes and categories. However, the researcher should condense all extended meaning units before he/she can begin to create categories. According to Bengtsson

(2016), the process of condensation is most needed when data are based on interviews and when a latent content analysis is to be carried out. All categories must be rooted in the data, from which they rise. The compilation is the fourth stage in the qualitative content analysis process and occurs once the categories have been established. The compilation stage involves the analysis and writing up process. In a manifest analysis, the researcher often uses the informants' words, and he/she remains aware of the need to refer back to the original text. This makes it possible for the researcher to stay closer to the original meanings and texts (Burnard, 1991). In contrast, a latent analysis requires the researcher to immerse himself/herself to some extent in the data to identify hidden meanings in the text. Regardless of the form of the analysis, the researcher can present a summary of themes, categories/sub-themes and sub-categories/sub-headings as a table to allow the reader to get a quick overview of the results. As a final check it is important that the researcher must consider how the new findings correspond to the literature and whether or not the finding is reasonable (Bengtsson, 2016; Burnard, 1991).

Content analysis technique specifically manifest analysis was used to analyze the data (Bengtsson, 2016). Data analysis was done following a step-by-step approach as guided by (Krippendorff, 2004). The first step involved listening to the audiotapes and verbatim transcription of each interview. The researcher transcribed the data by listening to the audiotapes, where each interview was transcribed word for word. Then, she familiarized herself thoroughly with the data by repeatedly reading and examining each transcript text and listening to audio recordings to identify expressions that reflect the fundamental meaning of the text to the sense of the whole (Bengtsson, 2016; Vaismoradi et al., 2013). Line by line reading was done and the data were then broken down into smaller meaning units. This was done to extract phrases and sentences that directly related to faculty perceptions of IPE and to identify prominent issues emerging from the participants' narratives. Some notes were written

down to describe the participants' narratives and isolate meaning from them. According to Bengtsson (2016), a meaning unit is the smallest unit that contains some of the insights the researcher needs. This was followed by the open coding process, where each identified meaning unit was labeled with appropriate code. The codes were generated inductively and clustered under the subcategories and categories according to their similarities. Using the codes, the researcher was able to identify concepts around which data were assembled into blocks and patterns (Polit & Beck, 2012; Vaismoradi et al., 2013). This was a rigorous and reflective process of going over every word, phrase, sentence, and paragraph in the text to elicit participants' meanings. The coding process was performed repeatedly, starting on different pages of the text each time to increase the stability and reliability (Bengtsson, 2016).

The researcher then checked whether all aspects of the content had been covered in relation to the purpose of the study. This was done by re-reading the original text alongside the final list of meaning units. Different colors were used to highlight and distinguish each meaning unit in the original text and the coded material was condensed into concept domains to further extract the sense of the data. Bengtsson (2016) and Vaismoradi et al. (2013) explained that the process of condensation is often needed when data are based on interviews. Categories, themes, patterns, and relationships were then derived from the codes to provide meaning to the codes (Polit & Beck, 2012; Vaismoradi et al., 2013). A summary of themes and sub-themes has been presented in a table to find an overview of the findings.

3.8. Trustworthiness

Trustworthiness refers to the quality criteria in qualitative research (Lincoln & Guba, 1985). The goal of rigor in qualitative research is to accurately represent study participants' experiences or narratives (Streubert & Carpenter, 2011). In this study, trustworthiness was enhanced using the quality criteria identified by (Lincoln & Guba, 1985), which are credibility, dependability, confirmability and transferability, reflexivity, and authenticity.

3.8.1 Credibility

Credibility refers to the study process, that is to is, to establish how the data and the analysis procedures are carried out and to ensure that no relevant data have been excluded (Bengtsson, 2016). Korstjens and Moser (2018) described credibility as the confidence that can be placed in the truth of the research findings. Furthermore, credibility establishes whether the research findings represent plausible drawn from participants' original data and is a correct interpretation of the participants' original views. Several strategies are used to establish credibility, and these include prolonged engagement, persistent observation, triangulation, and member check. For this study credibility was ensured through respondent validation (member check) and triangulation. Member check involves feeding back data, analytical categories, interpretations, and conclusions to members of those groups from whom the data were originally obtained. Respondent validation strengthens the data particularly because the researcher and the respondents look at the data with different eyes (Korstjens & Moser, 2018; Lincoln & Guba, 1985). The researcher presented research findings to some participants who participated in the interviews and focus group discussions for confirmation that the investigator correctly understood what the participants said. According to Korstjens and Moser (2018) respondent validation also provides to the people who participated in the interviews and focus group discussions to correct the interpretation and challenge what they perceived to be wrong interpretations. Anney (2014) emphasized that member checks are considered the single most important provision that can be made to bolster a study's credibility.

Additionally, to establish credibility, the researcher approached each person to ask them if they were willing to participate in the study and they were also allowed to refuse to participate in the project if they wished to do so. This ensured that the data collection sessions involved those who were genuinely willing to take part and to offer data freely. Member

checking was also done by probing for clarity during the interviews. Furthermore, credibility was enhanced through the inclusion of excerpts from participants' verbatim narratives. Verbatim quotes offer readers a greater depth of understanding, provide evidence for the interpretations made, and enable readers to make judgments about the fairness and accuracy of the analysis (Lincoln & Guba, 1985). Triangulation was another strategy that the research used to ensure credibility. Triangulation aims to enhance the process of qualitative research by using multiple approaches. Literature indicates three forms of triangulation which are; data triangulation, investigator triangulation, and method triangulation (Korstjens & Moser, 2018; Lincoln & Guba, 1985). The researcher used data triangulation and method triangulation to further establish credibility. Data triangulation refers to using multiple data sources in time (gathering data at different times of the day or at different times in a year); space (collecting data on the same phenomenon in multiple sites or test for cross-site constituency) and person (gathering data from different types or level of people, for example, individuals, family members, and clinicians). The researcher secured data triangulation by collecting data from faculty members, heads of departments, and deans of nursing, midwifery, pharmacy, and medicine undergraduate programs from three campuses (two at KCN and one at COM), In addition, data were collected on different days and at different times of the day. The researcher also used methodological triangulation by gathering data utilizing different data collection methods that included in-depth interviews, focus group discussions, and field notes.

Furthermore, the researcher conducted frequent debriefing sessions with the supervisors and presented the research work to content experts and peers for review. According to (Anney, 2014), peer scrutiny of the research project by colleagues, peers, and academics provides feedback to the researcher that may enable the researcher to refine his or her methods, develop a greater explanation of the research design and strengthen his or her arguments in light of the comments made throughout the project. Furthermore, peer

debriefing helps to manage interviewer bias and to assist with conceptual clarity during data analysis and manuscript writing. Trustworthiness was further achieved through the inclusion of excerpts from participants' verbatim narratives. This enhanced the credibility of the findings because according to Lincoln and Guba (1985), verbatim quotes offer readers a greater depth of understanding, provide evidence for the interpretation made, and enable readers to make judgments about the fairness and accuracy of the analysis.

3.8.2 Dependability

Dependability includes the aspects of consistency that is the stability of findings over time. Dependability involves participants' evaluation of the findings, interpretation, and recommendations of the study such that all are supported by the data as received from the participants of the study. The researcher needs to check whether the analysis process is in line with the accepted standards for a particular design while focusing on the interpretation process embedded in the analysis process. The interpretation of the data should be grounded in the data and not be based on the researcher's own particular preferences and viewpoints. (Anney, 2014; Korstjens & Moser, 2018; Lincoln & Guba, 1985). The researcher ensured dependability by keeping an audit trail. An auditing approach was followed whereby the researcher kept complete records of all phases of the research process such as the research design and its implementation, the operational detail of data gathering, and writing field notes. Anney (2014) stated that to address the dependability issue more directly, the processes within the study should be reported in detail, to enable a future researcher to repeat the work, if not necessarily to gain the same results. According to Korstjens and Moser (2018), an audit trail refers to transparently describing the research steps taken from the start of the research project to the development and reporting of the findings. To establish dependability through an audit trail, the researcher is responsible for providing a complete set of notes on decisions made during the research process, research team meetings, reflective thoughts, sampling,

research materials adopted, the emergence of the findings, and information about the data management. The audit trail is important because it enables the auditor to study the transparency of the research path.

3.8.3 Confirmability

Confirmability refers to the degree to which the findings of the research study could be confirmed by other researchers. It is concerned with establishing that data and interpretation of the findings are not fabrications of the inquirer's imagination but derived from the data. The strategy needed to ensure confirmability is an audit trail. Lincoln and Guba (1985) suggest a link between strategies used to ensure dependability and confirmability therefore, the same strategies were applied, and they increased the reliability of the study findings. To establish confirmability, the researcher kept records of the raw data: field notes, transcripts, and a reflexive diary to enable readers to make an audit trail of all the decisions taken during the research process. All the decisions agreed upon during the peer debriefing with the supervisors were documented. An audit trail was developed to allow an observer to trace the course of the research step-by-step through the decisions made and procedures described (Anney, 2014; Bryman, 2012). Additionally, a reflexive journal was kept that included details of all the events that happened in the field and the researcher's reflections in relation to the study. Through the reflective journal, it was possible to assess the influence the researcher's background, personal history, perceptions, and interests had on the research process to ensure objectivity and rule out any bias.

3.8.4 Transferability

Transferability refers to the degree to which the findings of qualitative research can be transferred to other contexts or settings with other respondents. It concerns mainly the aspect of applicability. The reader makes the transferability and not the researcher because it's the reader who knows the specific settings (Korstjens & Moser, 2018; Lincoln & Guba, 1985). The researcher facilitates the transferability judgment by a potential user through the thick description and purposeful sampling (Anney, 2014). Lincoln and Guba (1985) indicated that to ensure transferability, thick descriptive narratives must be provided for readers to judge the applicability of the findings in other settings. Thick description involves describing, not just

the behavior and experiences of the participants, but their context as well, so that the behavior and experiences become meaningful to the outsider. A detailed explanation of all the research processes has been provided in the report, from data collection, the context of the study to the production of the final report. The thick description will help other researchers to replicate the study with similar conditions in other settings. The use of purposive sampling is another strategy that the researcher used to facilitate transferability. Purposive sampling helps the researcher to focus only on participants who are particularly knowledgeable about the phenomena being studied, hence it provides greater in-depth findings (Holloway & Wheeler, 2010).

3.8.5 Authenticity

To ensure authenticity, the researcher made sure that all participants were treated with fairness. This was done through seeking informed consent from the participants, member checking and prolonged engagement, reflexivity, and peer debriefing. In member checking, the researcher shared field notes and interview transcripts with the participants to confirm the accuracy of the information. As for prolonged engagement, the researcher closely interacted with the participants expended the necessary effort to build an understanding of their perspectives regarding the phenomenon under study and discovered the important issues in the research context. The researcher also kept a reflective methodological journal to address personal beliefs and assumptions that could impact the study. Furthermore, the researcher discussed the study methodology with colleagues who were knowledgeable about the research process to prevent any bias. Additionally, the findings were accurately interpreted and widely disseminated by providing copies to the key stakeholders and interested groups (Holloway & Wheeler, 2010).

3.8.6. Reflexivity

Reflexivity is described as the process of critical self-reflection about oneself as a researcher (own biases, preferences, preconceptions) and the research relationship (relationship to the respondent, and how the relationship affects participant's answers to questions). The qualitative researcher there is need to acknowledge the importance of being self-aware and reflexive about his/her role in the process of collecting, analyzing, and interpreting the data and in the preconceived assumptions, he/she brings to the research (Korstjens & Moser, 2018; Lincoln & Guba, 1985). The researcher examines one's conceptual lens, explicit and implicit assumptions, preconceptions, and values, and how these affect research decisions in all phases of qualitative studies. To achieve reflexivity the researcher kept a diary and supplemented all the interviews, focus group discussions, and analytical data with reflexive notes. The reflexive notes for an interview described the whole research process and this was actively utilized during the process of analysis. The researcher documented all the identified themes and all the challenges the researcher encountered and what influenced her thoughts and feelings.

3.9 Presentation of Findings

Key findings under each main theme using appropriate verbatim quotes to support the themes were presented and only those claims supported by data were made.

3.10 Dissemination of Findings

The researcher planned to disseminate the research findings through research reports, peer-review journals, and policy briefs. Research reports were presented to the institutions participating in the study. The findings were also disseminated through conference presentations to relevant stakeholders and interested parties. Furthermore, the researcher conducted policy briefs to present the findings and recommendations of the study to policymakers and lobbyists.

3.11 Ethical Considerations

The researcher sought approval of the research proposal from the College of Medicine Research and Ethics Committee (COMREC) to conduct the study (See Appendix VIII). Permission to conduct the study was also obtained from the two institutions' management where the study was conducted (See Appendix IV and V). Informed consent from the participants was obtained after giving them the participants' information sheet. The information sheet fully described the nature of the study, the participants' rights to refuse participation without negative repercussions, the researcher's responsibilities, and the likely risks associated with participating in the study (See Appendix I). The participants read the information and after they understood and agreed with it signed on the consent form. Furthermore, to ensure confidentiality, the researcher pledged participants that any information participants provided would be publicly reported in a manner that does not identify them. To protect the participants' privacy, the researcher assigned each individual an identification number and pseudonym. In addition, all identifiable information that surfaced during the interviews of focus group discussions was changed (e.g., names, titles that could reveal the identity of a participant). The researcher assured the participants that the information collected from the interviews was to be accessible only to people involved in the study and the research supervisors. The researcher's name and contact information were provided in case there was a need for participants to ask questions or any other problems concerning the study. These procedures ensured that the participants' rights were upheld.

Chapter 4

4.0 Findings

4.1 Introduction

This chapter presents key findings of the qualitative study conducted to explore faculty readiness for interprofessional education (IPE) in the training of undergraduate health professionals at the KCN and COM in Malawi. Study participants included faculty members, deans, and heads of departments who were involved in the teaching of undergraduate nursing, midwifery, pharmacy, and medical students from KCN, and COM. Data were collected through semi-structured individual interviews and focus group interviews to elicit views and perceptions about individual and institutional readiness and support for IPE.

A total of 36 faculty members participated in the study. Key informant interviews were conducted with 16 deans of faculties and heads of departments. Focus group discussions were held with faculty members from the Pharmacy Department at the College of Medicine, faculties of Nursing and Midwifery, Neonatal and Reproductive Health Studies at Kamuzu College of Nursing. The researcher had planned to conduct four focus group discussions, one from KCN in Lilongwe, one from KCN in Blantyre, one from the pharmacy in Blantyre at COM, and one from medicine at COM in Blantyre. However, the researcher faced some challenges and did not manage to conduct a focus group discussion with faculty from the Faculty of Medicine. Thus, three focus group interviews were conducted, one at KCN Lilongwe, one at KCN Blantyre, and one at Pharmacy COM Blantyre. The focus group discussions conducted at KCN Blantyre, and Pharmacy COM Blantyre had six participants each while the one at KCN Lilongwe campus had eight participants. Additionally, in-depth interviews were conducted with two faculty members from the Faculty of Medicine. Qualitative content data analysis using the inductive approach was used to analyze the data. Specific objectives of the study were to describe faculty perceptions of IPE in the training of

undergraduate health professionals; describe faculty perceptions about their readiness attributes for IPE in the training of undergraduate health professionals at KCN and COM; determine faculty perceptions about their knowledge and skills for IPE in the training of undergraduate health professionals at KCN and COM; analyze faculty perceptions about institutional support for IPE in the training of undergraduate health professionals at KCN and COM.

4.2 Participant Demographic Characteristics

This section presents information about participants' demographic characteristics obtained through questions in the demographic sections of the interview guides. These included participants' professional domain, gender, and work experience. A total of 36 faculty members involved in teaching undergraduate health professionals at KCN and COM participated in the study. Their demographic and professional characteristics are presented in Tables one, two, and three.

4.2.1 Participants' Profession and Gender

The participants' profession and gender are presented in Table 1.

Table 1: Participants' Profession and Gender

Professional Domain	Gender		Total
	Female	Male	
Medicine	1	3	4
Nursing	12	3	15
Nursing/Midwifery	9	0	9
Pharmacy	4	4	8
Total	26	10	36

The findings show that most of the participants were nurses. Overall, there was a gender imbalance in favor of females as compared to males.

4.2.2 Participants' Work Experience in Higher Education

Participants' work experience in higher education is shown in Table 2.

Table 2: Participants' Work Experience in Higher Education

Years of Work Experience in Higher Education	Number of participants
1-3	2
4-10	14
11-20	17
>20	3
Total	36

The findings presented in Table 2 show that the majority of the participants had more than 10 years of work experience in higher education.

4.2.3 Participants' Positions by Professional Discipline

Participants' positions by their professional discipline are shown in Table 3

Table 3: Participants' Positions by Professional Discipline

Professional Domain	Position		Total Number
	Dean	Head of Department	
Medicine	1	1 (Deputy Head)	2
Nursing	3	6	9
Midwifery	1	2	3
Pharmacy	1	1	2

Table 3 shows findings from in-depth interviews that were conducted to collect information from 6 deans and 10 heads of departments. The majority of the interview participants were from the Faculty of Nursing because this faculty has more departments than the others.

4.3 Presentation of Key Themes

Key themes and subthemes are shown in Table 4.

Table 4: Themes and Subthemes

Themes	Subthemes
Perceptions of IPE	Understanding of the IPE Concept Shared learning/learning together Sharing resources Viewing IPE as a new concept Collaborative teaching Continuous professional development Awareness of existing IPE practices Perceived Benefits of IPE Benefits to students Benefits to institution/faculty Benefits to patients Perceived Challenges to IPE Perceived logistics challenges Lack of faculty preparation Challenges related to professional culture Challenges related to attitudes
Perceived Readiness Characteristics for IPE	Perceived Individual Readiness Characteristics for IPE Personality Readiness Characteristics Professional Readiness Characteristics Academic Readiness Characteristics Perceived Self-Readiness Perceived Peer-Readiness Perceived Institutional Readiness for IPE Classroom, Skills, and Computer Laboratory Space Perceived Management Support for IPE Training in IPE IPE Policy IPE Integration in Curricula
Perceived Needed Skills for IPE	Inter-personal and communication skills Teaching/facilitation skills Information and technology (IT) skills Clinical skills

Proposed Strategies for Implementing IPE

Promoting an institutional and individual shift of mind-set

Thorough planning

Orientating and training of faculty

Sensitization of both students and faculty
Identifying ways of sourcing funds to support IPE initiatives
Seeking views from major stakeholders

4.3.1 Perceptions of IPE

Almost all participants perceived IPE to be a very important and feasible approach in improving education for health professionals at the undergraduate level. Overall, they expressed a positive attitude towards IPE. One participant commented:

“I think this is something that is workable, and it can be done, because, for undergraduate students, they are just getting into the profession,” (P 9).

However, in contrast to the views of the other participants, one participant did not view IPE as a viable strategy in the education of health professionals at the undergraduate level despite agreeing that to some extent; IPE could remove the challenges that are associated with the current uniprofessional education approach. This participant commented:

“I’m not very sure if this is a viable strategy, I can anticipate some struggles between the two professions studying together because already if you even have the nursing group alone, sometimes they scold each other, already amongst themselves,” (Key informant 9).

Three sub-themes were identified under the Perceptions of IPE theme: Understanding of the IPE Concept, Perceived Benefits of IPE and Perceived Challenges to IPE.

4.3.1.1 Understanding of IPE concept

Participants were asked to describe what they knew and understood about IPE and their views regarding IPE in relation to the undergraduate training of health professionals in Malawi to determine their understanding and appreciation of the concept. This information would also enable the researcher to find out if there was shared understanding and appreciation of the concept among the participants and how definitions and understanding might differ within and between the professional groups. Various definitions and descriptions of IPE and perceptions towards IPE emerged from the data that the researcher obtained from focus group discussions and in-depth interviews. However, generally, the findings did not show any differences between focus group discussions and those from in-depth interviews with deans and heads of departments in the way the participants perceived IPE. Participants identified different concepts in describing their perceptions of IPE including (a) Shared learning/learning together; (b) Sharing of resources; (c) IPE as a new concept; (d) Collaborative teaching; (e) Preparing students for teamwork; (f) Continuing professional development; and (g) Awareness of existing IPE practices.

4.3.1.1.1 Shared learning/learning together

A common thread uniting several participants' responses both from focus group discussions and from in-depth interviews regarding what they knew about IPE centered on the notion of shared learning. Shared learning was described as a situation whereby students from different disciplines of the health professions come together, interact, learn together, from and about each other. One participant described IPE as:

“Interprofessional education; my understanding is that different groups of students from different disciplines learn together, or they interact during their education period. The basic sciences in these programs are the same so students in these programs learn together and they interact during their education,” (Key informant 6).

Another participant commented that:

“I also want to add that I understand inter-professional education to mean different disciplines learning together about the care of the patient, thereafter, going together to the patient to render care” (P 1).

Participants further explained that students come together and sit in one classroom and are given instruction or content at the same time. As they interact, they learn to understand and appreciate each other’s roles and how to integrate the roles for the benefit of the patients they serve.

One participant referred to IPE as a multidisciplinary training of health professionals with a focus on some overlapping areas or courses that are crosscutting. Medicine, nursing, midwifery, pharmacy, physiotherapy, dentistry, and environmental health were the most common health disciplines mentioned that could be included in IPE. This is what the participant said:

“Probably, I would define interprofessional education as a multidisciplinary training of health professionals so you have different kinds of or different sectors of disciplines and they are being trained at the same time probably or generating knowledge or imparting knowledge to students with multidisciplinary kind of background; for example, you talk of the natural sciences, you talk of social sciences coming together and imparting .that knowledge to individuals; to the students who are in the health sector”(P 3).

Another participant commented that:

“It seems like people of different professions coming together in like gaining knowledge, or skills or whatever, doing it together, not unlike like saying these are only midwives or what but people from different professional backgrounds; am

thinking of nurses, clinical officers, doctors and may be a pharmacist, assistants, pharmacists or anybody related to that field, it could be also lab technicians; all these people may be theoretically, they could have the same lectures in one classroom” (P 9)

To describe shared learning further, participants referred to various settings in which IPE could be practiced. The classroom and clinical area where the two settings in which IPE could be practiced. This is what one participant said:

“It means in this inter-professional education we can always learn together and am thinking it goes beyond even classroom, it goes beyond the clinical setting; it goes beyond even the community but as long as it’s health professional; it means we can do it together because it’s inter-professional”(P 5).

Most participants also identified some common areas of content that the students could learn together. In this regard, participants explained that only those courses that cut across disciplines could be taught to students. These courses were basic sciences, language and communication, education, management and leadership, professionalism, and ethics. This is what this participant said:

“Inter-professional education I understand it also means that usually, the topics that are taught to these students from different disciplines should be the ones that are very common like the common problems that are usually found in the clinical area because they can learn together and it will help as they are applying their knowledge in the clinical area; because usually, the care that we give to clients is collaborative nature so those topics that are very common, interdisciplinary that cut across the disciplines are the ones that are usually done using inter-professional education, for instance, the basics, like the sciences and also the diseases, common illnesses, diseases-

communicable, non-communicable, all those can be taught together in inter-professional education”(P 5).

Another participant added that:

“Am I think we know from interacting with the health professionals as lecturers that they are certain areas which are common I think, such as sciences basic sciences, management education and am sure even other sciences that are specific to the different nursing or medical people but certainly the three that are the basic sciences, education and management could be examples where they could take part; they could all learn together” (P 2).

Some participants described IPE in terms of teaching, which involves lecturers from different disciplines teaching students that come from a different health discipline in a way that they will be working in teams. This is what one participant said:

“I understand it’s like, for example, we got nursing students, other lecturers from other disciplines can also come and teach them topics that they have specialized in, for example, we can have a radiography coming to teach nursing students in their class on issues to do with radiography and cover the nurses’ role and that specialty” (Key Informant 3).

Another participant commented that:

“I think inter-professional education is to do with the teaching of students in a way that they will be working in teams, like collaboration because we know as the health profession collaborate with one another when you are providing patient care so this is like, instead of teaching, the way we do it now in isolation, you want to like them to start interacting as students and how they collaborate when they are in the uh....in the clinical setting” (P2).

4.3.1.1.2 Sharing of resources

Some participants understood IPE as an approach that allows sharing of resources.

Resources such as faculty, learning materials classroom, and laboratory space are shared for

the teaching or/and learning process resulting in improved learning and saving of resources.

This is what one participant said:

“Interprofessional education, I might say it’s the collaborating, the teaching, or sharing of resources between professionals,” (Key informant 12).

4.3.1.1.3 IPE as a new concept

Although all participants managed to define IPE in the way they understood it, two participants openly indicated that IPE was a new concept and that what they knew about IPE was based on what they had heard or read somewhere. These are comments from two participants from KCN and COM:

“It’s something new to me so that’s all I would say even though it’s been happening but... but really someone talking about it, it’s the first time I’m hearing; I don’t know whether I have heard or read but what I know about interprofessional... It’s where professionals teach beyond their area of specialization. Just as an example a medical doctor teaching nurses, clinical officers, doctors, medical assistants,” (Key informant 7).

Another participant said:

“Of course, an area of interprofessional education is not very familiar to me but what I have heard so far is that it is that type of education which you provide to different types of professions; they come together, and they learn together various aspects,” (Key informant 9).

4.3.1.1.4 Collaborative teaching

Two participants understood IPE as a collaborative approach in teaching where there is sharing of material and human resources. In terms of human resources, they explained that lecturers from other disciplines or colleges could come and teach students topics in which they have specialized. For example, a faculty member from the COM can go and teach human anatomy and physiology at KCN. As regards material resources, chemistry, and/or skills, laboratories were suggested as areas that the institutions could share. One participant narrated that this could be one way of raising standards in the education of health care professionals.

This is what one participant from KCN said, citing his experiences from the past as an example:

“I might say it’s the collaborating in teaching, or sharing of resources between professionals, for example, we might use Malawi College of Health Sciences who are teaching clinical officers, they might come and help us teaching or I might go and teach at Malawi College of Health Sciences,” (Key informant 12)

One participant understood the concept of IPE as a method of teaching students from different disciplines, as a way of preparing them on how to work in teams and collaborate with other health professionals. Students learn together for a common cause or goal. This is what the participant said:

“Teaching students in a way that they will be working in teams, like collaboration instead of teaching, the way we do it now in isolation. You want them to start interacting as students and collaborate when they are in the clinical setting,” (P8).

Another participant remarked:

“When interprofessional education is started right from their training, they will grow up with that approach and with that attitude to working as a team and then it will also impact on the health care that is being rendered now,” (P 9).

4.3.1.1.5 Continuing professional development (CPD)

Two participants rather viewed IPE as being synonymous with Continuing Professional Development (CPD). Furthermore, one participant had a distinct view of IPE by likening it to short courses or on-the-job training. The participant commented:

“At the same time, you can also have short courses, where you are bringing them together or just on job training; or CPDs learning sessions put them in the same boat,” (Key informant 5).

4.3.1.1.6 Awareness of existing IPE practices

To gain more information regarding participants’ understanding of IPE, participants were asked if they were aware of any existing IPE practices. A large number of participants said that they were not aware of any IPE practices. Several participants stated that there was some IPE happening, but that it was not formalized. There were differing views regarding the level at which IPE practices were happening in the two institutions. For COM, participants narrated that although there was some form of IPE that was done informally within their college, it was only done in the first year of the undergraduate programs. Participants further explained that undergraduate students from physiotherapy, pharmacy, and medical laboratory science disciplines learn together as a group only in year one. The courses that they learn together are mostly the basic sciences.

“We have a group that does that in the first year of study, so we have physiotherapy, pharmacy, and medical lab sciences; only happens in their first year,” (Key informant 2).

Participants from KCN stated that they were not aware of any IPE activities at the undergraduate level, but there were some post-graduate programs where the IPE approach was formalized. The Masters in Reproductive Health and PhD in Interprofessional Health Care programs were the examples they gave. It was clear from the participants that there were no interprofessional activities involving the two programs. This is what one participant said:

“The current practice is happening here and there, it’s not formalized, and what is happening is that most of the time we see doctors coming to teach our students,

but we don't see lecturers from KCN going to teach at College of Medicine; that doesn't happen. So, it should be both sides it's still one-sided; it's still showing that we think a doctor is superior," (P10).

Participants misunderstood the concept of IPE by equating it to the teaching of basic sciences and other foundational courses to first-year students from different programs especially at the College of Medicine. They also viewed IPE as meaning that faculty members from KCN or COM teach part-time at other institutions. These are comments from two participants regarding existing IPE practices:

"Invaluably I think IPE approaches are used but I think the only problem is that it's not formal, it's not stream-lined; there are no clear-cut expectations or what people are supposed to do; there is no sort of common ground on what really is expected for people to do"(Key informant 15).

"Currently we may not vividly say we are doing it at undergraduate level but possibly at post graduate level whereby we are looking at PhDs like for KCN we have that PhD but for undergraduate programs, it's still a challenge, I think it's something that we need to start" (Key informant 5).

4.3.1.2 Perceived IPE Benefits

Participants perceived IPE as being beneficial in several ways. The value of IPE was translated through the positive outcomes that would come with its implementation.

Participants stated that IPE would bring positive outcomes in different areas. The researcher observed that the perceived benefits mainly related to students, faculty and institutions, and patients. These positive outcomes related to faculty and students will translate to improved patient care in different health care settings. Perceived benefits generally focused on promoting collaboration/teamwork, cost-effectiveness; clarifying and understanding other

professional roles; improving the quality of patient care, teaching, and student learning. Furthermore, IPE was perceived as a mechanism for breaking professional barriers, conflict resolution; facilitating good relationships, promoting students' motivation; and reducing workload.

4.3.1.2.1 Perceived IPE benefits to students

Regarding benefits to students, some participants perceived IPE as a way of preparing students for teamwork and collaborative practice. They stated that as students learn together, they grow together, learn from each other and learn how to relate to each other as professionals. This would help to enrich their learning experiences and result in the development of cordial relationships, which is a basis for collaborative practice. Additionally, participants explained that IPE was important since it would assist students to develop self-confidence as they would be learning together right from the start and would grow together along with their educational processes. One participant remarked:

“So, I feel that it’s very important that we start grooming them from the time that they are in college. One advantage is it makes them to at least find life easier: interacting with the different professions,” (Key informant 3).

Some participants also perceived that IPE would help to clarify and facilitate understanding of the roles of other health professionals in the inter-disciplinary health care team and their contribution to the provision of holistic patient care. In this regard, IPE was perceived as a catalyst for developing skills and behaviors for collaborative practice. Additionally, some participants stated that IPE would facilitate the integration of students from various programs and help to reduce the duplication of courses in various programs, which is common with the current silo educational approaches. Furthermore, it was perceived

that the integration of students would also instill confidence in some cadres of students, such as pharmacy and nursing.

Several participants also shared that student would benefit in the sense that IPE would promote respect for each other and bring attitude change since they would learn under one umbrella. Additionally, IPE would inculcate values of caring in the students.

This is what one participant commented:

“I believe that when we learn together it also does promote respect for each other sometimes; I see that sometimes there’s a tendency to underrate one another and when we learn together, it (IPE) gives a feeling that we are at par because none is really senior to the other. We have complementary roles none is senior to the other,” (Key informant10).

Several participants conveyed a view of IPE as a powerful tool for improving communication skills and relationships among students as well as for motivating students. Furthermore, participants perceived that IPE would promote attitude change in students and would be a mechanism for resolving conflicts that are associated with the current silo educational approaches. One participant remarked:

“I think it can promote their communication skills and build their confidence, promote teamwork and it can also improve quality of care and it will even improve communication between the two professionals; they will look at each other as colleagues rather than separate professionals,” (P 6).

She further commented:

“Sometimes maybe students from nursing might look at the doctors as superior, but if they are learning together, it might change their attitude because they work

as a team and they will be doing most of the things together, so they will consider each other as colleagues rather than the top-bottom relationship,”(P 6).

4.3.1.2.2 Perceived IPE benefits to the institutions and faculty

A great number of participants perceived IPE as a catalyst for achieving cost-effectiveness in the institutions through sharing of resources. They explained that using IPE approaches would allow institutions to share faculty, material resources, and infrastructures such as laboratories and lecture rooms. This would help institutions to save on time and finances. One participant said:

“Another advantage is it is also going to save on faculty members, because for example, if that module is circulating to say this time, we have it in the curriculum; College of Medicine you are going to offer that module or you are going to assist in teaching that module, it means KCN that time they will be doing something else; we can share experiences. In the clinical aspect, we can be supervising them at the same time,” (Key informant 13).

Another participant remarked:

“So that would be advantageous in terms of resource; we would save on time, we would save on numbers of faculty members to teach same content because they have combined students,” (Key informant 4).

Furthermore, participants also stated that IPE would help reduce duplication of courses or even teaching or learning activities since students would be learning together. This would help the institutions to achieve cost-effectiveness in their operations. One participant remarked:

“My view, I feel interprofessional education is a welcome idea and I think that’s the way to go because we are running so many vertical programs which are related in several issues. It can even help to reduce some of the repetitions we do or make; here at KCN, I can say all our undergraduate programs, maybe the basics for the first two years are more less the same,” (Key informant 16).

A majority of participants perceived IPE as a way to promote collaboration as well as teamwork among faculty and between institutions. One participant shared that with IPE, faculty from the two institutions could co-teach and even supervise students together in the clinical area, hence reducing the workload. Furthermore, it was also perceived that as faculty from the two institutions would be interacting, they would also be sharing experiences and appreciating each other’s strengths. This would allow faculty to complement each other and improve the quality of teaching and student learning. This is what one participant commented:

“I’ve been working as a midwife for so many years, teaching students in the clinical area but when it comes to relating with our colleagues, let’s say Obstetricians and Pediatricians, you look at each other as aliens because you haven’t learned how to interact with each other from the grassroots, but if our students are together, we can even co-teach,” (Key informant 4).

Another participant said:

“Yes! It can be done, it can be done, and I feel that it will even improve the collaboration and inter-disciplinary teamwork, because they know we are here for the same goal and whatever we are going through is the same, even issues like undermining each other, they will not be there,” (Key informant 16).

Another one further commented:

“We could maximize how we teach by collaborating more, I think, certainly I could favor a situation where some teaching for medical students could be incorporated with some teachings for KCN students. Even within our own college, there’re times when there’s some duplication between areas of teachings in physiotherapy, or in pharmacy being done independently from medical students and we could incorporate them, integrate them a bit better,”(Key informant 1).

Regarding collaboration among faculty members, one participant shared that IPE would allow faculty to conduct interdisciplinary research hence improve the quality of teaching. Another participant further explained that IPE would promote sharing of ideas and experiences amongst health professionals while appreciating and complementing each other’s strengths as they carry out their work. One participant commented:

“But I look at it as really a nice thing especially in terms of like conduction of research, consultancies; it will really be a good thing if nurses and other professionals are doing those things together and if we had a deliberate move, of having interprofessional education, this would also prepare our graduates and even us as faculty members to easily link up with our colleagues from other professions that are related to us and come up with good projects, grants consultancies that can be marketable than standing independently,”(P 7).

Another participant perceived that IPE would be one strategy that would improve manpower challenges, which the health sector is facing in the country. The participant further explained that this would be possible because, with IPE, the number of graduates would increase. This is what the participant commented:

“I feel for undergraduate programs interprofessional education is really important and it’s the way to go and because we have the challenges as a country, we don’t

have enough manpower so with interprofessional education it can help because of course, we might not be a jack of all trades because we are not specializing, but we will be looking at what are the basic things that cut across the courses,” (Key informant 16).

IPE was also perceived as a tool that would help in conflict resolution and promote collaboration between institutions and professionals. Several participants pointed out that currently there were a lot of problems that emanated from the interactions between or among health professionals. Participants gave an example of one profession undermining other professions as one of the problems. Participants explained further that the practice impacted negatively on the professions that are looked down upon. As a result, members affiliated with the profession develop an inferiority complex. However, they expressed the hope that IPE would help resolve such challenges among health professionals. This is what one participant commented:

“Traditionally, the different cadres in the healthcare team house have pre-conceived ideas about each profession, and you feel other professionals becoming intimidated by different cadres. This is to the detriment of the patient. Other professionals are not able to actually play out their role to the full because of this kind of intimidation so interprofessional education at the undergraduate level, I think, will help erase those pre-conceived ideas,” (P2).

Another participant commented

“I think interprofessional education is not only important, but it will be solving a lot of the current problems that we are having in the interaction between professionals to the benefit of our patients,” (P 6).

4.3.1.2.3 Perceived benefits to patients

A majority of participants perceived IPE as a mechanism for improving interactions and good relationships among health professionals, which is a basis for collaborative practice and improved patient care. Participants further explained that IPE would promote teamwork among health professionals and bring a holistic approach to the delivery of patient care.

“If they start learning together then it will help them to grow together and learn how to relate with each other as students; collaboration can start right away because they will be studying together. Even after they graduate and when they qualify, they can easily interact in bettering the type of care they would provide to their patients or clients. So, I look at this approach as a way of really improving patient care,” (Key informant 4).

4.3.1.3 Perceived Challenges to IPE

The researcher asked participants to describe challenges they perceived would hinder the implementation of IPE. Participants described various challenges that they anticipated would hinder faculties’ as well as the institutions’ readiness for IPE. The researcher observed that the challenges to implementing IPE that participants identified were associated with issues regarding logistics, lack of faculty preparation, challenges related to professional culture, and challenges related to attitudes.

4.3.1.3.1 Perceived logistics challenges

For this study, logistics challenges referred to challenges related to funding the IPE initiative, the actual implementation details, geographical location and structure of the institutions, revision and harmonization of the undergraduate curricula and calendars, lack of faculty preparation for IPE, classroom and skills laboratory space, scheduling of classes, and transportation of students. Some participants stated that although they viewed IPE positively, lack of knowledge on how IPE is implemented was perceived as one of the potential challenges to faculty's readiness. They further explained that they were concerned that they lacked information on the actual details of how IPE is initiated and implemented and suggested that there was a need for a proper transition period in which faculty would be trained in IPE to ensure their readiness. This is what one participant said:

“I think the problem would be about the detail of how it is done. How it can be implemented,” (Key informant 1).

Another participant commented:

“We are looking at our curriculum. Its female oriented. Its nursing oriented. Now we are saying we need to have all the professions in one class; we need to know how we are going to intermingle, like basic information. How will it apply to the nurses? How is it going to apply to the medicine group? So, we need also to be creative in that,” (Key informant 5).

Some participants expressed concern about the financial implications the implementation of IPE would come with to the institutions. They further explained that the change to IPE might need revision or modification of undergraduate curricula to integrate the appropriate content and methods of assessment for IPE. This would require finances and thus may be a challenge for implementing IPE. Furthermore, they pointed out that the curricula

would need to be approved by the university's approval committees. Some participants perceived that changing from the current uniprofessional approach to IPE would be expensive because it would require making some changes on infrastructure such as skills laboratories to accommodate students from other disciplines. Additionally, they explained that finances would be needed to cater for the needs of interprofessional staff. This is what one participant commented:

“It might be expensive because it needs the faculties to sit down and start revisiting the curriculum which takes...it's not something you can just sit two days and then you can incorporate it. No, it takes a lot of time and for it to be passed at the university's council, it might also be something that it needs to be thought about thoroughly because it means you have to reduce some of the content in the other modules,” (Key informant 3).

The geographical location and structural set-up of the colleges at the University of Malawi were also perceived, by some participants, as potential barriers to faculty readiness for IPE. The colleges are located in different regions and operate independently, resulting in a challenge in terms of coordination of IPE activities, transportation of students and faculty, and scheduling of classes. Participants emphasized the importance of looking into all of these details before initiating IPE to ensure faculty readiness for IPE. One participant from KCN commented:

“The problem I see is it would work in other instances, but it might not work in others, because it would require more resources. For example, maybe the students going to Blantyre to utilize some of the places at College of Medicine, or students from College of Medicine coming over here to use some of the facilities plus also maybe the staff moving in between the campuses,” (Key informant 14).

Some participants perceived the current large intake of students as a potential challenge towards IPE, considering that the current classroom and skills laboratory space cannot comfortably accommodate them, thus adding more students would worsen the situation. One participant from COM remarked:

“The infrastructure, I don’t think is there, cause even now we are struggling with students at the College of Medicine. If you come and see our handover meetings most of the students are standing because there are no chairs, the rooms are, small so the infrastructure is not that adequate,” (P 12).

Another participant commented:

“For the undergraduates, I would say no because of the resources at hand I don’t think we would, we are not ready to handle interprofessional education; even preparation of faculty itself. I don’t think we are ready at all,” (Key informant 9).

4.3.1.3.2 Lack of faculty preparation for IPE

Although a majority of participants perceived themselves as being ready for IPE on the basis that they had the readiness characteristics and skills appropriate for IPE, they emphasized the need for proper preparation of faculty for IPE. They further explained that they did not feel confident because they had no formal training in how to use IPE approaches. In view of this, they suggested that formal training (either coaching or some form of orientation) was imperative before the initiation and implementation of IPE. One participant commented:

“I would say I have the skills, but the thing is I really don’t know the approach, so I still need an orientation so that at least I’m there because the skills that I use are not for IPE. They are the skills that I use just for general teaching of the students, but I still need to have an orientation of it; whether it’s an online thing I can do it

so that at least I have an idea, not necessarily sitting in class; sitting in front of somebody delivering the information,” (Key informant 3).

Another participant remarked:

“You are in a class with different...so you may be a midwife; so everything is just about midwifery, all the examples, all the explanations then it means the other groups will be disadvantaged so you may be biased towards your own area, you really need to be in that classroom or during that lecture you really need to be well prepared to make sure that you cover everybody’s expectations addressed appropriately,” (P15).

4.3.1.3.3 Perceived challenges related to professional culture

Participants’ narratives revealed issues surrounding professional culture as one of the potential hindrances to faculty readiness for IPE. Some participants expressed concerns about the demarcations that have been given to health professions. They explained that these demarcations create silos that hinder health professionals including faculty to work collaboratively. Some participants lamented over the tendency of other health professions to look at themselves as superior over other professions and to underrate others. They further explained that this practice makes those professions that are looked down upon develop an inferiority complex hence negatively impacting teamwork and collaboration. One participant had this to say:

“Sometimes the health sector looks like it’s the “animal farm” it’s like others are more professional than the others; there’s no respect for the other and from the experience that I have; when it comes to work, it’s like they have already compartmentalized; you can’t ask me about this; you can’t question me on diagnosis; you can’t question me on what I have prescribed,” (P 6).

Another participant commented:

“Because how you train pharmacists, how you train physiotherapists, how you train doctors, how you train nurses is quite different; they have got their own areas of focus so because of that it would require a degree of flexibility on the part of the faculty and again for that to work apart from the degree of flexibility, those egos, that revolve around the professions, they have to be swallowed so that we chart a way forward,” (P 6).

4.3.1.3.4 Perceived challenges related to attitude

Personal attitudes emerged as one of the potential challenges to faculty readiness for IPE. Some participants explained that some people are very rigid and inflexible, which can be a challenge for faculty to embrace IPE. Furthermore, the participants narrated that some individuals even as professionals are naturally resistant to change and have a fear of the unknown. This can hinder them from accepting and embracing new initiatives such as IPE. They emphasized the need for a lot of sensitization and support in form of training for faculty, to overcome feelings of resistance and fear. In view of this, they emphasized the need for a change of mindset and to develop a positive attitude towards IPE in order to be ready for IPE. This is what one participant said:

“We need to have a positive attitude and I think the other thing it’s having that willing spirit, team spirit. The other thing is we don’t have that team spirit with the other professionals. I think the first thing is a positive attitude. We need to change our mindset. That change of mindset is very key we need a positive attitude towards interprofessionalism because if we have the positive attitude, I don’t think it will be a challenge for us,” (Key informant 5).

4.3.2 Perceived Readiness Characteristics for IPE

To find out how the participants understood readiness for IPE, the researcher asked them to describe what they perceived to be readiness characteristics, for IPE. In view of this, the researcher asked participants to describe characteristics that they thought would make them as individuals and their peers to be considered ready for IPE. Additionally, the researcher asked participants to describe their views about their institutions' readiness for IPE.

4.3.2.1 Perceived Individual Readiness Characteristics for IPE

A common pattern emerged within several participants' responses regarding readiness characteristics for IPE. Participants described different characteristics that they considered necessary for a faculty member to have to be ready for IPE. The researcher categorized their responses into three major groups namely, personality, professional, and academic readiness characteristics. The academic and professional characteristics also include their work experience.

4.3.2.1.1 Perceived personality readiness characteristics

The most commonly mentioned readiness characteristic under this subtheme was open-mindedness. From both the in-depth interviews and focus group discussions, open-mindedness came out as one of the key characteristics for individual faculty members to have for them to be ready for IPE. A majority of participants explained that open-mindedness would help an individual to learn from others and appreciate the role other professions play in the delivery of health care. One participant emphasized the need for and importance of being open-minded:

“Open-mindedness; you should be ready to learn from others, but if you are part of those who believe in “animal farm” then it’s difficult; so open-mindedness I

think is a characteristic that a faculty member who is ready to be a game-changer as far as interprofessional education is concerned needs to have,” (P 6).

Participants viewed open-mindedness in two aspects. Firstly, participants referred to open-mindedness as being able to accommodate and accept other professions with different views, having a receptive mind to change, as well as having the ability to accept objective criticisms. Secondly, participants viewed open-mindedness in reference to the ability of faculty to accommodate and respect students with a different professional background from that of their own. In this aspect, it was explained that having an open mind would help faculty avoid bias when interacting with students from various professional backgrounds. One participant commented:

“The main thing is openness. Faculty have to open up to other students, whether in class or the clinical area. Do not segregate that because this is inclusiveness; let me put it that way. A spirit of inclusiveness, that I can also teach or supervise other students from other colleges and also issue of being compassionate,” (Key informant 12).

Additionally, having a positive attitude towards IPE also came out as one of the key readiness characteristics that faculty members should have to accept and implement IPE approaches. A majority of participants emphasized the need for individual faculty to have a positive attitude towards IPE to appreciate its value in the education of health professionals at the undergraduate level. This is what one participant commented:

“Positive attitude; we need to change our mindset; we need a positive attitude towards interprofessionalism because if we have the positive attitude, I don’t think it will be a challenge for us,” (Key informant 5).

Respect was the next most mentioned readiness characteristic that participants perceived to be crucial in terms of self-readiness for IPE. Participants also viewed respect in two aspects. First, participants looked at respect in terms of appreciating and acknowledging each other's roles and responsibilities.

“Another characteristic is professions that will embrace or will acknowledge the importance of other health professions; professionals who view others as equals; who view others as equally important for the delivery of the whole health service and I think if health professionals don't look inward too much and look outward, it's very easy to do interprofessional education,” (Key informant 1).

Respect as a character was also viewed as having respect for students belonging to different educational programs and treating them equally. In this aspect, one participant said the following.

“ What I would want to see in a faculty is to respect students of different programs, having them in one class, handle them as a group and also assess their needs based on their needs as individuals, because if you start with partiality then the essence of interprofessional education would be defeated,” (P 9).

Other personality readiness characteristics that emerged from the participants' narratives included being approachable, receptive to change, being tolerant, accommodative, humble, and exemplary, having a good personality, self-confidence, ability to build good interpersonal relationships and network, ability to work in a team, ability to teach and work across professions, flexibility and commitment.

4.3.2.1.2 Perceived professional readiness characteristics

A common thread arising within several participants' responses on readiness characteristics was around what the researcher termed professional readiness characteristics.

These characteristics were very much related to professional behavior and practice. Several participants commented that an individual needs to be an expert in their field of work.

Professional expertise was considered a powerful tool to help in building self-confidence, facilitate understanding of other professional's roles in health care delivery, and facilitating effective communication. It was perceived that if the person has confidence, it is easy to accept views from other professions. One participant commented:

“Another characteristic is he or she should be the real expert. You should actually know that subject inside out and by so doing you will be in a better position to communicate effectively because you are an expert, then you are confident and can accept things from the other disciplines or the other professions,” (P 19).

Another participant commented:

“A faculty who is ready for interprofessional education should be competent in an area of expertise because if you're competent, it will increase your chances of confidence to handle different programs because lack of competence brings in lack of confidence and then that can affect the delivery of the content,” (P 9).

“I don't know where the readiness would start, but for starters, I think they should have knowledge of not only their field but also other people's fields not entirely expertise knowledge but just have an idea,” (Key informant 15).

This is what another participant said:

“You need a qualification, academic qualification, so for instance, the University of Malawi: College of Medicine in particular for someone to be the tutor or a lecturer, you need a certain minimum qualification. In the past, we used the first degree as now people have realized that possibly we need to recruit at least an

MMed (Master's degree in Medicine) or specialization qualification so that they are able to impart the knowledge but also the clinical skills to the students," (P12).

Additionally, some participants also considered clinical experience to be important with regard to individual readiness. It was explained that faculty need clinical experience to teach and supervise students in the clinical area. In reference to this, one participant said:

"In addition to the educational qualifications, clinical experience is also important because after teaching them the theory, they will have to be taken to the clinical area for the show how, therefore two years of experience, work experience is enough," (P 7).

One participant shared that to him the most important characteristic is looking at professions not as discreet silos but embracing or acknowledging the importance of other health professions. Additionally, professionals viewing each other as equals and equally important facilitates being able to teach and work together across professions. This is what the participant commented:

"To me, the most important characteristic is the one that looks at professions not as discreet silos; another characteristic is professions that will embrace or will acknowledge the importance of other health professions," (Key informant 1).

Other professional readiness characteristics that emerged from participants' narratives included taking responsibility and being accountable for advancing the education of students, appreciating and recognizing each other's expertise; ability to work in a team; ability to build interprofessional relationships with lecturers from other colleges, ability to appreciate the curriculum, conduct multidisciplinary research and being a life-long learner.

4.3.2.1.3 Perceived academic readiness characteristics

Some common patterns of thought regarding readiness characteristics emerged from the participants' narratives, which the researcher categorized as relating to academic behaviors and practices. Being knowledgeable about IPE and having some training in IPE emerged as some of the academic readiness characteristics that would facilitate readiness for IPE in an individual. One participant said:

“I would think that being knowledgeable about interprofessional education, accepting that it can happen and being able to understand the benefits of interprofessional education because sometimes if people think that this cannot happen, we need to focus on one area then that will bar the possibility of implementing interprofessional education,” (Key informant 13).

4.3.2.1.4 Perceived self-readiness for IPE

To find out how participants perceived themselves in terms of readiness for IPE, the researcher asked the participants whether they perceived themselves to have the readiness characteristics and skills for IPE. Almost all participants perceived themselves to possess readiness characteristics and skills for IPE. Based on this, they perceived themselves as ready for IPE even though they were not trained in the same.

Additionally, some participants attributed their perceived readiness to the experiences they had in teaching students from various professional backgrounds. Several participants had taught students from other colleges including those that are outside the health sector, apart from their own. This gave them the confidence to consider themselves ready for IPE. Some participants attributed their perceived readiness for IPE to the experiences they had during their post-graduate training in addition to having the readiness characteristics and skills for IPE. They explained that they had attended classes together with other students that did not have the same professional background as them. Additionally, some participants narrated that

even the lecturers that had taught them had different professional backgrounds. Thus, these experiences exposed them to a certain extent to what IPE entails.

However, all participants shared that they were not trained in implementing IPE approaches. Therefore, although a large number of participants felt that they were ready for IPE, they did not feel confident enough to implement IPE approaches due to the lack of training in IPE. Participants showed a common concern that lack of training in IPE would be a cause of lack of confidence and failure in faculty to implement IPE. Hence, all of them emphasized the need for them to undergo some sort of formal training in IPE. Furthermore, they explained that training in IPE would help to build confidence in them. One participant commented:

“We do have the characteristics in terms of qualifications, work experience, competencies. All we’ll need to do is the mentoring or the transition period because we are used to teaching individual disciplines and we only meet as teams in the clinical area, so we need to have that transition period of training as faculty. Otherwise, the rest we already have and it’s manageable to do this,” (P 7).

In contrast, some participants narrated that they felt confident to teach students with diverse professional backgrounds although they had not been trained in IPE because they already have experience of that nature. This is what one participant shared:

“I wouldn’t really say that people have been trained specifically for IPE. I teach professionalism, I teach ethics, I can teach a group of interprofessional students. Recently I was teaching students from LUANAR. I was teaching them healthcare ethics. They’re taking dietetics,” (Key informant 10).

However, one participant felt that she was not sure whether she was ready for IPE, while another participant said that she was not ready for IPE because she finds it difficult to

include students from other colleges when conducting clinical teaching and supervision. The participant narrated:

“I have problems to teach students from other colleges to say the truth. Even if I have that knowledge and I find maybe two students are mixed, my own students are mixed up with other students and maybe they are nursing a woman, I normally have a problem to embrace all the group and start teaching,” (Key informant 9).

4.3.2.1.5 Perceived peer-readiness for IPE

In the course of eliciting what the participants thought about their peers' readiness for IPE, a majority of participants said that they perceived some faculty to be ready for IPE, whereas others were not perceived to be ready. For those who were perceived ready, the readiness assumed that they possessed the perceived readiness characteristics, skills for IPE, and work experience in higher education. Additionally, they perceived their peers to be ready for IPE because each faculty member is well trained in his/her field of work and that some have inherent abilities to teach.

“I mean sometimes people say that there are some people that were born teachers; alright there are some that are just good at imparting skills or knowledge to others not that they went to class to train as a teacher, but they were just born as a good teacher. Others, in fact, are bad. You can clearly see that if a student fails it's like they have sinned,” (P12).

However, two participants suggested that although they perceived their peers to be ready for IPE, they felt there was a need for all faculty members to undergo some form of formal training or orientation in implementing IPE approaches. In contrast, one participant described faculty as not being ready for IPE. The reasons that were given for not being ready

for IPE were that some faculty had feelings of inferiority complex; they lacked a collaborating spirit and some skills. One participant commented on the need for orientation:

“Orientation can help those that might have inferiority complex; saying I cannot teach medical students; so, I feel the orientation would really help to change the mindsets of those that have an inferiority complex,” (Key informant 10).

4.3.2.2 Perceived Institutional Readiness

The researcher asked the participants whether they perceived the institutions as ready or not for IPE. Some participants reflected that the institutions were partially ready for IPE, suggesting that the institutions were ready for IPE in some, but not all areas. Some participants from COM explained that they perceived their institution to be ready for IPE because they were already engaged in IPE, even though the engagement was not formal. One participant from the college commented:

“I think it’s ready because to some extent it’s already happening. The first year in medical school they combine all the laboratory scientists, physiotherapy students and medical students are taught together,” (Key informant 15).

Most participants perceived the institutions as not ready for IPE because of problems such as inadequate infrastructure; lack of IPE-trained faculty; and inappropriate curricula. One participant from COM remarked:

“I wouldn’t say we are ready as such; I think at a professional level, at an individual level; there are some people who would still not embrace it. Certainly not going across into other colleges. Personally, I believe we can do it, but it will take some institutional shift of mindset to say, for instance, let’s say for first years, first-year medical students, first-year nursing students across campuses, can we integrate our teaching?” (Key informant 1).

Another participant from KCN commented:

“For the undergraduates, I would say no because of the resources at hand I don’t think we would. We are not ready to handle interprofessional education, even preparation of faculty itself. I don’t think that one we are ready at all, but looking at postgraduate, since we have done it before, I want to believe from that side, it is not difficult and we can easily forge ahead with that arrangement but for the undergraduate, I want to believe they would be some plans to be put in place so that we should be able to handle such an initiative,” (Key informant 9).

Participants’ comments related to Institutional Readiness for IPE were divided into the sub-themes classroom, skills, and computer laboratory space; perceived management support for IPE; the existence of IPE policy in the institutions; and incorporation of IPE in the curricular at the undergraduate level.

4.3.2.2.1 Classroom, skills, and computer laboratory space

Some participants perceived the institutions to be ready to support IPE in terms of classroom space, library space, reading materials, the internet, and computer laboratories. However, there were some differences of opinion, even in those areas where participants perceived the institutions as being ready for IPE. On the available infrastructure, this is what one participant from KCN said:

“The current infrastructure, when it was being started, we did not have the mind of the interprofessional collaboration so it was started with the mind that we will each be doing things separately so they are not supporting but there are other areas where we can still use the current infrastructure to start off the interprofessional for example, libraries. We’ve got KCN library, and I don’t think there can be another chunk of students from another college. However, I don’t know whether a

KCN student can go to College of Medicine and borrow a book; about IT but I see it that it can be updated easily,” (P 10).

In contrast, a participant from COM commented:

“Infrastructural, that COM is ready because, I can say when it comes to buildings; the college buildings, it’s not like this one it’s a pharmacy building, MBBS building and all that, I’m talking about in terms of classes. Some could be indeed specific because they have to do some demonstrations like physiotherapy, lab, pharmacy; lab you know clinical lab, but in terms of lecture theatres, you find there’s someone who is hired to manage space within. So, COM is ready for that just like other universities across the world do,” (P 6).

4.3.2.2.2 Perceived management support for IPE

As part of institutional support for IPE, participants were asked to describe their views regarding management support for IPE. Most participants perceived that management in both institutions would be in support of IPE. Participants from the COM noted that there was already some form of IPE in the college, even though it was informal. KCN participants referred to the support for a post-graduate program in Reproductive Health that the management had previously given as a positive indication to support IPE. The program enrolled students from other health professions. Furthermore, some participants stated that because KCN is a World Health Organization Collaborating Centre for IPE, it was anticipated that the management would support IPE. This is what one participant from KCN said:

“We are a WHO center for excellence for interprofessional education and collaborative practice; so that in itself I think does indicate or it portrays the views that our management has. I think we couldn’t have been designated as such unless they really bought the idea, so I think in terms of management, we are OK. I

believe that they would really support such innovations or whatever has to do with interprofessional education,” (Key informant 10).

Another participant from COM commented:

“When I started pushing for the interprofessional education with medical students, our Principal was one of my supporters so I think management at COM would support such an initiative,” (Key informant 8).

In contrast to these views, four participants felt that management’s commitment to IPE would be conditional. They gave three conditions that would influence the managements’ decision on whether or not to support IPE. The conditions were availability of funding to run the initiative; convincing reasons why the approach should be initiated at the undergraduate level; and political directive. This is what one participant said regarding management’s support for IPE:

“I think it will be conditional; looking at what usually happens, sometimes some programs are accepted based on whether there is money attached; if it comes from the political side, management can accept but I don’t look at management really being committed. There’s a lot of financial involvement because we are talking of restructuring a lot of things. I don’t think management would be committed unless somebody out there would be willing to pump inadequate funds,” (P 15).

Another participant shared similar sentiments about financial challenges

“They supported it at master’s level but at the undergraduate level, I think we have already a lot of existing challenges in terms of financial resources,” (Key informant 13).

Although a large number of participants felt that management would support IPE, three participants from KCN had the view that management would not commit itself to support IPE. They bemoaned the poor relationship that exists between nurses and doctors as one of the potential reasons that would make management not give support for IPE. One participant from KCN commented:

“I do not think management would welcome the idea. Of course, there are some people in management that would welcome the idea but I think, the majority of people here would not welcome the idea, because the relationship especially if it’s with doctors and the College of Medicine; we always have had problems in terms of the relationship with nurses and doctors as from way back, so I think that is also inclined in us that we have these fears to say we’re to do these things together they would take advantage of us,” (Key informant 14).

One participant from COM was not sure of the type of reaction that the management would present regarding the issue. However, another participant said that both negative and positive reactions would be expected.

4.3.2.2.3 Existence of IPE policy

The existence of IPE policy in the institutions was one of the areas within the subtheme of institutional readiness for IPE. The researcher asked the participants if they were aware of the existence of any policy on IPE in their institutions. Almost all participants explained that they were not aware of the existence of such a policy for undergraduate programs. One participant at COM commented:

“No, I don’t know any policy in terms of that. The activities we are doing are supporting but then we don’t have a particular policy that we are implementing. If you are teaching something to different groups if you have them in the same class;

that hasn't actually been put in a policy that I actually know of," (Key informant 2).

However, one participant from KCN explained that though she had never seen one, she assumed they had it. The participant argued that the fact that KCN as an institution was running a PhD program in Interprofessional Health Care Leadership, it was not possible to do so without a policy on IPE. The participant commented:

"I think having one program of that nature, though I haven't seen it, but I should assume we have it because there is no way we can start a program without a policy I think it's something I need to check,"(Key informant 5).

Another participant from KCN, in agreement with others, echoed that even though KCN might not have the IPE policy, as a World Health Organization (WHO) center for excellence in interprofessional education and collaborative practice, has a WHO logical framework. Thus, KCN can use the framework to guide the initiation and implementation of interprofessional education. This is what the participant said:

"But I'm not too sure if there is any policy, but not to my knowledge so we may not have a policy but as a college; as a WHO center of excellence for interprofessional education and practice we have a logical framework on how we are going to implement interprofessional education and collaborative practice," (Key informant 10).

4.3.2.2.4 Integration of IPE in the existing curricula

The researcher asked participants whether content reflecting IPE approaches was integrated into the curricula at the undergraduate level. All participants explained that there was no explicit emphasis on IPE in the curricula at the undergraduate level. However, one participant stated that the curricula do not reflect IPE but that they include topics like

teamwork and interpersonal relationships. IPE has not been considered as a stand-alone teaching strategy. One participant from COM commented:

“There is no explicit integration of IPE in the curricula; as I said at the beginning, the things that are crosscutting, across all health professions can easily be incorporated in a module on IPE and that would also help when people graduate; how they work together in real life in practice,” (Key informant 1).

Another participant from KCN also remarked:

“We really need to critically look at our curriculum if we are to venture into IPE because we are only nursing focused; we need to review our curriculum to incorporate interprofessional education,” (P 14).

4.3.3 Perceived Skills Needed for Implementing IPE

In the course of finding out about the participants’ views regarding their readiness for IPE, the researcher asked them to describe skills that they perceived are necessary for implementing IPE. Participants described various skills they considered necessary for IPE that were categorized as six sub-themes: interpersonal and communication skills, teaching and facilitation skills; information and technology (IT) skills; professional skills; conflict resolution skills; and having formal training in education. Most of the skills that participants mentioned fell within the interpersonal and communication skills category.

4.3.3.1 Perceived Interpersonal and Communication Skills

Good communications skills in form of documentation skills, listening skills, report-writing skills, and presentation skills were mentioned most frequently as being important for IPE. Most of the participants viewed communication skills as an important tool for cultivating good interpersonal relationships among professionals, students, and even patients.

Additionally, some participants stated that faculty needed to have basic literacy in information

communication and technology (ICT). These skills would empower faculty to effectively communicate with students and improve the teaching and learning process. One participant commented:

“Probably, good interpersonal skills which we normally lack, because how you relate even with the fellow faculty members, with these students who are from various backgrounds also matter a lot as far as education is concerned,”(P19).

Another faculty member commented:

“As a faculty member, communication is a very important skill which you should have to be able to articulate issues. Another skill, I don’t know how to call it but something to do with ICT as faculty you should be able to have skills in terms of how you can deliver your teaching materials, or even communicating, group discussions on certain issues using even the social media, can add value to the teaching and learning process,” (P 6).

Other skills that were mentioned by some participants, related to this sub-theme were report writing, reading, listening, presentation, motivational, and counseling skills. Skills for managing students from diverse professional backgrounds and teamwork were also perceived as appropriate for IPE.

4.3.3.2 Perceived Teaching/Facilitation Skills

Most participants perceived teaching and facilitating skills as important for faculty members to be ready for IPE. They explained that faculty needed teaching skills to effectively teach in the classroom as well as supervise students in the clinical area. Related to teaching skills, some participants also shared that faculty needed to have facilitating skills to facilitate a fruitful discussion with students of diverse professional backgrounds. Additionally, participants explained that faculty members needed to have these teaching and facilitation

skills to teach large groups of students effectively using various teaching methods. One participant commented:

“I think facilitation skills because if you have large groups, you need to know how to facilitate, a fruitful discussion so that one would be an important skill to have,” (Key informant 4).

Regarding teaching methods, participants perceived the following teaching methods to be appropriate for IPE approaches: lecture, discussions in smaller groups, demonstration and return demonstration, student-centered, problem-based, workshops, coaching, social media, interactive, and innovative methods such as case study. However, some participants felt that teaching methods are the same for the uniprofessional education approaches as well as the interprofessional approaches. One participant explained that:

“I think the teaching methods are the same, and the way one would teach a nursing student would be similar to a medical student; probably, in undergraduate because I would think most of the education materials would be basic for example anatomy and physiology; so, the way you do the lectures, the demonstration would be similar to all the students. So, I don’t see there would be much of a difference in terms of teaching methodologies,” (Key informant 6).

Another participant commented:

“Critical thinking; these days we are talking of problem-based learning; creating scenarios; how do we make scenarios that are relevant to the nurses; that are relevant to clinicians; that are relevant to physiotherapists; that are relevant to pharmacists? So, we also need aspects of critical thinking for us to be effective in the delivery of this interprofessional,” (Key informant 5).

4.3.3.3 Perceived Conflict Resolution Skills

Some participants stated that faculty should have certain skills, which can help them to manage a diverse group of students or students from diverse professions. Skills in conflict resolution and problem-solving were perceived as necessary in anticipation of problems that would result from dealing with students and professionals of different disciplinary backgrounds. This is what one participant commented:

“Members of staff should have conflict resolution skills because where you have people from different backgrounds, they are bound to have some conflicts so members of staff should develop skills on how to resolve conflicts,” (Key informant 11).

4.3.3.4 Perceived Clinical Skills

Clinical/professional skills were perceived by some participants as an important area of readiness for IPE. They explained that practical experience would enable the faculty members to have a better understanding of how the clinical area functions and the roles that different professional groups, including students, play in the delivery of patient care. One participant commented:

“They should have clinical skills; not just the experience of teaching but practical experience,” (Key informant 16).

4.3.4 Proposed Strategies for implementing IPE

Participants generally expressed a positive attitude towards IPE and perceived benefits as well as challenges regarding IPE. They made several suggestions that the institutions needed to consider before initiating and implementing IPE approaches. These include promoting an institutional and individual shift of mindset; thorough planning; orientation and training faculty about using IPE approaches; sensitization of both students and faculty to

promote a better understanding of the benefits and challenges of IPE; identifying ways of sourcing funds to support IPE initiatives and seeking views about IPE from major stakeholders such as the Ministry of Health and Population, the Nurses and Midwives Council of Malawi and students. Participants perceived that looking into these issues before initiating IPE would ensure a successful implementation.

4.3.4.1 Promoting an Institutional and Individual Shift of Mindset

Putting in place strategies to promote a change of mindset in individual faculty members as well as at the institutional level was perceived by participants as crucial to the successful implementation of IPE. One participant pointed out that this was important because faculty members may find it difficult to embrace IPE, which is a new concept in Malawi. This is what one participant said:

“I think it will take a lot of change of mindset because we are very inward-looking and interprofessional education requires opening up and including other professions within. You can see even the name is...the College of Nursing and Midwifery so it’s indicative of our emphasis; so, it will require a lot of cultural manpower and mindset changing,” (P14).

On the need for an institutional shift of mindset, this is what some participants said:

“But it will take some institutional shift of mindset, for instance, integrate first-year medical students, first-year nursing students across campuses. Can we integrate our teaching? I think that may take a lot of institutional mind-shift especially in terms of logistics,” (Key informant 1).

“being a new concept, it will need a lot of mindsets change in most of the health care practitioners because we are used to be nursing, learning as nurses; doctors learning as doctors; clinicians learning as clinicians,”(P 17).

4.3.4.2 Thorough Planning

Some participants felt that there would be a need for thorough planning to ensure a successful implementation of IPE. This will facilitate a good understanding of the concept and proper preparation in terms of the required resources. This is what one participant said:

“We need to understand this more; what it involves; or how it is run from other areas; the positives and the negatives of it and then from there we can say okay, maybe can we put this to test and try it? Because maybe theoretically it may look good, maybe it’s not...for us it may not work and as we said earlier on, maybe it will be better for post-graduate other than undergraduate; but I think it would also be good to really learn from other people; what does it mean and what it involves,” (P 15).

4.3.4.3 Orientation and Training of Faculty

Regarding orientation and training of faculty, most participants proposed the need for faculty to undergo some formal training or orientation in IPE approaches to gain skills in using these approaches. This was so because they stated that they had not used IPE before. One participant remarked:

“Because we haven’t done the interprofessional thing, people might feel uncomfortable; and say how do I teach if I was to stand in front of a class with nursing and medical students? But I think people have the skills; the only thing could be reminding each other especially on teaching large groups, that’s the skill that a lot of us need for revision; we need some CPDs to an extent,” (Key informant 4).

Another participant said:

“Another thing that we need is a briefing or orientation so that at least we know exactly what it’s all about; what are the advantages or the benefits? What are the disadvantages?” (Key informant 3).

4.3.4.4 Sensitizing Students, Faculty, Management, and Policymakers

The need to sensitize faculty, students, and management and policymakers to promote a better understanding of IPE was perceived as important by most participants. Additionally, providing awareness about IPE, its benefits as well as challenges would promote the development of positive attitudes towards IPE.

“Whether management will be supportive, will depend on how we rationalize the whole thing; how you justify the importance of the interprofessional education both to the management and probably to the politicians; to the ministry which are the policymakers of course. I think for me it’s all dependent on how it’s sold; how it’s rationalized,” (P 14).

4.3.4.5 Identifying Ways of Sourcing Funds to Support IPE

One of the areas that most participants also proposed which needed to be considered before initiating IPE was to identify ways of sourcing funds to support IPE initiatives. This was considered imperative to ensure the successful implementation of IPE. One participant indicated that:

“I think maybe there will also be a need for some sort of funding if we are to mount such a program. So maybe as a college, it means we have to think of ways of generating income,” (Key informant 11).

4.3.4.6 Seeking Views about IPE from Major Stakeholders

Some participants suggested that views about IPE should be sought from major stakeholders such as the Ministry of Health and Population, the Nurses and Midwives Council

of Malawi, and students, before initiating and implementing IPE. This is what one participant said:

“Doing interprofessional education might be a way to go but there are also various issues that have to be taken into consideration and I want to urge people who are in a position of introducing such type of programs to consider the benefits, and also look at the risks that would be associated with introducing such type of a system and getting views from stakeholders before we actually put it in place,”
(Key informant 9).

4.4 Conclusion

This chapter has presented key findings of the study that aimed at determining faculty readiness for interprofessional education in the training of undergraduate health professionals at the College of Medicine and Kamuzu College of Nursing. Participants generally expressed positive attitudes towards IPE and perceived some benefits as well as challenges regarding IPE. In view of this, they suggested that the involvement of key stakeholders was imperative before making any conclusive decisions about initiating IPE.

Regarding individual readiness, findings show that most participants perceived themselves and their peers to be ready for IPE. However, they emphasized the need for some formal preparation for IPE. Participants expressed contrasting views on whether the institutions could support IPE or not. The institutions were perceived to be partially ready for IPE. This implied that the institutions were perceived to be capable of supporting IPE activities in some of the areas but not in others. Although the participants perceived themselves as being ready for IPE, the researcher identified some knowledge gaps in terms of their understanding of the concept of IPE. Participants misunderstood the concept of IPE by equating it to the teaching of basic sciences and other foundational courses to first-year students from different programs especially at the College of Medicine. They also viewed IPE

as meaning that faculty members from KCN or COM teach part-time at other institutions. In their support for IPE, participants proposed strategies that the institutions needed to consider to design, implement and sustain IPE successfully.

Chapter 5

5.0 Discussion

5.1 Introduction

This chapter presents a discussion of the findings presented in Chapter 4. The overall purpose of the study was to explore faculty perspectives on their readiness for IPE at KCN and COM. The specific study objectives were: to describe faculty perceptions of IPE in the training of undergraduate health professionals at KCN and COM; to describe faculty perceptions about their readiness attributes for IPE in the training of undergraduate health professionals at KCN and COM; to determine faculty perceptions about their knowledge and skills for IPE in the training of undergraduate health professionals in Malawi at KCN and COM, and to analyze faculty perceptions about institutional support for IPE in the training of undergraduate health professionals at KCN and COM.

The discussion is based on the themes and subthemes that have been presented in Chapter 4. Demographic information of participants, which includes gender, professional discipline, and work experience of participants, are discussed. Study strengths, limitations, recommendations, and areas needing further study area are also presented in this chapter.

5.2 Perceptions of IPE

The study involved 36 participants and all of them were faculty members teaching undergraduate health professionals from various disciplines. The participants comprised faculty members from the following professional disciplines, medicine, pharmacy, nursing, and midwifery. The inclusion of faculty members from different professional disciplines was important in exploring the different perceptions and viewpoints, which faculty members held about IPE. Dallaghan, Hoffman, Lyden, and Bevil (2016) stated that the delivery of IPE requires support at multiple levels within educational institutions, from administration to faculty. Faculty members are vital to the successful implementation of IPE initiatives/programs because they are the ones who provide the

front-line instruction of IPE. In addition to implementing IPE initiatives, faculty also play other important roles such as developing the curricula.

The study findings showed that almost all participants perceived IPE to be a very important and feasible approach in improving education for the health professionals at the undergraduate level. Overall, participants expressed a positive perception towards IPE, consistent with other studies exploring this area (Bennett et al., 2011; Egan-Lee et al., 2011; Margalit et al., 2009). Evidence suggests that positive perceptions of IPE are global and held in common by faculty, nursing, and non-nursing staff (Bennett et al., 2011). According to Dalrymple, Martin, and Smith (2013), facilitators possessing a positive, confident attitude and valuing IPE are more likely to enhance the students' learning experience, collaborative working capability, and subsequent patient outcomes. However, one participant did not view IPE as a viable strategy in the education of health professionals at the undergraduate level despite agreeing that to some extent, IPE could remove the challenges that are associated with the current uniprofessional education approach. The main reason for this negative view of IPE was the feelings about the existing power struggles between the two professions of nursing and medicine. Power inequalities among health professionals have been reported in the literature. Generally, the medical profession is usually perceived as dominant over other professions and this can negatively affect interprofessional interactions resulting in poor collaboration (Baker et al., 2011; Sunguya et al., 2014).

Findings from a study conducted by (Baker et al., 2011) indicated that individuals felt that socialization through their training affected the way different health professional groups viewed themselves. In general, physicians perceived themselves as leaders and decision-makers while nursing, therapists, and other professions (e.g., pharmacists, dietitians, and social workers) saw themselves as team members who tend to adopt a holistic approach to care. This belief could translate into a lack of knowledge about the roles and the

responsibilities of their colleagues leading to poor interprofessional interactions. It is believed that individual views reflect the extent to which individuals hold key beliefs regarding the need for change, and agree as to which changes individuals and organizations must take (Holt & Vardaman, 2013; Rafferty et al., 2013).

Most faculty members expressed support for IPE and showed a positive attitude towards IPE. Participants perceived that the incorporation of IPE into their courses was not only beneficial but also essential for the enhancement of teamwork. Additionally, there was a positive perception about the many future possibilities that an IPE approach would offer. The study findings are consistent with other studies exploring this area (Bennett et al., 2011; Graybeal et al., 2010; Racine, Bilinski, & Spriggs, 2016; Smith et al., 2009). However, despite the positive attitude towards IPE, participants also identified challenges associated with its implementation. Racine et al. (2016) found that most of the faculty members perceived the incorporation of IPE into their courses as extremely valuable. They perceived IPE as beneficial and essential for the enhancement of teamwork skills. However, one participant perceived IPE as not being valuable. Time constraints were one of the possible explanations for the negative perceptions of the IPE approach.

The work experience of the participants ranged from 2 to 31 years. Most participants had eleven to twenty years' experience of teaching undergraduate health professionals in their respective colleges. The researcher believed that the period spent in teaching the undergraduate health professionals enabled the participants to have a better understanding of the current higher education system and environment, and to have the requisite knowledge and experience of IPE. Most participants felt that as professionals in their different fields and using their experience in teaching, they would not find it difficult to teach using the IPE approach. However, despite the participants feeling confident due to their teaching experience, they felt they were not adequately prepared for IPE. These findings concur with (Egan-Lee et al., 2011) who conducted a study to explore experiences of neophyte IPE

facilitators in North America. The findings showed that participants perceived that their previous general educational experiences as educators within their professions made them feel positive and confident about their new facilitation roles. However, it was further reported that despite having expertise in teaching their respective students, participants felt facilitating IPE was more complex than initially assumed. While facilitators expressed some understanding of the principles of IPE and IPC, most of them were neither immersed in the interprofessional literature nor aware of the specific demands related to IPE facilitation. Furthermore, many participants struggled initially, to understand the core principles underpinning IPE and IPC, as their general facilitation experiences did not translate effectively into an interprofessional context. A number of the participants viewed IPE as simply a shared learning experience, which focused on learning with different professions, rather than learning with, from and about, as outlined in the CAIPE definition. Evidence underscores the necessity of faculty members to be relatively familiar with the knowledge and outcomes of interprofessional education to successfully implement interprofessional learning initiatives (Egan-Lee et al., 2011; Khabaz Mafinejad et al., 2016). Institutions that plan on implementing IPE approaches should first consider identifying faculty training needs that can help to develop faculty development programmes.

Similarly, a study by (Derbyshire et al., 2015) conducted in Northern England to explore university educators' perceptions of the knowledge and skills needed for their role adequacy as interprofessional learning facilitators revealed that even participants with several years of experience of teaching their own professional groups described a need for a transition period before feeling confident in the IPE facilitation role. This implies that even though faculty can have several years of experience in teaching students of their profession, this experience does not prepare them for the IPE facilitation role. General teaching experience

alone is not enough. Faculty need to have the knowledge, facilitation skills and a positive attitude to effectively plan, design and implement IPE.

In contrast to the study findings, Anderson et al. (2011) conducted a study whose purpose was to assess the readiness and attitudes of inexperienced educators who had no prior experience facilitating IPE. After participation in IPE, findings showed that participants had negative perceptions of IPE. The pre-teaching interview showed a dominance of negative views of IPE with only four participants seeing any positive likely outcome of IPE for either themselves or students. All the educators who were interviewed held reservations about IPE before their first experience of facilitating IPE. The reservations they held concerned how they were going to manage the teaching. The pre-teaching concerns were related to work pressures and potential fear for the loss of uniprofessional teaching. Faculty attitudes are considered an important factor driving the implementation of IPE initiatives. Holt et al. (2008) explained that an individual's attitude towards change is influenced by the following: the content of the change, (what is being implemented); the process, (how the change is being implemented); the context, (circumstances under which the change is occurring) and the individuals, (characteristics of those being asked to be involved in the change). It is therefore important that the views and attitudes of faculty towards IPE are known before implementing any IPE initiative. Faculty members also need to be given adequate information about IPE before its implementation so that they can develop a better understanding of the concept. This is important because negative attitudes held by faculty can be communicated to students through unconscious cues and non-verbal behaviour resulting in altered perceptions of IPE in students (Dallaghan et al., 2016; Holt & Vardaman, 2013; Smith et al., 2009). Positive attitudes in addition to adequate knowledge and skills in IPE are needed to develop effective strategies to support the successful implementation of IPE (Ratka, 2013).

5.2.1 Understanding of IPE Concept

Participants were asked to describe what they knew and understood about the IPE concept and their views regarding IPE in relation to the undergraduate training of health professionals in Malawi in order to determine their understanding and appreciation of the concept. Conceptual understanding referred to familiarity with the meaning and awareness of IPE practices in the two institutions. Findings showed there was shared understanding and appreciation of the IPE concept among the participants, with common definitions and understandings within and among the professional groups. However, the participants' understanding of IPE was partially correct in the sense that they had a narrow view of IPE, such as students learning together especially in their first year of study. Furthermore, they limited the content to mostly basic sciences. Various meanings and descriptions of the IPE concept emerged from the data that the researcher obtained from focus group discussions and in-depth interviews. The findings did not show any differences in the way the participants understood the IPE concept from the data obtained from both in-depth and focus group interviews. Participants presented various perspectives of their understanding and definitions of IPE. Participants understood and described IPE as shared learning/learning together; sharing resources; a new concept, collaborative teaching; preparing students for teamwork; continuing professional development. These perspectives and understanding of IPE do not match with the standard definitions, probably because IPE approaches are not practiced in Malawi. The most widely recognized definition of IPE by CAIPE reads; "Interprofessional education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care" (Freeth, 2010, pp 80-92). The CAIPE definition of IPE further expands that IPE includes all such learning in academic and work-based settings before and after qualification, adopting an inclusive view of "professional." The World Health Organization Framework for Action on Interprofessional Education and

Collaborative Practice (World Health Organization, 2010) described interprofessional education as education that occurs when two or more professions learn with, from and about each other to enable effective collaboration and improve health outcomes.

The understanding of the IPE concept was also translated in form of whether faculty members were aware of existing IPE practices in their institution. Findings showed that some participants perceived IPE as being a new concept. Although IPE was perceived as a new concept by some faculty members, Bennett et al. (2011) argued that IPE is not a new concept, only that, it has not been integrated or mainstreamed into the majority of health care professionals curricula (Bennett et al., 2011; Margalit et al., 2009). Some participants may not be familiar with IPE because, in developing countries such as Malawi, IPE approaches are not commonly used in the education of health professionals unlike in the developed countries, where the approaches are used (Sunguya et al., 2014). Conceptual understanding of IPE by faculty is important in ensuring effective planning, designing and implementation of IPE initiatives. According to Egan-Lee et al. (2011), the effectiveness of a teacher may be hampered if they do not have a clear understanding of the definitions of key terms and concepts that they are teaching. Almost all participants said that they were not aware of any IPE practices.

The study findings reflected some lack of understanding of the IPE. Some participants equated the understanding and meaning of IPE to the teaching of basic sciences and other foundational courses to first-year students of different programs especially at the College of Medicine. They also viewed IPE as faculty members from the KCN or COM doing part-time teaching at other institutions. However, despite the misconception of IPE, participants showed a positive attitude towards IPE. Lack of clarity and misunderstanding can hinder optimal IPE implementation. Thus, determining a clear, operational definition of IPE across health care disciplines will contribute to more effective IPE design, delivery and measurement (Olenick

et al., 2010). The study findings are consistent with (Racine et al., 2016; Egan-Lee et al., 2011; Khabaz Mafinejad et al., 2016). Evidence has indicated that understanding the concept of IPE is important in relation to readiness for IPE because it can promote the initiation and successful implementation of IPE. Lack of a clear definition of IPE and understanding of how to apply pedagogical principles related to teaching IPE can result in a lack of readiness for IPE (Racine et al., 2016). A study by (Egan-Lee et al., 2011), which explored the experiences of neophyte IPE facilitators, revealed that some participants attributed a lack of a clear definition, meaning of IPE and the type of teaching methodologies used, to one of the reasons for lack of readiness for IPE. However, findings further showed that despite their misconception of IPE, participants expressed a high level of enthusiasm and commitment towards their new IPE facilitation role (Racine et al., 2016). Similarly, Khabaz Mafinejad, Ahmady, Soltani Arabshahi, and Bigdeli (2016) conducted a study that aimed to explore the perceptions and viewpoints of faculty and students about IPE in an integrated health system in Iran. Findings showed that an adequate understanding of the IPE concept was perceived to be necessary for educational authorities to be more familiarized with ways of developing and implementing shared educational content. However, faculty members perceived that insufficient understanding of the IPE concept and lack of familiarity with positive outcomes from its implementation by faculty members, administrators and education planners was the cause for using uniprofessional curricula and lack of readiness for IPE. Furthermore, faculties' insufficient knowledge of how interprofessional education programs are designed and implemented, difficulties of preparing a shared educational content as well as lack of awareness about the outcomes of interprofessional skills negatively affected faculties' motivation and tendency to implement IPE programs.

In another study by Egan-Lee et al. (2011), which explored the experiences of neophyte IPE facilitators, findings indicated that although participants expressed some

understanding of the principles of IPE and IPC, most of them were neither immersed in the interprofessional literature nor aware of the specific demands related to IPE facilitation. Many of the participants continued to have difficulty defining IPE and IPC even after attending the preparatory workshop. A number of them viewed IPE as simply a shared learning experience focusing on learning with different professions rather than learning with, from, and about, as described in the CAIPE definition, which was emphasized during the faculty development courses. Furthermore, it was reported that in some cases participant uncertainty of interprofessional concepts resulted in difficulty describing them to consultants and incorporating them into program materials. As shown from the findings from these studies, participants emphasized the necessity and importance of relative familiarity with the knowledge and outcomes of IPE as key in the implementation of IPE. Furthermore, poor conceptual understanding of core IPE principles can result in negative implications as regards readiness for IPE. This information is important because it can be used to identify faculty's development needs as regards IPE approaches.

5.2.2 Perceived IPE Benefits

The primary purpose of IPE is to prepare a collaborative practice ready workforce and improve health services and outcomes (D'Amour, Ferrada-Videla, San Martin Rodriguez, & Beaulieu, 2005; Dhaliwal, 2015; World Health Organization, 2010). Evidence has shown that there are various benefits of interprofessional education in the field of health care. According to Sunguya et al. (2014), IPE has the potential to improve future health workers' clinical and medical knowledge and clinical skills; furthermore, IPE together with collaborative practice plays a significant role in mitigating many of the challenges faced by health systems around the world. IPE benefits in relation to service users and health workers, higher education institutions service providers and students have been reported in the literature (Illingworth & Chelvanayagam, 2007; Sunguya et al., 2014, 2014; World Health Organization, 2010).

Participants in this study perceived IPE as being beneficial in several ways. IPE was perceived to have value due to the potential positive outcomes that would come with its implementation. The researcher categorized the perceived potential IPE benefits mainly as those relating to students, faculty, institutions, and patients.

Regarding benefits to students, some participants perceived IPE as a way of preparing students for teamwork and collaborative practice. They stated that as students learn together, they learn from each other, learn how to relate to each other as professionals and grow together. This would help to enrich their learning experiences and the development of cordial relationships, which is a basis for collaborative practice. Furthermore, it was perceived that IPE would facilitate the development of self-confidence in students as they learn together right from the start and grow together along with their educational processes. It was also perceived that IPE would help to clarify and facilitate understanding of the roles of other health professionals in the inter-disciplinary health care team and their contribution to the provision of holistic patient care. These findings are consistent with what has been reported in the literature (Dhaliwal, 2015; Illingworth & Chelvanayagam, 2007; Sunguya et al., 2014; World Health Organization, 2010; (Barr et al., 2016a). According to Sunguya et al. (2014) when individuals of different professions learn together, the experience can break down the professional wall between them, change their attitudes, and reduce stereotypes between professions within the medical field. Thus, among students, IPE has been a useful strategy to help change their attitudes, develop their interests in patient care, and improve their medical and clinical knowledge. Furthermore, learning together can cultivate mutual awareness, trust, countering ignorance, prejudice and rivalry in readiness for collaborative practice. Students develop interdependence as they learn with, from and about each other, which may promote interdependence in practice, enabling workers to withstand occupational stress and mitigating defensive behavior, which impedes innovation and collaboration (Barr et al., 2016a). IPE is

also reported to promote the development of students' role clarity and professional identity, which destroys negative stereotypes, creating positive attitudes towards each other as a result improving collaboration and patient care. Additionally, students are able to recognize the overlapping professional functions, or those activities that fall between professional roles. In this regard, IPE was perceived as a catalyst for developing skills and behaviors for collaborative practice. Improved understanding of the roles that other healthcare professionals have in the delivery of holistic patient care culminates in increased self-confidence, boosts an individual's recognition of the contribution of others and helps abolish deep-rooted stereotypes. This enables students to understand how to work interprofessionally hence they are ready to enter the workplace as members of the collaborative practice team (Dhaliwal, 2015).

The development of a collaborative practice team is a key step in moving health systems from fragmentation to a position of strength (World Health Organization, 2010). The study findings concur with (Smith et al., 2009), who conducted studies in the US to describe the views of faculty members on IPE benefits, barriers and strategies for implementation. The findings revealed that IPE enhanced student education and training. Participants indicated that IPE approaches more effectively prepare students for clinical practice, from functioning in an interprofessional manner to understanding the roles each discipline fulfils in the provision of patient care. Similarly, findings from the WHO Study Group on IPE and CP (World Health Organization, 2010) indicated that respondents experienced many educational and health policy benefits from implementing IPE. Educational benefits included students having real-world experience and insight; and learning about the work of other practitioners. Furthermore, IPE was reported to promote the development of teamwork skills in the students, enabling them to practice collaboratively in different health care settings. Literature has shown that there is sufficient evidence to indicate that IPE

enables effective collaborative practice, which in turn optimizes health services, strengthens health systems and improves health outcomes (Dhaliwal, 2015; World Health Organization, 2010).

Consistent with the study findings, a study by WHO (Dhaliwal, 2015) indicated that IPE was perceived to facilitate students' role clarity and the development of professional identity, which destroys negative stereotypes, creating positive attitudes towards each other and consequently improving collaboration and patient care. Additionally, evidence has shown that IPE has the potential to achieve greater collaboration between healthcare professionals by encouraging greater understanding through the creation of a common knowledge base, language and culture by introducing common concepts, values and perspectives into the curricula. Moreover, IPE can increase knowledge and enables students to assimilate new areas of learning (Mendez et al., 2008).

Evidence has also shown that the implementation of IPE can bring various benefits to both faculty and their institutions. Some of the potential benefits of IPE that relate to faculty and higher education institutions include; the potential to increase job satisfaction, raise staff morale and workforce flexibility, improved workplace practices and productivity, reducing organizational pressure, achieving greater collaborative working (Mendez et al., 2008; Reeves, Boet, Zierler, & Kitto, 2015; World Health Organization, 2010). Illingworth and Chelvanayagam (2007) described IPE as having the potential to transcend the tribalism of health professionals, promote creativity in teaching and research and foster professional cooperation. The study findings revealed that participants perceived various IPE benefits related to faculty and higher education institutions. Faculty must be aware of the benefits of IPE because awareness helps to promote faculty buy-in and to ensure successful implementation. Olenick et al. (2010) stated that once IPE is clearly defined, faculty first be educated about the benefits of IPE to ensure that facilitators deliver according to the

expectations. The study findings showed that IPE was mainly perceived as a catalyst for achieving cost-effectiveness in the institutions through collaboration and teamwork. The study participants explained that cost-effectiveness could be achieved through sharing of resources and teamwork. These findings concur with Illingworth & Chelvanayagam, (2007), who reported that cost-effectiveness was a common thread throughout the literature about the positive outcomes of IPE for institutions.

Evidence has further indicated that IPE approaches can develop opportunities for university colleges, including nursing colleges to collaborate thereby improve the efficiency of resource allocation while effectively preparing students for future roles as professionals in multidisciplinary teams (Bennett et al., 2011). Through collaboration, sharing of resources (faculty and material resources) and infrastructure (laboratories and lecture rooms) will be possible. Furthermore, IPE would help reduce duplication of courses or even teaching or learning activities, which is common with the current silo education approaches because students from various professional disciplines and programs would be learning together. Similarly, studies were done in 6 US colleges of Pharmacy (Smith et al., 2009), which aimed to describe the views of faculty members on IPE benefits, barriers and strategies for implementation, revealed some benefits which relate to higher education institutions. IPE was perceived to capitalize upon instructional economies of scale due to the potential of IPE models to minimize resources necessary to provide and administer multiple degree and professional programs.

Participants also perceived other IPE benefits such as that, IPE would promote collaboration between institutions and professionals; promote sharing of ideas and experiences amongst health professionals, while appreciating and complementing each other's strengths; improve the quality of teaching and student learning; facilitate inter-disciplinary research hence improve the quality of teaching; help to resolve conflict emanating from the

numerous interactions between or among the health professionals, and improve manpower challenges which the health sector is facing in the country. Similarly, a study was done by (Bennett et al., 2011), which aimed to explore barriers and opportunities for IPE in the complex milieu of competing for higher education institution priorities, indicated that faculty had a positive perception of the many future possibilities that an IPE approach could offer. The future opportunities that IPE could offer included improved alignment for educational programs between schools, increased communication and collegiality within the faculty and with industry, improved research opportunities within faculty and with industry partners and the potential power equalization within the faculty. Likewise, findings reported from the WHO Study Group (World Health Organization, 2010) indicated that IPE had the potential to promote improved workplace practices and productivity and to raise staff morale. These perceived benefits would enhance collaboration among faculty from different backgrounds and industry partners leading to quality teaching and learning and consequently, the preparation of collaborative practice ready graduates ready for the health work force.

As regards IPE benefits relating to patients, the majority of participants perceived that IPE would promote teamwork among health professionals and a holistic approach in the delivery of patient care through improved interactions and good relationships among health professionals. Teamwork forms the basis for collaborative practice and improved patient care. According to the WHO framework for action on IPE and CP (World Health Organization, 2010), the benefits of IPE in relation to the health systems and healthcare improved workplace practices and productivity include; improved patient outcomes, improved patient safety, better access to health care and raised staff morale. Furthermore, effective IPE fosters respect among the health professions, eliminates harmful stereotypes and evokes a patient-centered culture in practice, which results in collaborative practice and improved patient outcomes. Additionally, overall, IPE has the potential to create a more holistic approach to

health care by developing common knowledge and standardizing clinical skills and teaching, while reducing competition and conflict between different healthcare professionals (Dhaliwal, 2015). Findings from another study (Smith et al., 2009) also revealed some benefits which relate to patient care. These benefits were that IPE promotes teamwork, because learning with and from each other supports team-based approaches to care delivery; improves communication among healthcare professionals due to the potential for IPE to eliminate barriers to a greater understanding of other professions' roles and cultures; improves the quality of care and patient outcomes through promoting patient and provider safety, identifying and preventing errors, improving efficiency, and enhancing patient communication. Despite, all these recorded perceptions about IPE potential benefits on improving patient care outcomes, D'amour and Oandasan (2005) argued that there was little evidence that formalized interprofessional education initiatives particularly at the pre-licensure level, have improved patient care outcomes. However, WHO (2010) emphasizes that IPE has a great influence on improving health service delivery and healthcare outcomes.

5.2.3 Perceived Challenges to IPE

Despite the majority of participants expressing a positive attitude towards IPE and supporting it, they also perceived challenges that would hinder its implementation. Participants described various challenges that they anticipated would hinder faculty members' as well as the institutions' readiness for IPE. The researcher observed that the challenges to implementing IPE perceived by participants were associated with issues regarding logistics, lack of faculty preparation for IPE, challenges related to professional culture and those related to attitudes. These findings are consistent with findings from studies that have explored this area. The following common individual, as well as organizational challenges in implementing IPE, have been recorded; logistical challenges; lack of interprofessional training; negative attitudes; lack of communication and cohesiveness among faculty; lack of interprofessional

guidelines; structure of the educational system; centralization of educational programs; education policy; resistance to IPE approach; inadequate understanding of the interprofessional education concept; curriculum changes; limited resources; costs and funding related to IPE implementation; technology; accreditation and regulatory requirement; lack of leadership commitment and support. These challenges can hinder both individual and organizational readiness for IPE and its successful implementation (Anderson et al., 2009; Bennett et al., 2011; Berger et al., 2017; Clark, 2011; Graybeal et al., 2010; Khabaz Mafinejad et al., 2016; Sunguya et al., 2014). According to Sunguya et al. (2014), these challenges were reported in developing countries where IPE is practiced; however, there is potential for these challenges to occur in developing countries like Malawi. Furthermore, knowledge of the examples of challenges and barriers encountered from developed countries can help guide planning, initiating, and implementing IPE in developing countries. Challenges relating to logistics were the most commonly reported in this study. This is consistent with the available literature (Bennett et al., 2011; Berger et al., 2017; Dallaghan et al., 2016; de Vries-Erich, Reuchlin, de Maaijer, & van de Ridder, 2017; Graybeal et al., 2010; Smith et al., 2009).

Similarly, a study conducted by (Bennett et al., 2011), whose aim was to explore barriers and opportunities for IPE in the complex milieu of Higher Education Institution (HEI) priorities, revealed the following two broad categories of barriers to IPE: faculty related barriers that included logistical requirements, leadership, curriculum costs and funding and logistical requirements that covered curriculum, topics, technology, timetabling, and class sizes. It was also perceived that IPE leadership and commitment from one of the executive levels was fundamental to IPE success. Faculty leadership would be required to look into these logistical requirements, which if not addressed, may ruin potential gains of IPE. Furthermore, without executive leadership and commitment, not all institutions would equally

commit themselves to IPE and the barriers may seem too mighty. In contrast to the findings of this study, findings from a study by Khabaz Mafinejad et al. (2016) conducted in Iran whose aim was to explore perceptions of students and faculty members about interprofessional education in the context of the medical education and the health system found that participants perceived several barriers to IPE implementation in their settings including; compression of training programmes, the high workload of students in the clinical area, centralization of the current educational programmes and resistance of different specialized departments of interprofessional education. Participants stated that difficulties in adjusting their professional responsibilities and interference of their time with educational programmes negatively affected their main priority which was to supervise students in the clinical area. The difficulty of setting schedules which arose not only from the compression of educational courses but also from problems associated with coordinating the curricula of different professions and the centralization of the current educational programmes. Challenges with scheduling interprofessional learning activities have been reported in the literature as one of the challenges to the implementation of IPE. Faculty members and those involved in organizing such activities must find ways to deal with the challenges in order to successfully implement IPE initiatives.

The second category of barriers to IPE that was perceived by the participants was related to the health sector. It was perceived that industry challenges would occur with the implementation of IPE such as potential complications of each discipline's accreditation and the regulation requirement was the most cited challenge. This would arise from the fact that the introduction of IPE was likely to result in the need for changes to curricula and courses and each discipline would be required to conform to discipline-specific external registration and accreditation requirements. Effective strategies must be identified to address the perceived challenges at both individuals as well as organizational levels to ensure readiness

for IPE. Evidence has shown that there is a need for a tailored approach to help design a sustainable IPE (Bennett et al., 2011; Sunguya et al., 2014). Bennett et al. (2011) emphasized the need for the health industry to embrace an interprofessional practice model within its work practices to reduce workforce resistance and other barriers to IPE. Furthermore, in developing countries, an IPE program should be designed based on the context of the area in which it is to be implemented (Sunguya et al., 2014). This approach will help to reduce challenges or barriers to IPE implementation.

The study findings are consistent with a study that was conducted at the Heidelberg University Medical Faculty by Berger et al. (2017), which described results from a planned change to implement IPE. The results revealed logistical challenges such as scheduling and timetabling, given that the undergraduate curricula were already densely packed, competition for existing teaching space due to a large and growing student body, resistance to curricula and traditional roles changes and increased workload. It is reported that these logistical challenges limited the pace of change in implementing IPE. In view of this, it is important for educators to seriously consider logistical and scheduling issues as potential barriers to the readiness and implementation of IPE. de Vries-Erich et al. (2017) highlighted a similar range of challenges. These include the logistics of physically bringing diverse students together, lack of cohesiveness, the absence of a joint vision, interests and educational goals, which hampered the implementation of IPE. It was reported that these challenges influenced both the individual and organizational level readiness for IPE. Logistical and curricula challenges were also reported in a study conducted by (Khabaz Mafinejad et al., 2016), which aimed to explore the perceptions and viewpoints of faculty members and students about IPE in an integrated system. The findings showed educators' perceptions about the difficulty in scheduling associated with the compression of educational courses, problems of coordinating the curricula of different professions and the centralization of the educational programs.

Resistance of different specialized departments to IPE was also perceived as a barrier to IPE readiness and implementation. Perceived challenges to IPE must be managed effectively for IPE to be supported and successfully implemented at an individual as well as organizational level. It is therefore important that these perceived challenges be identified before IPE can be initiated or implemented. Ho et al. (2008) stated that IPE curricula must address pragmatic issues such as shared space, timetabling and equipment use in addition to opportunities for collaborative learning.

5.3 Perceived Readiness Characteristics for IPE

Readiness for IPE is viewed at individual and organizational levels. Literature indicates some prerequisite readiness characteristics for individuals and institutions to implement IPE (Clark, 2011; Derbyshire et al., 2015; Ho et al., 2008; Khabaz Mafinejad et al., 2016; MacDonald et al., 2010; Ruiz et al., 2013).

5.3.1 Perceived individual readiness characteristics for IPE

Evidence shows that individual faculty members must have some of the following readiness characteristics to implement IPE; respect, politeness, good listening skills, motivation, creativity, enthusiasm, honesty, sensitivity reflexivity, positive attitude, commitment, flexibility and openness (Derbyshire et al., 2015; MacDonald et al., 2010; Ruiz et al., 2013). These readiness characteristics that faculty members need to have to be able to implement IPE effectively are consistent with the findings of this study. Participants in this study described different characteristics that they perceived as being necessary for a faculty member to have in order to be ready for IPE. The researcher categorized their responses into three major groups namely, personality, professional, and academic readiness characteristics. Open-mindedness, positive attitude, and respect came out as key personality readiness characteristics. Other personality readiness characteristics included being approachable, receptive to change, tolerant, accommodative, humble, and exemplary, having a good

personality, self-confidence, the ability to build good interpersonal relationships and to network, the ability to work in a team, to teach and work across professions, flexibility and commitment. Professional expertise was perceived as a powerful tool to help in building self-confidence, facilitate understanding of other professions' roles in health care delivery and promote effective communication. It was perceived that if the person has confidence, it is easy for them to accept views from other professions. Other professional readiness characteristics that were perceived were, taking responsibility and being accountable for advancing the education of students, appreciating and recognizing each other's expertise; the ability to work in a team; to build interprofessional relationships with lecturers from other colleges, to appreciate the curriculum, to conduct multidisciplinary research and being a life-long learner.

Perceived academic readiness characteristics included being knowledgeable about IPE and having some training in IPE. It is important for faculty members to have the readiness characteristics that would enable them to implement IPE effectively. The introduction of IPE involves teaching groups of students from diverse professional backgrounds and means that changes are made to the curricula. These changes to the curricula and in the composition of students require that faculty members change their traditional teaching role to the new facilitation role (Derbyshire et al., 2015; Di Prospero & Bhimji-Hewitt, 2011). Furthermore, these changes demand that faculty have these readiness characteristics for them to effectively manage the diverse students and effectively perform the facilitation role. Di Prospero and Bhimji-Hewitt (2011) stated that when planning for interprofessional learning experiences, it is important to select the appropriate facilitators who will exude enthusiasm and commitment to the idea of interprofessional collaboration. Clark (2013) pointed out the significance of these readiness attributes in building collaborative relationships and practice. It is stated that both trust and respect are essential ingredients in the development of partnership capital,

which comprises the interconnections individuals have with one another and between social networks. Clark (2011) further explained that lack of trust is one of the key reasons that many interprofessional projects fail. Almost all participants perceived themselves to possess readiness characteristics and skills for IPE and based on this, they perceived themselves as ready for IPE even though they were not trained in the IPE. However, one participant felt that she was not sure whether she was ready for IPE, while another participant said that she was not ready for IPE because she naturally finds it difficult to include students from other colleges when conducting clinical teaching and supervision.

In the course of eliciting what the participants thought about their peers' readiness for IPE, a large number of participants perceived some fellow faculty members to be ready for IPE while others were not perceived to be ready. For those who were perceived ready, the readiness assumed that they possessed the perceived readiness characteristics, skills for IPE and work experience in higher education. Additionally, they perceived their peers to be ready for IPE since each faculty member was well trained in their own field of work and that some have inherent abilities to teach.

Findings of this study showed that open-mindedness was the most frequently mentioned perceived individual readiness characteristic a faculty member must have to implement IPE effectively. The majority of participants explained that open-mindedness would help an individual to learn from others and appreciate the role other professions play in the delivery of health care. Participants viewed open-mindedness first, as ability to accommodate and accept other professions with different views, having a receptive mind to change as well as the ability to accept objective criticisms. Secondly, participants viewed open-mindedness in reference to the ability of faculty to accommodate and respect students with a different professional background from that of their own. In this aspect, it was explained that having an open mind would help faculty to avoid bias when interacting with

students from various professional backgrounds. The readiness characteristics perceived in this study are similar to those indicated in the literature (Derbyshire et al., 2015; MacDonald et al., 2010; Ratka, 2013; Ruiz et al., 2013).

Similarly, MacDonald et al. (2010) identified key competencies and their associated behavior indicators to support and evaluate students on IPE experiences more efficiently and effectively. The findings revealed that being open to and seeking the contributions of other team members was perceived as one of the behavioral indicators that would facilitate individual professionals including faculty to acquire interprofessional competency of knowledge of the professional role of others. Respecting the roles, expertise and unique contributions of other team members, addressing misconceptions/stereotypes among team members, valuing the enhanced benefits of the collaborative efforts of the team, were some of the behaviors perceived to facilitate readiness for IPE. The study findings are also consistent with (Ruiz et al., 2013) who found that characteristics and behaviors such as openness; respect, where a respectful tone of voice was used; politeness, where questions were answered politely; listening attentively to comments; were displayed by facilitators. Facilitators also used a variety of strategies in a conscious attempt to help students to feel comfortable in participating in the discussions. It is the role of health science educators to support students participating in IPE learning activities to understand interprofessional learning and in valuing the relevance of interprofessional participation. Faculty behaviors and characteristics as indicated in this study can help in creating a safe and receptive atmosphere and an engaging learning environment that will promote successful implementation of interprofessional education (Ruiz et al., 2013).

Similarly, in a study (Derbyshire et al., 2015) which aimed to establish IPE facilitators' perceptions of the requirements for the role adequacy, participants perceived the following readiness individual characteristics: being a transformational leader; flexibility;

motivation, creativity, enthusiasm, honesty, positive attitude, reflexivity, commitment, a clear understanding of IPE principles, theory and policy alongside a good understanding of the curriculum. These readiness attributes support the development of competencies that direct educators/faculty to teaching strategies that encourage, support, evaluate and facilitate the development of collaborative practice-ready graduates. Ratka (2013) underscores the need for pharmacy educators/faculty to have competencies to master the growth and development of IPE. Furthermore, they should possess unique characteristics such as appreciation of the value, benefits and importance of IPE in health care and show a deep understanding of, and respect for, other health professionals' skills and contributions to patient care. Most of all, they should have determination and extraordinary interest in the adoption, implementation and success of IPE.

5.3.2 Perceived Institutional Readiness Characteristics for IPE

Regarding institutional readiness for IPE, there were different views from the participants about their institutions being ready to implement IPE. Some participants perceived the institutions to be partially ready for IPE. This was so because they perceived the institutions as ready for IPE in certain areas and not ready in other areas. The institutions were perceived by some participants to be ready to support IPE in the following areas: availability of classroom space, management support for IPE, library space, reading materials, internet and computer laboratories. However, most participants perceived the institutions as not ready for IPE because they felt the existing infrastructure was inadequate; faculty were not trained in IPE; the institutions did not have IPE policy, and the existing curricula were inappropriate for IPE. Evidence has indicated that the incorporation of IPE into health professional curricula involves significant changes and as such, threatens the status, boundaries and involvement of individual stakeholders. It often results in a paradigm shift in institutional culture (Graybeal et al., 2010; Lawlis, Anson, & Greenfield, 2014). According to Graybeal et al. (2010), IPE

implementation often results in a paradigm shift in institutional culture where in some instances, institutional philosophy, mission statements and strategic planning were heavily influenced. Literature has shown that at the institutional level the following are some of the key readiness characteristics that have been reported as needed to support IPE development and implementation: time for planning and implementing IPE initiatives; academic and administrative support and commitment to creating an organizational context necessary for the growth of interdisciplinary programs; facilitation and coordination of IPE activities; governance and management structures that offer a collaborative environment; IPE champions; faculty development; a shared vision and fully integrated IPE philosophy; measures to track and evaluate the processes and outcomes of IPE with targets and standards for their achievement (Graybeal et al., 2010; Holt et al., 2007; Khabaz Mafinejad et al., 2013; Lawlis et al., 2014).

The findings of this study do not completely concur with the findings reported by Graybeal et al. (2010) and Ho et al. (2008). Findings by Ho et al. (2008) whose study aimed to identify key conditions/factors that drive and sustain academic institutions in facilitating the integration of IPE as a routine part of health education and practice, revealed the following key conditions that must be present at the institutional level for IPE to succeed; governance and management structures that facilitate a collaborative environment for participating disciplines, including interprofessional curricular development, management of collective resources and promotion of educational changes that are in accord with those occurring in the larger workplace. Furthermore, findings showed that funding was reported to be an important foundation for the implementation and sustainability of IPE initiatives as was the important role champions had in initiating IPE and their ongoing involvement as a key factor for overcoming barriers to successful organizational change. Professional development for faculty was perceived to play a critical role in the design, development, implementation

and delivery of IPE. The need for educational institutions to provide funding for joint educational programmes was suggested by participants as a facilitating factor in the implementation of IPE programmes (Khabaz Mafinejad et al., 2016). Similar findings were reported by (Graybeal et al., 2010) from their study whose purpose was to explore the core themes that contribute to the art and science of IPE from institutional leaders from institutions of higher learning identified as emerging leaders in IPE. The findings showed that the following must be present in the institution for the successful initiation and implementation of IPE; key IPE champions in selected departments to advocate for IPE programs and culture; the presence of governance structures such as a fully integrated IPE philosophy and the related curriculum development and implementation work; student involvement and support for IPE; institutional leadership support for IPE, especially the deans' role in identifying funding support for IPE initiatives, ensuring that steps are taken to align IPE development efforts to the college mission and values, and ensuring accountability in design, implementation and evaluation. These conditions or readiness characteristics must be present at the institution for it to implement IPE successfully. Similarly, (Clark, 2011) reported that successful IPE programs require multiple players of genuine support.

5.4 Perceived Skills Needed for Implementing IPE

Evidence has shown that IPE facilitators need to have certain skills to effectively implement IPE (Dalrymple et al., 2013; Derbyshire et al., 2015; Di Prospero & Bhimji-Hewitt, 2011; Egan-Lee et al., 2011; Freeth, 2010; MacDonald et al., 2010; Ruiz et al., 2013; Silver & Leslie, 2009). Competent IPE health professional educators need to have adequate knowledge, skills and attitudes to develop effective strategies, support successful implementation of IPE to health professionals' curricula, coordinate IPE activities and lead others in IPE endeavors (Ratka, 2013). However, Freeth (2010) argued that experienced faculty members already have most of the skills they would need to facilitate IPE. This is so

because these educators teach uniprofessional groups, which contain learners from different cultures of different ages, with different abilities, varying prior experiences and different levels of interest in the topic under consideration. Consequently, faculty and practice-based supervisors gain skills in playing to the strengths of different learners and supporting everyone to make a valued contribution; providing some tailored feedback; and managing group dynamics, including conflict. Nevertheless, the greater diversity within an interprofessional learning group may stretch these skills and make the faculty feel unprepared to implement IPE approaches effectively. According to Freeman et al. (2010) with IPE the educator undertakes an explicit facilitation role, leading the group process to meet diverse learning needs and professional expectations beyond those found when working uniprofessionally.

Participants in this study described various skills they considered necessary for implementing IPE. The researcher identified some common patterns from the participants' narratives and came up with six categories of skills. These were interpersonal and communication skills, teaching and facilitation skills, information and technology (IT) skills, professional skills, conflict resolution skills, and formal training in education. Most of the skills that participants mentioned fell within the interpersonal and communication skills category. Most of these competencies are similar to those identified in the literature. Ratka (2013) underscored the importance of faculty members who have transitioned to IPE champions to have interprofessional education knowledge and understanding, accompanied by adequate pedagogical skills. Pedagogical skills include the capacity to plan, initiate, lead and develop education and teaching with the departure point in both general and subject-specific knowledge of student learning (Ratka, 2013). Furthermore, they should be able to create novel learning environments, innovative teaching methods and diverse learning activities. Additionally, they should possess excellent communication skills, conflict

resolution, consensus-building skills and the ability to effectively share their vision and lead others in IPE.

In contrast, Derbyshire et al. (2015) reported different categories of skills perceived to be necessary for effective implementation of IPE. Findings from their study, which aimed to establish university educators' perceptions of the knowledge and skills needed for their role adequacy as IPL/IPE facilitators in Northern England, showed that participants perceived the following skills as key to effective implementation of IPE; the ability to foster an IPL/IPE culture and the ability to draw on transformational leadership skills to manage unpredictability, group dynamics, relationships and behavior. Transformational leadership skills are essential to strengthen role adequacy for IPE facilitation in order to role model a positive attitude towards interprofessional working. Furthermore, role adequacy for IPL/IPE facilitation appeared to be maximized when facilitators could use transformational leadership skills to place them as core to the process, creating a shared interprofessional vision, coping with complexity and unpredictability arising from professional differences. Additionally, effective supportive challenging of students' stereotypes was described as an important skill. In this study, participants did not perceive transformational leadership skills as needed for the implementation of IPE. Although participants did not specifically mention the term transformational leadership skills, some of the skills they perceived to be needed for the effective implementation of IPE are part of the transformational leadership skills, for example, communication and conflict resolution skills. According to Clark (2013), successful implementation of IPE requires a shift from a more traditional management style of coordination and control to a transformational leadership style which is more visionary leadership. Transformational leadership style is required for the development and continuation of IPE programs because it is associated with such qualities as attending to the

needs of the partnership members, building a shared vision or culture and fostering a learning environment based on mutual respect and trust.

Similar findings by (MacDonald et al., 2010) revealed six key competencies. The key competencies were communication; strength in one's professional role; knowledge of the professional role of others; leadership; team function and negotiation for conflict resolution. It is important that competencies needed for IPE implementation be identified because they can be used to form the basis for the preparation of faculty and students for interprofessional practice and to develop a tool for assessing students' performance. Additionally, identifying the needed skills and competencies for implementing IPE will help in developing IPE programs and faculty members will be able to support and evaluate students in interprofessional educational experiences efficiently and effectively. Similarly, findings from a study (Di Prospero & Bhimji-Hewitt, 2011) which aimed to explore faculty's perspectives with facilitated teaching of a first-year interprofessional course within the didactic curriculum of a health professional program revealed that the skills of the facilitator were key in infusing continual relevance to clinical practice through each module and small group learning session. Facilitating small group sessions and having the ability to link small group sessions to relevant course content and professional clinical practice was key in engaging students in the facilitated activities. The facilitator has a unique role to guide learners through a constructive learning process where the focus is less on content expertise and more on the ability to guide the students through their learning using directed focused questions and reflection (Di Prospero & Bhimji-Hewitt, 2011). The faculty also identified the ability to manage tension, conflict and breakdown in communication among the group of learners as important to carry out the facilitator role successfully. Facilitators need to pay close attention to group dynamics while concurrently maximizing interactivity and creative problem solving among all the participants. The ability to facilitate is integral to the delivery of interprofessional curricula.

Lack of facilitation skills will result in the ineffective implementation of IPE programs or initiatives. Di Prospero and Bhimji-Hewitt (2011) further reported that the majority of faculty assigned as facilitators did not have formal facilitation training and had minimal skills in guided discussion as well as interactive teaching. Lack of formal training in facilitation and having minimal skills in guided discussion and interactive teaching made the facilitators apprehensive and less confident with the facilitating process. Consequently, they felt the sense of unpreparedness hindered the achievement of the learning objectives. Facilitators need to pay close attention to group dynamics while concurrently maximizing interactivity and creative problem solving among all the participants.

The sense of unpreparedness felt by participants (Di Prospero & Bhimji-Hewitt, 2011) concurs with Cant et al. (2013), who found that teachers thought that successful interprofessional teachers applied specific facilitation skills to bring together students from one discipline to engage with each other in a meaningful exchange of knowledge, clinical skill or technical aspects of patient care. Teachers' strategies included being interactive, facilitating inter-student discussion and generally making sure that there was verbal interaction between groups. Furthermore, there was a perceived need to encourage students to communicate openly with each other. The teachers' views on the need for having facilitation skills to effectively implement IPE, has been reported in the literature (Di Prospero & Bhimji-Hewitt, 2011; Egan-Lee et al., 2011). According to Di Prospero and Bhimji-Hewitt (2011), the skill of being able to facilitate is integral to the delivery of interprofessional curricula. Faculty involved in IPE needs to be effective facilitators with abilities to adapt to the dynamics of interprofessional learning, to optimize learning and to value the unique experience and contribution that each profession brings to the learning environment. However, Buring et al. (2009) observed that most faculty members have not been trained to teach before being hired as educators. Instead, they teach in ways similar to how they were

taught, learn on the job, and/or grow through faculty development programs. This can result in faculty failing to implement IPE effectively.

5.5 Proposed Strategies for Implementing IPE

Participants expressed positive attitudes towards IPE and made several suggestions that the institutions needed to consider before initiating and implementing IPE approaches. The following suggestions were proposed: promoting an institutional and individual shift of mindset to achieve readiness for IPE; initiating IPE at a small scale and going into full scale along the way; thorough planning; orientation and training of faculty to provide adequate preparation and transition to using IPE approaches; sensitizing both students and faculty to promote a better understanding of the benefits and challenges of IPE; identifying ways of sourcing funds to support IPE initiatives; and seeking views about IPE from major stakeholders such as the Ministry of Health and Population, the Nurses and Midwives Council of Malawi and students. Participants felt that looking into these issues before initiating IPE would ensure successful implementation. Similarly, findings from a study by de Vries-Erich et al. (2017) indicated that participants mentioned sufficient support and resources such as time and budget as pivotal for the implementation of IPE. Other facilitators for successful IPE implementation included curriculum assignments suited to IPE, committed teachers and faculty development training. They felt discussion about IPE within organizations and at the government, the level was a key element that needed to be advocated, to accomplish the successful implementation of IPE. On the other hand, organizational or government-issued budget cuts, lack of interprofessional faculty training, interprofessional guidelines in educational blueprints and the focus on uniprofessional guidelines decreased opportunities to invest in IPE. A study conducted by Berger et al. (2017) indicated that stakeholder commitment at a state, political or ministerial level was a major enabling factor. The clear responsibility to prepare health professionals with academic qualifications to meet future

service delivery facilitated the investment of significant financial resources in the University to support the establishment of a new interprofessional bachelor's degree. Adequate funding and leadership commitment were also reported as essential for the successful implementation and sustainability of IPE (Graybeal et al., 2010). Utilizing a facilitator guideline was perceived to provide comfort to faculty members that were new to facilitation as well as consistency in meeting the learning objectives. Furthermore, the guide provided a structured format to an otherwise unstructured teaching style which helped to ensure an effective learning dialogue among all participants of the small group learning (Di Prospero & Bhimji-Hewitt, 2011).

Good leadership that focuses on building understanding, value and mutual respect across disciplines is essential for embedding IPE into health professionals courses (Bennett et al., 2011; Graybeal et al., 2010; Ho et al., 2008). It is important that college leadership, especially the dean, be fully committed to the implementation of IPE educational approaches. In a study by Graybeal et al. (2010) respondents pointed out the important role that the dean's office plays in identifying funding support for IPE initiatives, ensuring that steps are taken to align IPE development efforts to the college mission and values, and ensuring accountability in design, implementation and evaluation. Furthermore, the office of the dean could serve as a terrific platform to advance IPE thinking and action among faculty and within the college. The dean plays a critical role at the higher-level administration in ensuring that there is some understanding on the part of the management of the importance of IPE.

Regarding the approach to initiating and implementing IPE, Buring et al. (2009) indicated that systematic planning, development and implementation including a plan for faculty and curricular development process should be outlined before IPE can be initiated at any institution. It is important to consider such areas as the diversity of the mission and goals of the institution; the type of institution and settings where the school or college is allocated;

and the availability of other institutions and organizations outside the university where the school or college is located. Findings from a study by Berger et al. (2017) demonstrated that the incremental pace of change generated a range of short-term wins and milestones that were more easily managed. A further major advantage was that time was made available over four semesters to gain acceptance of the IPE change vision and steadily created buy-in- at the faculty, which helped manage attitudinal resistance to the change from some quarters. It was considered that the incremental changes proved to be less disruptive to workload than a major overhaul of two curricula at once would have been. Furthermore, this approach to implementing IPE made it possible to avoid the need to invest significant resources upfront (purchase of teaching resources and employment of additional teaching staff), which was of value at the administrative level. It was concluded that the structured approach drawing on change management concepts was a key strategy in successfully anchoring IPE seminars in the undergraduate curricula. According to Smith et al. (2009), a commonly recommended principle to implementing IPE was to view it as a continuum, with small forays at the onset. Findings from a study by Smith et al. (2009) indicated that participants felt that expecting a wholesale change in a short time was unrealistic and might lead to confusion, frustration and lack of expectance by faculty members and students. In view of this, participants recommended that activities should first focus on a small area such as practice approaches, ethics in practice, professionalism and core educational science. In addition to developing requisite award structures, some participants noted that perhaps not all members need to or should be involved in IPE, for example, basic sciences. Yet it was noted that while widespread institutional support was critical, faculty members must individually embrace IPE. Furthermore, the findings showed that academic incentives for units, as well as individual faculty members to pursue IPE initiatives were also key success factors. Budgetary support was often listed as the primary incentive, along with funding of pilot projects, and sustained

funding for successful endeavors. Findings from a study by Cant et al. (2013), whose objective was to explore interprofessional teachers' perceptions of key features of interprofessional teaching at Monash University, revealed that students' learning was thought to proceed best when there were equal numbers of students from the participating professions, and less well when there was a shortage in some groups owing to placement dates. The effectiveness of IPE was also seen as highly dependent on the chosen clinical skill topic, which should suit shared learning among disciplines. Furthermore, effectiveness was seen to depend on topic choice being relevant to the learning objectives of each group according to their stage of learning as groups may have different expectations of the depth of content required. The chosen topic needed to be of value to students and this was reportedly emphasized to students, for otherwise they could be reluctant to pay attention because they were more focused on topics in their study course that incorporated summative assessments. Freeth (2010) indicated the need to ensure a comfortable learning experience where the content and pace of IPE need to be appropriate to all participants. This implies that faculty needs to have good knowledge about topics appropriate for IPE.

Orientation and training of faculty were emphasized as one of the areas that needed to be considered before initiating IPE in this study. Participants proposed that orientation and training of faculty were necessary to provide them with adequate preparation and transition to using IPE approaches. These views regarding the need for faculty development in preparing them for IPE implementation are similar to those that have been reported in the literature. The important role that faculty development plays in the preparation of faculty members for implementing IPE has been emphasized in literature (Berger et al., 2017; Buring et al., 2009; Di Prospero & Bhimji-Hewitt, 2011; Egan-Lee et al., 2011; Ho et al., 2008; Ratka, 2013; Ruiz et al., 2013). Faculty development is a key element in the development of IPE. Faculty members play a critical role in the design, development, implementation and delivery of IPE.

However, Buring et al. (2009) observed that historically, faculty members have not been trained to teach before being hired as educators. Instead, they teach in ways similar to how they were taught, learn on the job, and/or grow through faculty development programs. IPE requires faculty to shift from a content linear delivery model of teaching to a facilitative model (Ruiz et al., 2013). Thus, it requires faculty to think differently about what constitutes learning and teaching. Given this, faculty needs to have knowledge and skills in IPE and interprofessional teamwork for successful implementation of IPE. Ruiz et al. (2013) stated that comprehensive faculty development programs are an important means by which an institution can move towards implementing and sustaining IPE. However, Egan-Lee et al. (2011) observed that there continues to be uncertainty within the literature, about the learning needs of facilitators and how best to prepare them to be effective in their IPE work. In support of the need for IPE training for faculty, Freeth (2010) emphasized that experienced teachers already have most of the skills they will need to facilitate IPE, which they gained from teaching uniprofessional groups. Nevertheless, the greater diversity within an interprofessional learning group may stretch these skills. According to Dalrymple et al. (2013) preparation for the IPE, facilitation role should involve personal leadership development approaches such as coaching, action learning and role shadowing.

The findings of this study are consistent with Egan-Lee et al. (2011) who aimed to explore the perceptions and experiences of neophyte facilitators in preparing for and delivering IPE in an urban setting in North America. The results showed that despite having expertise teaching their respective students, faculty felt that facilitating IPE was more complex than initially assumed. Although facilitators entered the project feeling confident about their role as facilitators, many described themselves during post-program interviews, as feeling rather under-prepared for small group facilitation work. Time was therefore needed to provide adequate preparation for these new facilitators to carry out the IPE facilitation role

effectively. Specific IPE training for faculty may enhance understanding of how best to deliver education. Faculty needs adequate training in IPE for them to achieve a successful transition to IPE.

5.6 Limitations of the Study

The limitations of this study are recognized. This was a qualitative study that utilized a purposive sample of 36 faculty members teaching in undergraduate nursing, pharmacy, and medical programs in Malawi. The findings, as for any qualitative research, may not be transferable to other settings. Although every effort was made to explore the narratives systematically and to limit reporting bias, the nature of qualitative research means that the analysis of the findings relies on the interpretation of the researcher. In addition, the analysis may not have captured every issue relating to the views of the participants. According to Bradshaw et al. (2017) knowledge of reality from a naturalistic perspective as is the case in qualitative description research, is socially constructed by the participants and also by the researchers. It is therefore recognized that an objective reality cannot be discovered or replicated by others. It is also recognized that the study was done at KCN and COM only among all the other institutions that provide tertiary education for health professions, which may have affected the findings of the study. However, to canvas the views of many professions as a whole, more institutions and health professions could have been included in the study to get a broader perspective about IPE. Time and financial constraints were additional limitations for the researcher. As the study was conducted as a requirement for the fulfilment of the degree of Doctor of Philosophy in interprofessional healthcare leadership, it had to be done and completed within a stipulated period.

5.7 Recommendations

Based on the findings of the study, some participants showed a misunderstanding of the IPE concept equating it to the teaching of basic sciences and other foundation courses to

first-year students from different programs. The concept of IPE was also associated with part-time teaching at a different institution. In view of this, there is a need to provide IPE orientation to all faculty members to sensitize them and increase awareness about IPE. Additionally, faculty members emphasized that they needed to be trained in IPE before its implementation, even though they felt experienced and had adequate skills as educators. It is therefore recommended that institutions should assess faculty training needs and design appropriate staff development programmes to ensure a successful transition to IPE. The researcher also recommends further research involving a larger sample of different health professionals. When more disciplines engage in IPE, there is a greater chance for success. Findings also revealed that participants proposed that key stakeholders such as students, the Ministry of Health, and regulatory bodies needed to be consulted before IPE approaches are implemented in the training of undergraduate health professionals. Stakeholder commitment at the political (Ministry) level is one of the major enabling factors in ensuring the successful implementation of IPE. Student organizations and their leadership council can be one of the major tools for garnering students support. It is therefore recommended that research be conducted to examine students' and other stakeholders' views towards IPE.

5.8 Conclusion

The study sought to explore faculty perspectives on their readiness for IPE at KCN and COM. The findings showed that there was positive perception towards IPE. IPE was perceived to have the potential to improve the quality of education and health care outcomes. However, participants portrayed a lack of understanding of the concept of IPE, which probably prompted them to underscore the need to train faculty in IPE before its implementation to ensure a successful transition. Although participants displayed a gap in their understanding of the concept of IPE, they were able to mention characteristics that they perceived would make individual faculty as well as their institutions ready for IPE.

Additionally, participants felt that certain skills were appropriate for implementing IPE approaches and emphasized that faculty should be trained to master the skills. However, there were contrasting views about the need for training whereby some participants felt they already had the required skills. Challenges to IPE implementation at an individual as well as institutional level were also perceived. Based on the perceived challenges, strategies for the successful implementation of IPE were proposed. Participants felt that successful implementation of IPE would only be achieved if the proposed strategies such as promoting an institutional as well as the individual shift of mindset would be taken into consideration before initiating the IPE approaches. Furthermore, the involvement of major stakeholders such as the Ministry of Health, regulators and students to hear their views about IPE before its implementation was also proposed. Graybeal et al. (2010) emphasized that institutions of higher learning have an obligation to move beyond traditional profession-based silos that characterize most health professions' education and create a conducive environment where IPE can occur. This study has contributed valuable information on the perceptions of faculty towards IPE in the Malawian context.

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Appendices

Appendix I: Participant Information Sheet and Consent Form

Part A: Information sheet

Study title: ‘Readiness for interprofessional education for health professionals: Perspectives of faculty in the University of Malawi’

What is the purpose of the study?

The purpose of the study is to explore faculty readiness for interprofessional education (IPE) in the training of undergraduate health professionals at KCN and COM

Do I have to take part?

Your participation in the study is very important and is entirely voluntary. You can withdraw from the study at any time you feel like, and your withdrawal will not have any negative consequences. The study is being conducted after obtaining ethical approval from the College of Medicine Research Committee (COMREC).

If I take part in the study, what will happen to me?

All participants’ rights will be observed as required by the research ethics bodies. Anonymity will be ensured by assigning numbers to the participants instead of using names. Data will be collected in a well-arranged private room at the respective college campuses with very minimal disturbances. In-depth interviews will be used to collect data from deans and heads of departments, while focus group interviews will be used to collect data from faculty. All interviews will be tape-recorded. Additionally, handwritten notes will be taken to supplement the tape-recorded information.

Both electronic and physical data resources will be kept safe throughout the data collection and analysis period to control its access by unauthorized persons. Data will be locked in a cabinet and will only be accessed by the researcher and the supervisors to keep it safe from corruption and ensure confidentiality and privacy. Electronic data will be saved on a computer and will only be accessed using a password.

What are the possible benefits for participating in the study?

There are no direct or indirect benefits for your participation in the study. However, the information you contribute will help to improve the quality of undergraduate education for the various disciplines in the health profession.

What are the possible risks for participating in the study?

There are no risks for participating in this study.

If something goes wrong what will happen?

If you have any concerns about this study and how you have been treated during the study can be forwarded to:

The researcher - Caroline Gillian Chitsulo, Kamuzu College of Nursing, P/Bag 1 Lilongwe.
Tel. 0888 876 755

Supervisor – Associate Professor. Dr. Rachel R. Pitman, Kamuzu College of Nursing, P/Bag 1 Lilongwe. Tel 0997357377

The Secretariat – COMREC, P/Bag 360, Blantyre 3. Tel. 01871911

Part B: Informed Consent

You are invited to participate in a study exploring faculty readiness for interprofessional education in the training of undergraduate health professionals. Read and sign this form please if you agree to participate in the study.

1. I have read the attached information sheet and have understood the purpose of the study
2. I agree to voluntarily participate in the study and provide information to the best of my knowledge and experience.
3. I understand that I am free to withdraw from participating in the study any time I feel like it and that this will not have any risk on my job in any way.

4. I know that I do not have to suffer any injury or harm during the research process. This information that I will give to the researcher will not be used against me in future.
5. I understand that information will be kept confidential and accessed by the researcher or those people directly concerned with the study.
6. I understand that I will not benefit from participating in the study financially.
7. I know how to contact the researcher if need be.

Participant's name	Signature	Date
Researcher's name	Signature	Date

Appendix II: Letter of Support to Conduct a Study at the College of Medicine

Kamuzu College of Nursing
Private Bag 1
Lilongwe

6th October 2016.

The principal
College of Medicine
Private Bag, 360
Chichiri
Blantyre 3.

Dear Sir,

RE: Letter of Support to Conduct a Study at the College of Medicine

I am Caroline Gillian Chitsulo, a senior lecturer in the Basic Studies department at Kamuzu College of Nursing currently pursuing a Doctor of Philosophy degree in Interprofessional Health Care Leadership at Kamuzu College of Nursing. As part of the requirements for the completion of the degree, I am expected to conduct research. **My study title is ‘Readiness for Interprofessional Education for Health Professionals: Perspectives of Faculty in the University of Malawi’.**

Qualitative research approaches will be used to explore faculty readiness for interprofessional education in the training of undergraduate health professionals. The study is expected to provide baseline data on the feasibility of incorporating interprofessional education in the training of undergraduate health professionals. The study participants will include faculty members, deans and heads of departments from the MBBS and Pharmacy degree programs. Data will be collected through in-depth interviews for deans and heads of departments and focus group interviews for faculty members. It is proposed that data will be collected from

December 2016 to February 2017 depending on approval of the study by the College of Medicine Research Ethics Committee (COMREC).

The purpose of this letter is therefore to ask for a letter of support that will be attached to my research protocol for approval by COMREC.

Please contact me for any further information on 0888876755/0997677365

Caroline Gillian Chitsulo (RNM, MBA)

gillianchitsulo@kcn.unima.mw; gillianchitsulo@gmail.com

Supervisor: Associate Professor Rachel Rodriguez Pitman, KCN, Blantyre

Rrodriguez406@gmail.com

Appendix III: Letter of Support to Conduct a Study at Kamuzu College of Nursing

Kamuzu College of Nursing
Private Bag 1
Lilongwe

6th October, 2016.

The Principal
Kamuzu College of Nursing
Private Bag 1
Lilongwe

Dear Madam

RE: Letter of Support to Conduct a Study at Kamuzu College of Nursing

I am Caroline Gillian Chitsulo, a senior lecturer in the Basic Studies department at Kamuzu College of Nursing currently pursuing a Doctor of Philosophy degree in Interprofessional Health Care Leadership at Kamuzu College of Nursing. As part of the requirements for the completion of the degree, I am expected to conduct research. **My study title is ‘Readiness for Interprofessional Education for Health Professionals: Perspectives of Faculty in the University of Malawi’.**

Qualitative research approaches will be used to explore faculty readiness for interprofessional education in the training of undergraduate health professionals. The study is expected to provide baseline data on the feasibility of incorporating interprofessional education in the training of undergraduate health professionals. The study participants will include faculty members, deans and heads of departments. Data will be collected through in-depth interviews for deans and heads of departments and focus group interviews for faculty members from the faculties of nursing and midwifery. It is proposed that data will be collected from December 2016 to February 2017, depending on approval of the study by the College of Medicine Research Ethics Committee (COMREC).

The purpose of this letter is therefore to ask for a letter of support that will be attached to my research protocol for approval by COMREC.

Please contact me for any further information on 0888876755/0997677365

Caroline Gillian Chitsulo (RNM, MBA)

gillianchitsulo@kcn.unima.mw; gillianchitsulo@gmail.com

Supervisor: Associate Professor Rachel Rodriguez Pitman, KCN, Blantyre

Rrodriguez406@gmail.com

Appendix IV: Support Letter from Kamuzu College of Nursing

UNIVERSITY OF MALAWI KAMUZU COLLEGE OF NURSING

ACTING PRINCIPAL
Prof. E. Chinwa, DipNurs, MRM,
B.Sc., MN, PhD



P/BAG 1, LILONGWE, MALAWI
TELEPHONE: 265 (0) 1 751 622/200
TELEGRAMS: NURSING
FAX: 265 (0) 1 756 424
EMAIL: principal@kcn.unima.mw
Website: www.kcn.unima.mw

REF.NO.: KCN/R

26th October, 2016

To : Whom it May Concern

Dear Sir/Madam

SUPPORT FOR MRS CAROLINE GILLIAN CHITSULO'S RESEARCH

Mrs Chitsulo is a staff member of Kamuzu College of Nursing (KCN) and currently she is pursuing a PhD. She has informed us that she plans to conduct a research whose title is ***"Readiness for Inter-professional Education for Health Professionals: Perspectives of Faculty in the University of Malawi."***

My writing is to assure all concerned that KCN shall allow her to conduct interviews, focus group discussions and individual interviews to its staff members in various groups as categorized in her research.

In case of further clarity with regard to this support, please do not hesitate to contact the Registrar of KCN at the address indicated above.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Humphreys Kalele Gunchi'.

Humphreys Kalele Gunchi
For: REGISTRAR

CC: Acting Principal
Acting Deputy Research Director
Dean of Postgraduate Studies

Appendix V: Support Letter from College of Medicine



COLLEGE OF MEDICINE

Principal
M. H. C. Mipando MSc PhD

Our Ref:

Your Ref:

College of Medicine
Private Bag 360
Chichiri
Blantyre 3
Malawi
Telephone: 01 871911
01 874107
Fax: 01 874 700

8th November 2016

Mrs Carol Chitsulo
Kamuzu College of Nursing
P/Bag 1
Lilongwe

Dear Mrs Chitsulo

RE: LETTER OF SUPPORT TO CONDUCT A STUDY AT COLLEGE OF MEDICINE

Thank you for your letter of 6th October 2016 regarding a supporting letter for you to conduct a study titled "Readiness for Inter-professional Education for Health Professionals: Perspectives of Faculty in the University of Malawi". This is part of your PhD study.

As Dean of Medicine, I believe this study will be relevant and is likely to contribute to the quality of teaching in all our programmes at College of Medicine.

I fully support that you conduct the study at College of Medicine and also wish you all the best in your studies.

Yours sincerely

PROFESSOR N C MKANDAWIRE
DEAN OF MEDICINE

Appendix VI: Readiness for IPE: Focus Group Interview Guide

Number of participants:

Composition of participants:

- Department
- Gender
- Age
- Highest educational qualifications
- Work experience

Place:

Starting time:

Finishing time:

1. Tell me what you know about interprofessional education (IPE), (knowledge of IPE and IPE principles).
2. What are your views about IPE in relation to the undergraduate training of health professionals in Malawi? (attitudes and beliefs, value for IPE)
3. What characteristics should a faculty member have to be considered ready for IPE? (Do you think you have the characteristics?)
4. What approaches would you use to teach when implementing IPE initiatives?
5. What skills do you think are required to implement IPE?
6. In your opinion, do you think you have the skills to implement IPE initiatives if the college was to start one?
(Probe: What are these skills)?
7. What are your views regarding KCN/COM in implementing IPE? (Probe: Can the existing infrastructure support the IPE initiative?)

Appendix VII: IPE Readiness In-depth Interview Guide

Readiness for interprofessional education: Perspectives of faculty in the University of Malawi

The researcher will conduct in-depth interviews of deans of faculty and heads of departments for medicine, pharmacy, nursing and midwifery programmes.

Date of interview	
Time of interview	
Name of institution	
Department	
Interviewer	
Interviewee's code number	
Position of interviewee	
Duration of interview	

Section A: Demographic data

Age

Sex Male ☐ Female ☐

Profession.....

Highest educational qualifications.....

Position.....

Section B: In-depth interview questions

Institutional support

1. Tell me anything you know about interprofessional education (IPE).
2. Describe your views regarding IPE in relation to the undergraduate training of health professionals in Malawi.
3. In your opinion, do you think the institution is ready to initiate IPE? Explain.

4. What characteristics should a faculty member have, to be considered ready for IPE?
Do you view the faculty in your department as having these characteristics?
Do you think you have the characteristics yourself?
5. What are your views about the skills of faculty in your department in relation to using IPE approaches in the training of undergraduate health professionals? (Probes: Are there any faculty members trained in facilitating IPE?
Are there any plans to train faculty in skills for implementing IPE initiatives?)
6. In your opinion, do you think you have the skills to implement IPE initiatives if the college was to start one?
7. How do you view the existing infrastructure (classroom space, IT systems) at the college regarding IPE in the training of undergraduate health professionals? Can it support the implementation of IPE?
8. How do you view management's commitment to IPE in the training of undergraduate health professionals? (Availability of IPE policy at the institutional level)

Appendix VIII: COMREC Certificate

