# THE IMPACT OF POSTGRADUATE QUALIFICATIONS IN MEDICAL EDUCATION

AHSAN SETHI

Submitted for the degree of

Doctor of Philosophy in Medical Education

Centre for Medical Education

University of Dundee

March 2016

*I dedicate this thesis to my parents. I hope that this achievement will complete the dream that they had for me all those many years ago, when they taught me how to read.*

*I also dedicate this thesis to the people of Pakistan. I hope that this accomplishment will help me bring progress and prosperity to our community.*

# Contents

# List of Tables

# List of Figures

# List of Abbreviations

AAMC.....Association of American Medical Colleges
AMEE .....Association for Medical Education in Europe
AoME..... Academy of Medical Educators
ASME.....Association for the Study of Medical Education
BEME.....Best Evidence Medical Education
CME .....Continuing Medical Education
CME ..... Centre for Medical Education
CoP.....Community of Practice
CV .....Curriculum Vitae
EdD ..... Doctor of Education
ERIC.....Education Resources Information Center
FD..... Faculty Development
GEA ..... Group on Education Affairs
GMC.....General Medical Council
GP.....General Physician
HEA ..... Higher Education Academy
IELTS.....International English Language Testing System
LCME.....Liaison Committee on Medical Education
MRCGP……Member of the Royal College of General Practitioners
NHS.....National Health Service
PhD.....Doctor of Philosophy
PRHO .....Pre-Registration House Officer
QLLR .....Qualitative Longitudinal Research
REF ..... Research Excellence Framework
SCIT ..... Social Cognitive Identity Theory
SCT .....Social Cognitive Theory
SLE.....Supervised Learning Events
SPSS..... Statistical Package for Social Sciences
TEF..... Teaching Excellence Framework
UK.....United Kingdom
USA..... United States of America
WHO ..... World Health Organisation

# Acknowledgements

For a significant role in actualising my dream and tucking this feather in my cap. I would start my expression of gratitude from Allah, the Almighty, thanking Him for giving me the opportunity, strength and wisdom.

I could not have imagined having a better supervisory team for my PhD than Drs. Sean McAleer, Rola Ajjawi and Susie Schofield. It was an honour to work under their kind supervision. Their insightful feedback and encouragement helped me to widen my research from various perspectives. I am extremely thankful for their patience, guidance and support. The laughter over cups of tea with the faculty, staff, and PhD colleagues from the Centre for Medical Education will always be remembered. I extend my gratefulness to them for always being there when needed and above all for their friendship. I am also indebted to all the participants, who extended their support for my research study and enabled me to collect data in a timely fashion. I look forward to work with all of you again in the future.

I owe a deep sense of gratitude to my parents, who have nurtured and supported me throughout my lifetime in the accomplishment of my endeavours. I am also thankful to my siblings Fatir, Shoaib, Hira, Maha, and Maria who tied me into their loving web and supported through all odds from miles away. And to my sweet niece Haram and nephew Musa, who were born during the course of my PhD. I hold all of you in my heart.

Travelling to a new place, settling down in another country and different environment is always challenging. I take this opportunity to thank all those people who made my stay in the United Kingdom worthwhile. Shakeel, Jaffar, Usman, Asif, Ashraf, Faisal, Taqweem, Omer, Kashif, Saqib, Ahsan, Saad, Adnan, Waleed, Tariq, Pervez, Khawar and Naveed to name a few. Being with all of you has been a wonderful experience.

Last but not the least, this acknowledgement would be incomplete if I did not mention the Higher Education Commission and Khyber Medical University for funding my PhD candidature, and especially Prof. Dr. Mohammad Hafizullah for his constant support.

Thank you very much

# Declaration

I, Ahsan Sethi, declare that I am the author of this PhD thesis entitled, 'The Impact of Postgraduate Qualifications in Medical Education'. This thesis is a record of research work that I, Ahsan Sethi, have undertaken and this work has not been previously accepted for a higher degree. Finally, unless otherwise stated, I declare that I have consulted all references cited within this thesis.

Ahsan Sethi

## Summary

Due to increasing societal demands, accountability and economic constraints, there has been a paradigm shift in the healthcare culture with a move to formally train medical educators. This has resulted in the professionalisation of medical education, with various development initiatives including postgraduate qualifications. The demand for these qualifications in medical education can be judged by the increase in providers, from 2 to 31 in the UK and from 7 to 124 worldwide over the last two decades. However, detailed information about the influence and effectiveness of such courses remains sparse. This study investigated the impact of postgraduate qualifications in medical education on graduates' educational identities, practices and career progression.

The study design is mixed methods using the explanatory model. The first study comprised of an online survey of graduates from the Centre for Medical Education, Dundee between 2008 and 2012. The data collected were sequentially explored in more depth through semi-structured interviews in the second study. To increase the range and scope of enquiry a third study was carried out, which involved a 10 month follow-up of a new cohort of face-to-face students (2013/14) through the course and to the workplace. The quantitative data were analysed using non-parametric statistics on SPSS 21, and constructivist grounded theory analysis was used for the qualitative data in ATLAS.ti 7.

I found that a qualification in medical education enhances theoretical foundations in educational practices, with increased self-efficacy and engagement in scholarly activities. The qualification encourages transformational changes and epistemological development as a teacher, researcher, leader and learner. Many participants attributed their career progression to the qualification. The graduates were able to lead various educational changes in the workplace and they described substantial performance attainments. I also found their work environment and personal factors influenced the impact of these qualifications. A conceptual framework based on an increased understanding of the identity development of healthcare educators was also developed.

This is the first study on the long-term effects of a degree-awarding course in medical education on healthcare professionals worldwide. The findings have implications for the educators, course directors, healthcare organisations and professionalisation of the speciality.

# Preface

It is said, 'life always begins with one step outside of your comfort zone'. After three years of toil and sweat, highs and lows, I present my PhD thesis in the hope that it will unlock sagacity and encourage a thought process. As a student, I was not satisfied with the traditional ways medical education is delivered in Pakistan, and I always observed a need for professional development of medical educators. This was further emphasised as I moved into medical education and was given the opportunity to undertake a PhD within the Centre for medical Education at the University of Dundee in January 2013. My future role at the Khyber Medical University, Pakistan will involve the development of a programme leading to a Masters' degree in medical education. Since medical education is not widely seen as a valid speciality in my context, I will be viewed as a leader of the discipline of medical education in my country, promoting it as a postgraduate speciality for the medical graduates. I will also be asked to contribute towards teaching, assessment and educational scholarship both nationally and internationally. In addition, I was intrigued by the number of people enrolling for a qualification in medical education and the increasing number of institutions offering these qualifications in medical education worldwide. Therefore, researching this area is of personal as well as professional interest to me. I hope that this research will inform the policy and practice in medical education and also justify the investment in terms of faculty time and other resources requested from the universities.

The PhD has been a steep learning curve, with many new experiences. Being a dental health professional with a postgraduate qualification in Public Health from Pakistan and a Masters in Medical Education from Dundee was advantageous in terms of the awareness of the context and work practices in the United Kingdom and overseas. My Masters' research introduced me to the pragmatism research paradigm, and my range of work experiences led me to understand the experiences of various health professionals.

This thesis is organised into six chapters. In Chapter 1, I present an in-depth literature review on professional development initiatives in medical education, followed by a focus on professional identity. Through this review, I identify the gaps in the literature to inform my research questions. Chapter 2 presents the methodology, focussing on the mixed methods approach and the overarching pragmatism paradigm. Also, included in this chapter is a reflexive account of measures I undertook to ensure the quality of the

research. Chapters 3 to 5 provide a detailed account of the three studies carried out as part of this research thesis. Each of these three chapters comprises: methods including details on participant recruitment, ethical considerations, data collection and analysis; results/findings and discussion. Finally, Chapter 6 brings the whole thesis together, highlighting the key findings, educational implications and directions for future research.

## Papers

Sethi, A., Schofield, S., Ajjawi, R. & McAleer, S. 2015. How do postgraduate qualifications in medical education impact on health professionals? Medical Teacher (published online).

## Presentations

Sethi, A., McAleer, S., Ajjawi, R. & Schofield, S. 2015. Postgraduate qualifications in medical education – Is the juice worth the squeeze? In: Association for Medical Education in Europe Annual Conference (AMEE 2015). Glasgow, UK. 5-9th Sept 2015.

Sethi, A., McAleer, S., Ajjawi, R. & Schofield, S. 2015. Postgraduate qualifications in medical education – An ace up your sleeve? In: 25th CMDN Annual Postgraduate Research Symposium. University of Dundee, Dundee, UK. 12th June 2015.

Sethi, A., McAleer, S., Ajjawi, R. & Schofield, S. 2014. Identity development of medical educators. In: CMDN Seminar Series 2014. Mackenzie Building, University of Dundee, Dundee, UK. 10th December 2014

Sethi, A., McAleer, S., Ajjawi, R. & Schofield, S. 2014. The impact of postgraduate qualifications in medical education on graduates' professional identity development and career pathways. In: MEI meeting, College of Medicine, Dentistry and Nursing - Research Symposium, Crieff Hydro Hotel and Resort, Crieff, Perthshire, UK. 21st February 2014

Sethi, A., McAleer, S., Ajjawi, R. & Schofield, S. 2013. The impact of postgraduate qualifications in medical education on graduates' professional identity and career pathways. In: 23rd CMDN Annual Postgraduate Research Symposium. University of Dundee, Dundee, UK. 7th June 2013.

## Posters

Sethi, A., McAleer, S., Ajjawi, R. & Schofield, S. 2014. The impact of postgraduate qualifications in medical education on graduates' professional identity and career pathways. In: Association for the Study of Medical Education Annual Scientific Meeting (ASME ASM). Brighton, UK. 16-18 July 2014.

Sethi, A., McAleer, S., Ajjawi, R. & Schofield, S. 2014. The impact of postgraduate qualifications in medical education on graduates' professional identity and career pathways. In: 24th CMDN Annual Postgraduate Research Symposium. University of Dundee, Dundee, UK. 6th June 2014.

## Workshops

Sethi, A. 2014 Introduction to Mixed Methods Research. In: CMDN Seminar Series 2014. Mackenzie Building, University of Dundee, Dundee, UK. 10th December 2014

Ajjawi, R. & Sethi, A. 2013 Mixed Methods in Research. In: Discovery Course - Research Methods in Medical Education. West Park Conference Centre, Dundee, UK. 15 – 19th July 2013

## Awards

George Lawrence Fund – University of Dundee (ASME meeting Nov 2015)

AMEE Free Registration Award (AMEE conference Sep 2015)

Dow Travel Funding - Graduate School - University of Dundee (Jun 2014)

Best Poster at 24th CMDN Annual Postgraduate Research Symposium (Jun 2014)

# Chapter 1: Medical Education – History and Research

## 1.1 Introduction

This chapter provides an in-depth account of the literature on professional development initiatives in medical education and on professional identity development. First, I provide a brief background followed by an exploration of various drivers of professionalisation in medical education. Subsequently, I present an overview of this professionalisation along with a critical analysis of the relevant literature on professional development initiatives. Then, I discuss transformation, professional identity, and the associated literature from education and medical education. Finally, I highlight the gaps in the literature and present the overarching research question.

## 1.2 Search Strategy

A systematic exploration and analysis of the relevant literature facilitated the development of rationale, methodology and preliminary understanding on identity development in the current study. The literature review around professional development, medical education and professional identities was carried out in accordance with the Best Evidence Medical Education (BEME) guidelines (Haig and Dozier, 2003a, 2003b). In 2013, the initial literature review was carried out electronically using ERIC[1] and Medline[2] (PubMed). However, it continued throughout the duration of the project. Google Scholar was extensively used to search for relevant articles and books from specific authors working on professional identity and faculty development e.g. Lynn Monrouxe, Alan Bleakley, Richard Jenkins and Yvonne Steinert. As the literature became familiar, a focussed search in key journals such as Medical Education, Advances in Health Sciences Education, Medical Teacher and Academic Medicine ensued. Grey literature that included policy documents of various health regulatory bodies was also reviewed.

The initial keywords were Faculty, Development, Medical, Education, Professions and Identity. The educational level was set to Higher Education. The search focus was

[1] An educational database with ten million (10,000,000) educational citations (largest for education) and 17,000 medical education citations.
[2] A North American search engine with 300,000 educational citations and 73,000 medical education citations.

narrowed to articles with full text availability and from the last 15 years. However, some articles beyond this range were also read to understand the history and drivers of professionalisation. The language was restricted to English. Only relevant articles were downloaded and critically reviewed.

### 1.3 Background

The word 'doctor' comes from the word '*docere*' (Latin) and it means 'to teach' (Cherry, 1986). Until relatively recently, any competent medical doctor was considered an effective teacher, and a qualification in education was deemed unnecessary (Irby, 1994, Jason and Westberg, 1982). A patient after undergoing a procedure is not assumed qualified to perform that procedure. Why then should it be assumed that doctors automatically know how to teach based on having been medical students themselves? (Petersen, 1999).

Van der Vleuten and colleagues (2000) criticised health professionals over their indifferent attitude towards education and educational research. They pointed out that for achieving mastery in clinical practice and research, health professionals undergo extensive training and supervision, which is accredited and quality assured. In addition, they are encouraged to search for best evidence to inform their practice. However, for their role as educators, formal training in teaching is not considered worthwhile and progress in their professional field is considered equivalent to their development as teachers. Healthcare educators are criticised for consciously or unconsciously following those whom they have most admired and respected without using evidence to inform their educational practice (Van der Vleuten et al., 2000). One might argue that there are good teachers, who are not formally trained in education. However, this can be associated with their charisma as a teacher, which should not exclude applying evidence to practice. Despite the recommendations of the UK Government (UK Professional Standards Framework, 2011), teacher training programmes available in many universities are often voluntary and serve a small number of graduate students (Brownell and Tanner, 2012). Hence, teaching is left to habit, experience and idiosyncratic educational decision-making in universities.

Fortunately, in healthcare there has been increasing recognition that the skills required of trainers to help transform medical students into physicians are neither inborn nor acquired automatically (Cohen et al., 2005, McLachlan, 2005). The wide-spread belief

that expertise in teaching occurs naturally with excellence as a scientist or practitioner highlighted by Irby (1994) has since been challenged (Davis et al., 2005). It has become clear that the mastery of the scientific content, research and clinical skills does not in itself necessarily translate into educational expertise (Searle et al., 2006a). At the same time, ongoing research in education and psychology has long been demonstrating that learning is a complex process (Mann, 2011). This calls for an increase in sophistication on the part of healthcare educators and implementation of professional development initiatives.

### 1.4 Drivers of Professionalisation

In recent years, there has been a growing interest in the professionalisation of medical education. The impetus has come from a number of factors e.g. increased public expectations, accountability, evidence based education, economic constraints and workforce shortfall in healthcare (Davis et al., 2005).

#### 1.4.1 Public and Professional Expectations

There has been an exponential growth in the volume of medical knowledge and the range of services (Davis et al., 2005, Hesketh et al., 2001). At the same time, the increase in medical consumerism has led to heightened public and professional demands of healthcare services and practitioners (Harden, 2000). In response to these changes, the pattern of healthcare delivery has changed. Health professionals are expected to be self-directed lifelong learners, continuously updating and adapting with the increasing demands of practice (Bligh, 1998, Jolly and Rees, 1998). In addition, there has been a paradigm shift in the culture of medicine. The traditional professional autonomy and powerful hierarchies no longer holds (Bleakley et al., 2011). Hence, there is ongoing need for assessing these changes and offering an appropriate response via professional development of the healthcare educators in universities.

#### 1.4.2 Accountability and Accreditation Requirements

The increasing public dissatisfaction and sensationalised media coverage of unprofessional practices have resulted in governmental oversight and societal pressure for accountability in healthcare (Bligh, 1998, Harden, 2000, Riesenberg et al., 2009).

Medical schools and regulatory bodies need to ensure that tomorrow's healthcare providers are professionally competent to meet community needs (Wallace, 1997). The curriculum must acknowledge the healthcare priorities of its community and guarantee adequate standards of attainment amongst graduates (Bligh, 1998). The government, educators and doctors as well as patients have begun to focus on what is required to produce good physicians (Jolly and Rees, 1998). There has been a focus on developing standards, accreditation requirements and other quality assurance measures in healthcare across the medical education continuum (Eitel et al., 2000, GMC, 2006, Postgraduate Medical Education and Training Board, 2008). These accreditation requirements by the regulatory bodies and sponsors also mandate continuous evaluation of the curriculum, appraisal of the faculty and re-accreditation of all healthcare professionals (Hesketh et al., 2001). Thus, medical schools require departments of medical education to evaluate the implications of these trends and provide appropriate advice (Davis et al., 2005).

### 1.4.3 Evidence Based Education and Curriculum Reforms

Various innovations in teaching, learning and assessment methods, along with the increasing complexity of the curriculum at various levels of training as a professional have led to the recognition of research and scholarship in education (Bleakley et al., 2011, Harden, 2000). Initially, educational models promoting student-centeredness and collaborative learning had little impact on the traditional apprenticeship structure, and clinicians continued with authoritarian methods such as using humiliation for correction (Bleakley et al., 2011). Later, increased awareness about the potential usefulness of applying principles of education to teaching and training programmes has ensued (Guilbert, 1985, Van der Vleuten et al., 2000).

A survey of U.S. medical school deans and faculty members showed a need for 'fundamental changes' in the medical curriculum (Cantor et al., 1991). Also, there have been various reports calling for major reforms in medical education (Armstrong et al., 2003, Cox et al., 2006, Riesenberg et al., 2009). Significant curricular and organisational changes have been taking place in the training institutions (Armstrong et al., 2003, Steinert et al., 2010). The students are viewed less as passive learners or empty vessels to be filled; rather knowledge is seen as constructed through prior experiences (Mann, 2011). In recent years, small group collaborative learning methods have gradually been replacing didactic teaching (Harden, 2000). Likewise, objective

and structured assessment have been replacing traditional subjective methods. Additionally, the internet allows supported asynchronous teaching and learning, beyond the usual classroom and clinics (Bleakley et al., 2011). All these changes are necessary to keep up with the rapid developments in healthcare and meet the accreditation requirements of the regulatory bodies and sponsors (GMC, 2009). These educational developments and curriculum reforms underpin the increase in recognition for training the healthcare professionals to expand their pedagogical understanding (Dath and Iobst, 2010, Hesketh et al., 2001, O'Sullivan and Irby, 2011).

### 1.4.4 Shortfall in Workforce and Economic Constraints in Healthcare

Many countries have identified workforce shortfalls in healthcare (Davis et al., 2005). In response to that, new medical schools are opening, and existing schools are increasing enrolment. This has resulted in a lack of staff commensurate with the increasing number of students (Davis et al., 2005). The commercialism and economic constraints in healthcare also present a big challenge (Jolly and Rees, 1998). Health professionals are required to provide compassionate patient care within a contained treatment cost (Armstrong et al., 2003). These circumstances demand efficiency and effectiveness, thus recognising a need for experts in educational methods and curriculum planning for the new medical schools (Davis et al., 2005).

## 1.5 Professionalisation in Medical Education

Professionalisation refers to a process whereby a gainful activity claims social standing and achieves the status of a ‘profession’ (Emener and Cottone, 1989). That activity should have an agreed and unified body of knowledge, professional standards and qualifications, codes of ethics and behaviour (Gray, 2011). The definition of a ‘profession’ has changed over time and no single, comprehensive, universally agreed definition or model of a profession exists (Newlyn, 2015). However, Newlyn contended that all of the models contain features that suggest a profession to have an identifiable body of knowledge and an autonomous governing body.

Medical education (also called health professions education) has been evolving to claim professional status among the heterogeneity of professions and fragmentations (specialisation) within them (Watson, 1992). Some key medical educators and other

international organisations have played a key role in moving the field forward (Fincher and Work, 2006). According to Bleakly and colleagues (2011), medical education is a force for change, which democratises the traditional authoritative discipline of medicine by generating and promoting evidence-based educational practices.

As part of and in response to increasing professionalisation of medical education, there has been an emergence of medical education associations supporting scholarship locally and globally (Cohen et al., 2005, Pugsley et al., 2008b, Steinert, 2005). Some of these associations (e.g. Association for Medical Education in Europe and Association for the Study of Medical Education) organise conferences and professional development events. Others (e.g. Academy of Medical Educators) have been developing standards and establishing systems for credentialing medical educators (Bleakley et al., 2011). These bodies are concerned with regulatory issues. They also claim or at least intend to achieve the status of professional bodies in medical education. According to Gray (2011), such claims for professional status and the emergence of standards and awards are typical of the journey towards professionalisation.

Various peer reviewed journals (e.g. Medical Education, Medical Teacher and Academic Medicine) and books (e.g. Handbook of Medical Teachers and Understanding Medical Education) add to the existing body of knowledge. The educational methods used are now being scrutinised by educational experts and legitimised by an educational community of practice (Bleakley et al., 2011). As evident from the educational reforms around the world, this increasing scholarship now influences various decisions in medical education. This is in contrast to a previous study by Nelson et al (1990), which reported that evidence rarely played a role.

One of the roles of the doctor which has received worldwide recognition is as a trainer of future doctors (Frank and Danoff, 2007, Harden et al., 1999). The Liaison Committee on Medical Education (LCME), which establishes standards for medical schools in the USA, now requires faculty to have an understanding of educational methods and show a longitudinal commitment to educational scholarship (Liaison Committee on Medical Education, 2014). In the United Kingdom, various developments in the National Health Service (NHS) have also led to an increased emphasis on doctors as educators (Hesketh et al., 2001). The Walport report (2005) which lays out career options for doctors in the UK has recognised medical education as a speciality discipline. The General Medical Council (GMC) specify the personal and professional attributes required of doctors in

the UK. ‘The New Doctor’ recommended that ‘doctors with particular responsibility for supervising PRHOs [Pre-Registration House Officer] must develop the skills, attitudes and practices of a competent teacher’ (GMC, 2005, p. 51). ‘Tomorrow’s Doctors’ also mentions that doctors are responsible for ‘developing the skills and practices of a competent teacher if they are involved in teaching’ (GMC, 2009, p.12). The Foundation Programme Curriculum (2012) for medical doctors introduces Supervised Learning Events (SLEs). These SLEs include a component for ‘Developing the clinical teacher’ (Academy of Medical Royal Colleges Foundation Programme Committee, 2012). In addition, the GMC is currently implementing a ‘Recognition and Approval of Trainers’ process (GMC, 2012), making it mandatory for all named roles involved in educating medical students and trainees to have minimum competencies in education. This shows a trend towards engaging doctors in effective pedagogical practices across the continuum of their undergraduate, postgraduate and continuing medical education.

Genn and Harden (1985) recommended linking career development prospects (promotion) with faculty development and appraisal. Initially, only faculty development in professional, leadership and organisational initiatives were rewarded. Then institutions started to adapt their promotion and tenure guidelines to reward educational scholarship in addition to clinical care and basic sciences research (Schindler et al., 2002). Many universities have formally linked promotion with scholarship and research in education (Boyer, 1990, Gibbs and Coffey, 2004, Gruppen et al., 2003, Heflin et al., 2009, Turner et al., 2011). In some countries, universities have also made competence in education and scholarship mandatory for recruitment in academia (Tekian and Artino, 2013). This has also encouraged the faculty to participate in educational scholarship and foster learning more effectively (Fincher and Work, 2006). The Association of American Medical Colleges (AAMC) Group on Education Affairs (GEA) has reached a consensus over using educational portfolios with qualitative and quantitative measures to document, assess and reward the attributes of medical educators (Simpson et al., 2007). However, documentation and assessment of scholarly activities in a tangible way is challenging.

### 1.5.1 Evolving Roles of Medical Educators

With the increase in complexity of medical education, the roles of medical educators have evolved. Harden and Crosby (2000) explained 12 ways in which a medical teacher

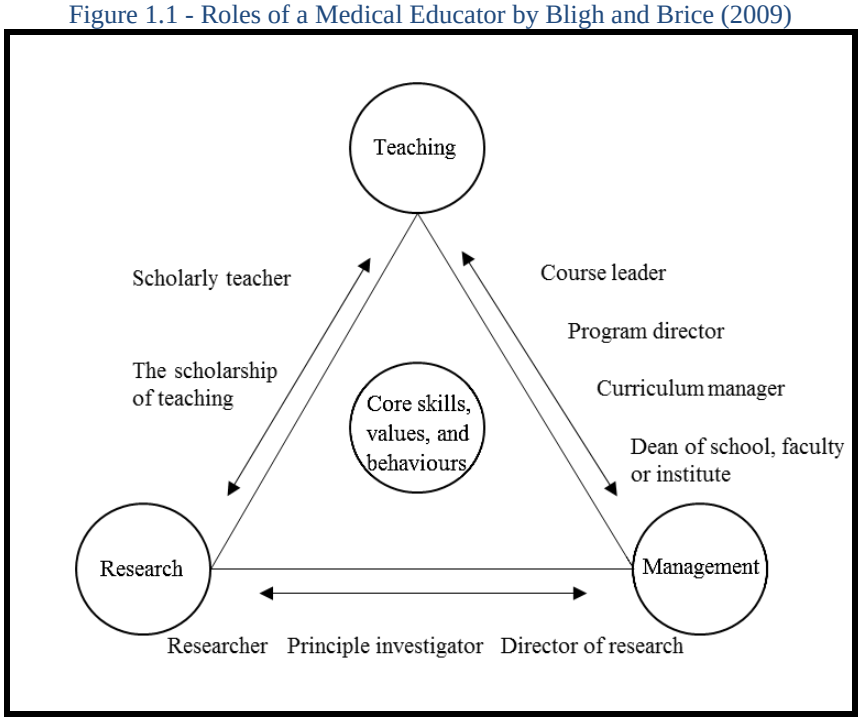
can contribute. These are grouped under six areas: information provider, role model, facilitator, assessor, course planner and resource material producer. Hesketh and colleagues (2001) proposed a three-circle learning outcomes model for an `effective teacher': performance of the tasks (the tasks the doctor as a teacher is able to do), approach towards these tasks (how the doctor approaches his/her teaching) and professionalism (the doctor as a professional teacher). However, some roles of a medical educator demand more educational expertise while others more medical expertise. Likewise, some involve more face-to-face contact than others do. In addition, the boundaries between these various competencies are vague and therefore, may need further refinement.

A good medical teacher is more than a subject expert. Medical students have identified many qualities of a good teacher: good communicator, approachability, ability to relate to the students, friendliness, being sensitive to needs of the learners, expert knowledge, enthusiasm, and patience (in a high to low rank order) (McLean, 2001). In another study, clinical clerks and residents have identified positive attitude, taking time to teach, using teachable moments, tailoring teaching methods to the learner, and giving appropriate feedback as attributes of a good teacher (Thurgur et al., 2005). Although, teachers still perceive current knowledge of the field as important, good teaching is also associated with other attitudinal competencies such as enthusiasm for teaching and collegiality (Duvivier et al., 2009).

Repeated calls have been made for improving the education process through scholarship and research in medical education (Whitcomb, 2002). Boyer (1990) proposed four definitions of scholarship: discovery (original research), integration (disciplined work that brings new insights to bear on original research), application (professional service and applied research) and teaching. He emphasised the dynamic roles of teachers in transmitting, transforming, extending and maintaining the continuity of knowledge. While refining Boyer's scholarship of teaching, Fincher and Work (2006) highlighted the educator's role as a researcher with distinctions from teaching along a continuum. Teaching (design and implementation of activities) leads to scholarly teaching (evidence based teaching with continuous evaluation and improvement), which then leads to scholarship of teaching (development of peer-reviewed and publicly disseminated product for use in student's learning) on a continuum. Bligh and Brice (2009) emphasised the role of medical educator as a leader, manager, and administrator, which has been neglected in the literature. They included those who influence and shape policy

at all levels (leader) as a third dimension to Fincher and Work's (2006) continuum. They presented an equilateral triangle with teaching, research and leader as its three points (Figure 1.1). Hence, the expectations of today's academics now include leadership along with scholarly activities as well (Steinert, 2011).

Figure 1.1 - Roles of a Medical Educator by Bligh and Brice (2009)




### 1.5.2 Evolving State of Medical Faculty

To enact quality in the United States medical education, Abraham Flexner surveyed American medical schools and published a report under the aegis of the Carnegie Foundation, commonly known as the Flexner report (1910). Among its various recommendations, it proposed university-based, full-time and salaried faculty that can devote significant time to teaching and research, in the absence of pressures to generate income through private clinical practice. Flexner mentioned that there is no place in medical schools for

*'the scientifically dead practitioner, whose knowledge has long since come to a standstill and whose lectures, composed when he first took his chair, like pebbles rolling in a brook get smoother and smoother as the stream of time washes over them'* (Flexner, 1910, p.57)

Today, medical schools employ full-time and salaried clinical faculty. However, their roles and responsibilities significantly differ from what Flexner had imagined. The pressures of clinical productivity still competes with the time for teaching (Barzansky and Kenagy, 2010).

Even though, teaching has been recognised as important, its comparable status as a professional activity is still lower than other areas of professional activity. The demands of balancing time for clinical commitments, management responsibilities and research compete with teaching, which is delegated to the bottom of the list for faculty time (Bligh, 1998, Lowry, 1993, Martenson and Nystrup, 1984). The constraints of professional practice also do not allow for training as a teacher (Lowry, 1993). It has become difficult for health professionals to stay up-to-date with the current literature in medical education (Faux, 2000).

The National Committee of Inquiry into Higher Education in the UK recommended in the Dearing report (1997) that 'institutions of higher education begin immediately to develop or seek access to programmes for teacher training of their staff' (p. 126, Recommendation 13). Elton (1998) also endorsed this view and suggested a need for basic training for all those involved in teaching. Governments are now responding by compelling universities to make provisions for teacher training (UK Professional Standards Framework, 2011). However, a critical mass of dedicated medical educators is necessary to provide consultation, professional development, raise awareness and act as role models in medical education. Riesenberg and colleagues (2009) identified various constraints that make acquisition of competencies in education difficult for the physician educators with little time to improve teaching, assessment or work on curricular related activities. They proposed hiring non-physician academics (e.g. sociologists, psychologists and anthropologists) and allied medical staff (e.g. nurses and physician assistants) with training in medical education. However, the various aspects of clinical teaching, professionalism and pressures (social and emotional) in medicine makes it unique and complex. A lack of exposure to clinical or medical circles creates potential problems for the translation of medical education research (Bleakley et al., 2011). Therefore, a primary background in the healthcare may be important.

Nowadays, an extremely diverse workforce with varying responsibilities in discrete settings is delivering medical education (Bligh and Brice, 2009). Although, most of the medical educators are health practitioners who began their careers as clinicians but they

also come from diverse backgrounds of health management or research in the basic sciences, psychology, statistics or social sciences. They may deliver teaching to small groups, large groups or individual trainees in a medical school, hospital or the community settings. Their teaching responsibilities depend on their roles (formal/informal) and position (e.g. consultant/residents) as a medical educator (Hesketh et al., 2001). They may have varying responsibilities alongside teaching such as clinical service, research, management, curriculum design and assessment. They may have a range of employers: universities, medical schools, teaching hospitals and academic health centres. Such a varied workforce is hard to encompass within a single set of standards and competences (Bligh and Brice, 2009).

### 1.6 Professional Development in Medical Education

Effectiveness in various roles of the educator require appropriate training in order to facilitate learning and thus, meet the demands placed on them as medical educators (Brownell and Tanner, 2012). Faculty development initiatives within medical education began in the 1950s through the activities of the Association of American Medical Colleges' Curriculum and Assessment unit (Miller, 1985, O'Sullivan and Irby, 2011). It was realised that a systematic preparation for teaching is as important as medical practice or research. Over the past few decades, the educational aspects of health professionals training have grown into prominence and become a major concern. The Faculty Development (FD) of teachers was initially defined as 'an institutional process which seeks to modify the attitudes, skills, and behaviour of faculty members toward greater competence and effectiveness in meeting student needs, their own needs, and the needs of the institution' (Francis, 1975, p.720). Earlier, it was conceptualised as strategies to improve faculty members' teaching performance (Stritter, 1983). However, subsequent reviews (Bland and Schmitz, 1986) called for a broader definition of FD, based on the expanding scope of faculty roles. According to Sheets and Schwenk (1990), it refers to those activities that institutions use to renew or assist faculty in their roles as teachers, researchers, clinicians and administrators. A comprehensive approach to professional development in higher education includes instructional, professional, leadership as well as organisational development (Irby, 1996). The definition of faculty development (also called professional development) advanced in subsequent decades under the influence of organisational policies, demands and evolving roles of medical educators (Webb, 2012).

Many doctors and allied health professionals with an interest in education are engaging in medical education courses (Bleakley et al., 2011). O'Sullivan and Irby (2011) identified four different types of participants: (1) students and trainees early in their careers, who teach but have little or no expertise, (2) faculty with a minor teaching role (3) faculty with a major teaching role and, (4) faculty interested in becoming full-time medical education researchers and faculty developers. They asserted that professional development programmes should vary according to the diverse nature of participants and their motivations for enrolment. 'Motivation' here refers to a force that influences someone to act (Williams et al., 1999). When something is done solely for attaining personal pleasure and satisfaction, it is an *Intrinsic Motivation* (Dysvik and Kuvaas, 2013). When the focus is on the results and consequences, it is an *Extrinsic Motivation* (Dysvik and Kuvaas, 2013). According to self-determination theory, different types (extrinsic/controlled or intrinsic/autonomous) and levels of motivation lead to distinct outcomes (Williams et al., 1999). Research has clearly demonstrated that an autonomous motivation for learning links with better conceptual understanding and greater achievements (Williams et al., 1999). Al-Eraky and McLean's (2012) conceptual framework to plan faculty development was also inspired by self-determination theory, and advocates that faculty development strategies should be informed by an organisation's vision and resources along with an individual's performance gaps and interests.

### 1.6.1 Type of Professional Development Initiatives

In response to the changing medical education environment and to help faculty maintain academic vitality, various provisions for professional development have been initiated (McLean et al., 2008, Swanwick, 2008). These professional development initiatives evolved from periodic sabbaticals, mentoring schemes, seminars and short courses to full-blown programmes of formal training in educational methods designed to support faculty members in all areas of their lives as academics (Garcia-Barbero, 1995, Lewis, 1996, Morzinski et al., 1994, Steinert, 2010b). These activities aim to make teaching and learning effective by keeping the educators informed and proficient in modern educational practice (Pugsley et al., 2008b). Good clinical supervision of junior doctors ultimately results in better performance and produces better patient outcomes (McCann et al., 2009).

### *Workshops/Seminar/Short Courses*

The most common professional development activities are workshops, seminars and short courses. They are popular due to their flexibility and require relatively less time to organise than accredited programmes (Steinert, 2005, Ullian and Stritter, 1997). Such events assist in developing faculty networks and improving organisational culture (Steinert, 2005). According to Goldszmidt et al., (2008), there is a significant number of faculty with an interest in medical education who do not wish to attain additional qualifications. Therefore, such initiatives may suffice in their case. However, the National Joint Committee on Learning Disabilities described these short professional development activities as 'sit and get' sessions, with many passive participants, and they may not bring about a substantive change in practice (Klingner, 2004). In addition, they are often unconnected, with limited potential to encourage educational progression (Schofield et al., 2009). Steinert and colleagues (2008) noted that workshops alone might not bring about the impact in terms of publications. They asserted that involvement with peer groups, protected time for independent writing and supportive feedback on the writing process are all valuable components. Also, there is an increasing acknowledgement that long-term exposure is necessary for changes in practice (Davis et al., 1999). Therefore, some organisations now offer a series of connected workshops. Hueppchen and colleagues (2011) noted that these training opportunities in medical education are usually limited to self-selected faculty, who already have an interest in education, and there remains a need to reach out to other faculty members.

### *Integrated Longitudinal Programmes and Fellowships*

Since the 1990s, longitudinal programmes and fellowships in medical education have become increasingly popular (Thompson et al., 2011, Ullian and Stritter, 1997). They are currently more common in the USA and Canada. These programmes assist in developing faculty networks and improving the organisational culture (Steinert, 2005). Some of these programmes are grounded in the principles of adult learning and requires reflective writing to support the participants as change agents. Such programmes also create a community of medical educators (Epstein, 1999, Lown et al., 2009, Thompson et al., 2011). These fellowships involve a set of extended professional development activities designed to meet the local needs of medical educators and are also tailored to the time, expertise and monetary constraints of the institution (Searle et al., 2006b,

Thompson et al., 2011). The faculty members, along with performing their usual educational roles and responsibilities, commit 10–20% of their time for professional development over one to two years (Steinert, 2010a). Most of these fellowships do require a scholarly project for completion; however, it varies in complexity. Thompson and colleagues (2011) found that these fellowships are of varying length and format, with contact hours varying from 10 to over 500, and they can be completed within a month to four years. In addition, these fellowships usually focus on teaching, with less than half requiring the design or implementation of a curriculum.

### *University Accredited Programmes*

In response to the growing trend towards professionalisation of medical education and the increasing need to certify medical educators to meet global standards (Eitel et al., 2000, GMC, 2006, 2012, Postgraduate Medical Education and Training Board, 2008), organised courses leading to the award of higher qualifications such as Postgraduate Certificate, Diploma, Masters and PhD are available in several higher education institutes (Geraci et al., 2010). Certificate courses in medical education are popular, with many universities requiring their faculty to have formal training in certain courses (Steinert, 2005). They are also increasingly becoming a requirement for academic positions in some countries e.g. USA, Canada and UK (Tekian and Artino, 2013). These programmes aim to equip healthcare educators with a grounding in educational theory and practice (Cohen et al., 2005, Geraci et al., 2010). Unlike many other postgraduate qualifications, they do not build on a body of theoretical knowledge gained from undergraduate study. The participants are already postgraduates but with no essential grounding in educational theory and principles (Pugsley et al., 2008a). These postgraduate qualifications encompass a broad range of activities to address the faculty needs in their various academic roles. They are designed to develop educational leadership, administration and research skills (Steinert, 2010b), thus encouraging a core group who can facilitate curricular and organisational change (Steinert, 2012). This professionalisation of medical education is well supported by the regulatory bodies, institutions and other individuals. However, some fear that it may disenfranchise keen and committed educators who have no qualifications in medical education (Eitel et al., 2000, Purcell and Lloyd-Jones, 2003).

There has been an increase in the number of institutions providing Masters-level degree programmes in medical/health professions education worldwide (Gruppen et al., 2006, Tekian and Artino, 2013). Globally, they have increased in number from seven to 124 and in the United Kingdom from two to 31 over the last two decades (Table 1.1). In the UK, these were initially offered in Dundee and Cardiff only. The courses are offered in various formats: distance learning (paper-based or online), face-to-face or a combination of face-to-face and online learning (blended).

Table 1.1 - Provision of Master's Level Programmes in Medical Education

| **Timeline** | **1996** | **2005** | **2008** | **2012** | **2013** | **2014** | **2015** |
|---|---|---|---|---|---|---|---|
| Worldwide | 7 | 21+ | 40+ | 76 | 103 | 121 | 124+ |
| United Kingdom | 2 | 8 | 17 | 20 | 25 | 31 | 31 |
| | (Tekian and Harris, 2012) | (Cohen et al., 2005, Cusimano and David, 1998) | (Pugsley et al., 2008b, Riesenberg et al., 2009) | (Tekian and Harris, 2012) | (Foundation for Advancement of International Medical Education and Research, 2013) | (Tekian and Artino, 2013) | (Foundation for Advancement of International Medical Education and Research, 2015a) |

The demand has encouraged many institutions offering Masters to increase their intake and start programmes leading to doctoral degrees (PhD or EdD) in medical education. Currently, there are over 24 structured doctoral programmes worldwide, including four in the UK (Dundee, Glasgow, Swansea and London) (Table 1.2). These doctoral programmes are concentrated in North America, Europe, Africa, Australia and New Zealand. This makes it challenging for medical educators from South East Asia, Latin America, the Middle East, and Russian republics to pursue a doctoral degree in medical education (Tekian, 2014). However, with increasing use of technology to support distance communication this may change.

Table 1.2 - Provision of PhD/EdD Level Programmes in Medical Education

| **Timeline** | **2014** | **2015** |
|---|---|---|
| Worldwide | 24 | 24+ |
| United Kingdom | 3 | 4 |
| | (Tekian, 2014) | (Foundation for Advancement of International Medical Education and Research, 2015b) |

### 1.6.2 Research on Professional Development Initiatives

Davis et al., (1999) reviewed 14 randomised controlled trials on the impact of formal Continuing Medical Education (CME) activities. They found that interactive learning opportunities delivered in a sequenced manner along with favourable working conditions have a positive effect on participants' professional practice and occasionally, healthcare outcomes such as patient behaviour outcomes. They advanced the view that the impact of formal CME interventions must be understood in the context of the educational technique, nature of the interaction, workplace environment and other complex intra/interpersonal educational variables that affect the individual participants. A recent Cochrane review also indicated that CME interventions can bring a small to moderate improvement in practice and patient care outcomes (Forsetlund et al., 2009). However, they found that a mixed interactive and didactic education is more effective than interactive education alone.

Many studies on the impact of longitudinal fellowships programmes have been carried out (Frohna et al., 2006, Gruppen et al., 2003, Muller and Irby, 2006, Robins et al., 2006, Searle et al., 2006b, Steinert and McLeod, 2006). These studies reported an impact in terms of career progress, increased confidence, publications and institutional productivity. Armstrong and colleagues (2003) surveyed Harvard Medical School educators two years after their participation in a Harvard Macy Program in the USA for developing physicians as educators. Their participants reported a significant self-perceived impact on their teaching behaviours and commitment towards medical education. They also reported being identified as educational resources by others, and receiving recommendations for academic promotions. However, all these studies were based on participants already having a strong commitment to medical education. The selection criteria for the courses demanded good candidates who had potential for productivity and commitment from their chair or immediate superior to support their prospective projects in medical education. Moreover, some of these changes were assessed on professional development initiatives by recipients' home institutions with favourable conditions for implementation of learning to practice. Lown et al., (2009) also reported a qualitative impact on the personal and professional development in terms of identity, career and productivity on completion of the Rabkin and Mount Auburn fellowships in medical education, which were established at Harvard teaching hospitals. Their participants included the faculty affiliated with Harvard Medical School that was selected through a competitive application process, and they were already

highly motivated. Lown et al., also mentioned that some fellows had difficulty in distinguishing the impact amongst fellowship and other significant faculty development activities.

Steinert and colleagues (2006) carried out a systemic review on faculty development initiatives in medical education. The review reported high satisfaction rates among participants and an increased knowledge of educational concepts with a positive change in attitudes towards teaching. It also highlighted some key features of effective faculty development such as experiential learning, feedback, effective peer and colleague relationships, diversity of educational methods and adherence to principles of teaching and learning. However, Most of the studies reviewed (72%) were based in the USA, with the majority being centred on seminars, short courses and workshop type faculty development interventions. Only five of the studies included longitudinal programmes (e.g. Fellowship) and none were degree-awarding programmes. Most of these studies were course evaluations that looked at Kirkpatrick's (1998) first two levels of evaluation only: participant satisfaction and improvement in knowledge, skills and attitudes. The changes in organisational practices and students' learning were not investigated in any of the studies. The focus of this review was limited to faculty development activities designed for teaching effectiveness of faculty in medicine only. The review proposed the need for more robust research methods and process oriented studies to assess the change over time.

Leslie et al., (2013) reviewed studies published on faculty development initiatives from 1989-2010. To avoid repetition, they excluded the articles from the Steinert et al., (2006) review. All the studies reviewed were focussed on workshops, short courses (less than a week), fellowships (1 year) or longitudinal programmes (ranging from 10 days to 2 years). The studies reviewed were from the United States, Canada, Israel, Sweden and Germany. There were no studies from the UK nor on degree-awarding programmes in medical education. The scope of most of the programmes was local to national, with only one programme being international. Along with an understanding of faculty development interventions, Leslie et al., also reviewed the robustness of the methods. They found that most of the studies were quantitative, with surveys being the most popular method. Only two studies were qualitative and six had a longitudinal design. Most of them used self-reported data. Unlike McLean (2001) and Steinert et al (2006), they also found that the focus of studies had moved beyond teaching effectiveness to career development, leadership and scholarship. Leslie et al.,

recommended the use of comprehensive and robust studies that produced rich data. It was also encouraged to use mixed methods with a focus on studying the educational processes, their impact and the interplay of various contextual factors.

Another recent review of studies published on leadership development interventions intended for faculty members in medicine (1980–2009) revealed that 86% of the interventions were based in the USA (Steinert et al., 2012). Only one study was reported from the UK and Canada respectively. These programmes were local to national in nature, with faculty being trained in their home institutions in most cases. Only one programme was international. This review also did not report any studies on degree-awarding programmes in medical education. Again, most of the studies reviewed were course evaluations asking for satisfaction with self-perceived changes in attitudes and leadership behaviours. Very few of the studies examined the impact at the level of workplace (the implementation of specific educational innovations and increased departmental collaborations). Steinert et al., recommended process-oriented studies to understand the process of change within the individuals due to the intervention.

Goldszmidt and colleagues (2008) studied the impact of a Masters' degree in education, with an aim to address the gaps in the literature on supporting medical faculty with interests in educational scholarship. The participants reported that the qualification positively influenced their careers and stimulated their interest in scholarly pursuits. However, there was no impact of the qualification on their future involvement in educational scholarship. In addition, there were no significant differences in terms of educational grants, projects or publications between the faculty with and without formal training in education. The authors proposed that this might be due to minimal preparation in research and completion of the courses without research components. A lack of protected time, knowledge of research methods and funds were reported as the main barriers toward educational scholarship and research. Support in educational research, interaction with similarly interested colleagues/educational experts, and provisions for development were identified as the perceived needs. This study included interested and highly motivated members of faculty from their own institution with a supportive educational leadership. Motivations for pursuing advanced qualification in education were not identified. In addition, various measures of educational scholarships (such as presentations at seminars/conferences) were not explored, which may have led to an underestimation of involvement of participants in educational scholarship.

University-accredited postgraduate programmes in medical education are unique and variable in their structure and quality (Pugsley et al., 2008a). Despite the popularity and extensive investment in these courses, there is little research in this area, and detailed information about their influence and effectiveness remains surprisingly sparse (Cohen et al., 2005, Pugsley et al., 2008b). Zwanikken et al., (2013) carried out a systematic review of outcome and impact of Masters' in health and healthcare. They found that the articles were related to programmes in public health, nursing, physiotherapy, general or family practice, occupational therapy and other professions. No studies were reported on the impact of Masters in medical/health professions education. The only studies published on postgraduate qualifications in health professions education from the UK are scoping studies to give an overview of medical education programmes and the quality of Masters' research to inform educational interventions (Pugsley et al., 2008a, 2008b). These studies showed variable quality of Masters' educational research across institutions. This variability was associated with poor funding, lack of protected time and non-availability of clinical educators with experience in qualitative research (Pugsley et al., 2008a). The graduates reported that they had more confidence in their working abilities, and their credibility had risen in the eyes of others (Pugsley et al., 2008b). Hueppchen et al., (2011) observed that progress in the realm of medical education is slow and often undervalued in comparison with patient care and research. The limited evidence relating to the impact of these postgraduate courses in medical education may lead them to being undervalued. The authors urged for rigorous studies on these postgraduate programmes in medical education, investigating explicit gains, to justify the time and resources requested of institutions.

Marks (1999) found multiple demands on time and credence given to medical education as the main concerns for those pursuing a career in medical education. However, little has changed since then, as Zibrowski et al., (2008) also found a time-associated dilemma of faculty with an interest and involvement in educational scholarship. The study reported that fragmentation (inability to get protected time to work on educational projects), prioritisation (juggling various competing responsibilities – clinical, teaching, and administrative or leadership roles) and motivation (institutional values and colleagues' reactions to their involvement in education) interfered with faculty's ability to achieve their goals. An acceptance by the healthcare community also appeared to be critical for retention and success in medical education. There is a need to explore in

detail these complex and multi-faceted dilemmas faced by the medical educators from various academic centres.

### *Models and Methods of Evaluation*

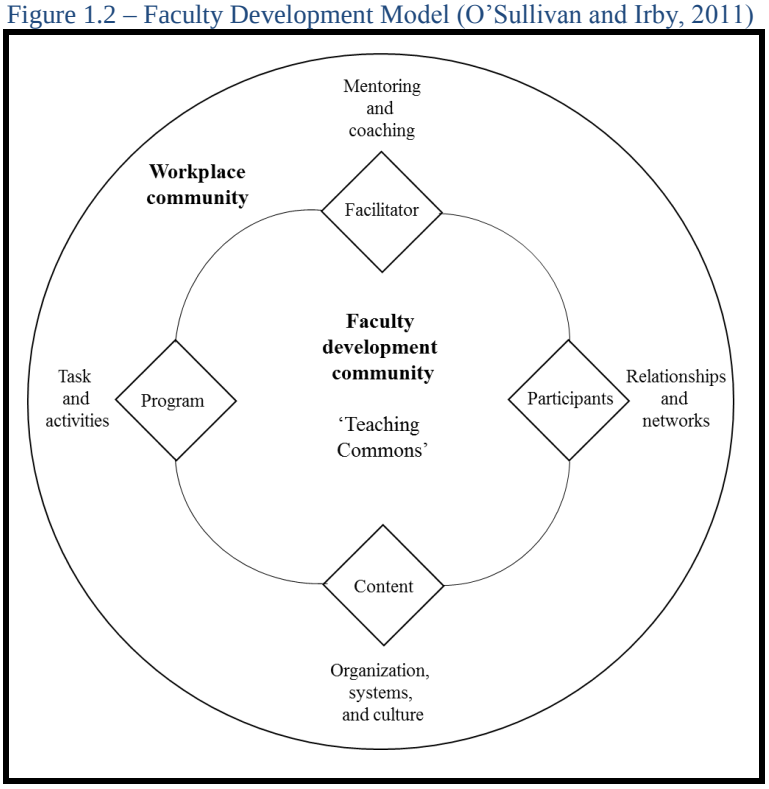
Various models and methods have been employed to study the impact of these professional development initiatives. Some studies used Kirkpatrick's (1998) four level of evaluation framework originally published in 1959: reaction (satisfaction); learning (knowledge and skills); behaviour; and results (Lown et al., 2009, Searle et al., 2006a). However, the assumptions about a causal relationship and increasing importance of information between each level of the Kirkpatrick's model have not been demonstrated (Alliger and Janak, 1989, Bates, 2004). Hammick et al., (2007) elaborated on Kirkpatrick's framework and proposed four inter-professional outcomes: reaction; change in knowledge, skills and attitudes; change in behaviours; and change in organisational practice as well as benefits to patients. Rotem and colleagues (2010) identified measures such as improved capacity, services and outcomes for evaluation. Zwanikken et al., (2013) developed his framework around output (level of satisfaction and number of students passing the test); outcome (application of the learned competencies in practice e.g. developing programmes, effects on career); and impact (impact on workplace by the graduates e.g. improved quality of care). Only one study (Lown et al., 2009) was identified exploring the influence of a fellowship on the epistemic beliefs of educators about education or educational identities, which is a measure of accountable practice (McLean et al., 2008).

Since the outcomes and impact of professional development initiatives are affected by various factors occurring after their completion, Yamnill and McLean (2001) suggested that the acquisition of competencies through training is of little value if the context does not facilitate its translation to practice. Therefore, it is important to assess the components of a training programme resulting in a behavioural change and the constraints towards transfer of learning.

Research into faculty development has been criticised by O'Sullivan and Irby (2011) because it focuses on participants educated outside the workplace environments and it has no control groups. They moved beyond the traditional linear model of faculty development research which they suggested had an unrealistic cause and effect relationship, instead presenting an expanded cyclical model that focuses on the interplay

between the faculty development community and the workplace community (Figure 1.2). They proposed that a desired change involves the interaction of faculty development community (participants, programme's curriculum, facilitators' pedagogical knowledge, and the context) with the workplace community (mentoring and coaching; relationships and networks; organisation and culture; and tasks and activities). This model highlights the powerful influences of the workplace environment. It also acknowledges the impact of social factors i.e. responsibilities assigned to the participant, their workload model and engagement within the community of practice on the success of these initiatives. To document realistic outcomes, all the components and their relationships need exploration. However, it is challenging to separate the effects of these influences in the workplace from that of the professional development initiative.

Figure 1.2 – Faculty Development Model (O'Sullivan and Irby, 2011)




Some studies also considered involving students, peers and supervisors of the participants. Notzer and Abramovitz (2008) studied the long-term (1 year after) benefit of an instructional skills workshop using objective and performance-based outcomes. They asked for student ratings of the teaching performance and found that the participants differed from the non-participant group. However, as no pre-test was done

before the workshop, it is possible that those who took the workshop were better than the non-participant group even before participation. Moreover, the workshop only focussed on instructional skills and not on development as an educator. Plack and colleagues (2015) also sought to move beyond the individual participant views. They interviewed the peers and supervisors of the graduates to show the impact of an educational fellowship in the workplace. The participants reported that graduates exhibited increased confidence and led changes in the workplace. However, the research participation was voluntary and from the local faculty as identified by the academic dean. Therefore, a 360˚ evaluation may not be feasible for participants enrolling from across the globe into postgraduate programmes in medical education.

The impact of professional development initiatives has been assessed using various methodologies including self-reporting surveys, observations, educational portfolios, objective structured teaching exercise, students exams, randomized controlled trials (Hueppchen et al., 2011) and case control study designs (Branch Jr et al., 2009, Notzer and Abramovitz, 2008). Curriculum vitae have been analysed to examine the productivity in the workplace (Frohna et al., 2006, Morzinski and Schubot, 2000, Morzinski and Simpson, 2003). Others have used interviews (Moses et al., 2009, Plack et al., 2015, Weurlander and Stenfors-Hayes, 2008) and focus groups (Herrmann et al., 2007). Whereas, some have also considered a mixed methods approach (Knight et al., 2007, Lown et al., 2009) in order to overcome the limitations of both the quantitative and qualitative methods.

### 1.7 Transformative Learning and Professional Identity Development

Teachers inform practice based on their pedagogical beliefs and skills, which are in turn formed under the influence of their professional identity (Ballantyne et al., 2012). Learning is not exclusively the gain of knowledge but an ongoing construction of meaning and development of a professional identity (Abednia, 2012, Bleakley et al., 2011, Varghese et al., 2005). According to Wenger (1998), learning is a vehicle for the transformation of practices and development of identities. Therefore, it is important for universities to allow for transformative learning and professional identity development (Trede et al., 2011). Anecdotal evidence through personal communication with graduates of medical education programmes indicates changes in thinking about how they approach problems in their professional life as educators, thus showing

epistemological development contributing to their educational practices. A recent discussion at the Association of Medical Education in Europe (AMEE) on the Masters-level programmes in health professions education worldwide, also highlighted 'transformation' as an expected influence of these qualifications (Tekian and Harris, 2012). This transformation results in marked differences in participants' educational practices, which are informed by an evidence base rather than intuition (Bleakley et al., 2011). Bleakley et al., suggested that learning from a qualification results in a 'novice to expert' shift and professional identity development. I believe that a qualification in medical education also results in similar shifts in educational beliefs along with identity development of the participants. However, none of these assertions have been formally researched yet.

### 1.7.1 Transformative Learning

Transformative learning is the development of a new perspective about one's self and work, and changing one's actions in light of that new perspective (Mezirow, 2000). According to Mezirow (1997), as adults we acquire a coherent body of experience and develop associations, concepts, values, beliefs, feelings and responses, giving rise to frames of reference. These frames of reference influence our actions such that we have a tendency to reject ideas that do not fit our preconceptions. A critical reflection on all our assumptions while engaging in a learning activity such as discussion, problem solving, reading or a self-reflective assessment helps in changing the frames of reference. A frame of reference is composed of two dimensions. One is the habits of mind i.e. broad, abstract and habitual ways of thinking, feeling and acting based on culture, society and education. These beliefs develop early in life because of cultural assimilation and other idiosyncratic influences. The other dimension is the point of view, which is subject to continuous change. For instance, when we try to understand and reflect on events that did not work the way we anticipated. Habits of mind are durable but point of views are more accessible to change through awareness and feedback from others (Mezirow, 1997). This process of effecting changes in a frame of reference through critical reflection is the key to transforming one's beliefs, resulting in transformative learning. Therefore, along with subject matter mastery and attainment of professional competencies, an important educational objective should be the empowerment of learners to become autonomous thinkers who can reflect on their ideas and judgements, rather than following them uncritically. This is fundamental to effective problem posing

and solving, thus developing learners as productive and socially responsible professionals. Reflection and collaborative participation is a key process for deep professional learning, where new beliefs develop and there is a transformation of the whole person i.e. identity development (Anspal et al., 2012, De Weerdt et al., 2006, Siry and Lara, 2012).

### 1.7.2 Identity

According to Hall (1994, p.394), 'identities are names we give to the different ways we are positioned by, and position ourselves within, the narratives of the past'. It is dynamic, contextual and continuously being defined by the competing internal (emotional) and external (personal, professional and situational) factors (Anspal et al., 2012). Identity is an ongoing interpretation and re-interpretation of our experiences (Skelton, 2012), whereby we define who we think we are, who we think others are, who we think others think we are, who we think others think they are and who we are becoming or seek to become (Jenkins, 2008, Monrouxe, 2009a, Monrouxe, 2010). It involves making sense of individuals' place and control in changing associations and connections, which tells them who they are and how they are doing to gain stability and mastery (Bleakley et al., 2011). According to Rees (2009), identity is the product of inter-subjective and external social processes, during which it is negotiated, constructed, co-constructed and contested through social interaction. It also involves ways of thinking and participating in practice (Siry and Lara, 2012). Identity provides a framework to understand our place in society and construct ideas on 'how to be' and 'how to act' (Anspal et al., 2012, Ballantyne et al., 2012, Hall et al., 2012).

Identities develop under the influence of various external and internal factors. Early in life, the external factors predominantly determine our identities, which are readily accepted, internalised and can be difficult to change later in life. These identities are constructed through personal situations and experiences such as gender, social class and ethnicity (Goldie, 2012, Monrouxe, 2010). As the internal factors gain control with age, there is internal negotiation to any modification that may hinder modification of identity (Goldie, 2012, Monrouxe, 2010). Therefore, the transformation process can become challenging for individuals later in their career, especially if it is in conflict with already developed identities and internal factors.

### 1.7.3 Professional Identity

Based on the professional roles adopted, individuals define themselves and are also being defined by others (Adams et al., 2006, Goldie, 2012, Ryynänen, 2001, Watts, 1987, Weaver et al., 2011). According to Sutherland and Markauskaite (2012), a professional identity is the perception or image of oneself as a professional i.e. who one is, ones relationship with the profession and how ones behaviour aligns with the norms and cultures, based on ones interpretations and reinterpretation of interactions within the professional community. It is the self-categorisation or self-differentiation (who I am, who I am not) within a social system or group of professionals (Haslam et al., 2000, Turner, 1999). It is about how similar a person is to others in the same profession in terms of professional knowledge, skills and values (Lawler, 2008). This similarity with one professional group results in differentiation from others, who are not a part of the profession. These professional communities usually have established loyalties and familial bonds. The identities are socially sanctioned by the professionals belonging to that community, usually through assessment of competencies (Bleakley et al., 2011). However, tensions exist within the community as well. An educational identity as a construct, represents perceptions of what educators do, their pedagogies, dispositions and discourses within a community of practice (Ballantyne et al., 2012).

#### *Multiple Professional Identities*

Professionals can have multiple identities and they can relate to each other in diverse ways. Individuals can also switch between their multiple identities according to their needs (Shotter and Gergen, 1994). Some of these identities are core while others are peripheral, based on the personal value attached to each of them (Beijaard et al., 2004). According to Monrouxe (2010), an individual's multiple diverse identities can relate to each other in four ways. They can overlap each other, their intersection forming one strong identity such as 'white male doctor'. An individual with these three identities altogether (making one strong identity) would see only those with all of these characteristics as their in-group. This may be related to the emergence of subcultures, where a certain group of people with multiple identities develop one strong identity to differentiate themselves from the larger group or culture to which they belong. Similarly, identities can be related to each other in the form of a hierarchy i.e. in an order of importance. Therefore, if identity as a doctor is above other identities, then all doctors would be considered an in-group. Identities can be differentiated in the form of

compartments, where preference for an identity will depend upon situation and context or they can be merging which is flexible and no single identity is dominant. It is important for all these identities to exist in harmony with each other rather than in conflict. These multiple identities and their relationship have a large impact on individuals (referred to as intersectionality theory and explained in the section 1.7.5) (Tsouroufli et al., 2011).

### *Importance of Professional Identity*

Professional identities are as important as knowledge and skills for success (Costello, 2006, Rees, 2009). For a rewarding career, the individuals should be able to shape themselves according to their professional roles and behave accordingly (Monrouxe, 2010). A professional identity influences decisions, language and interactions of the professionals with themselves, their peers and others (Ashmore et al., 2004, Brownell and Tanner, 2012, Monrouxe, 2010). It also influences the confidence and capability of professionals in meeting the demands of their practice (Abednia, 2012, MacLeod, 2011, Monrouxe, 2010). It allows for self-recognition and internal regulation of professionals, enforcing the professional values and goals (Cavenagh et al., 2000, Goldie, 2012, Monrouxe, 2009a, Niemi, 2003, Weaver et al., 2011). A professional identity can influence the individual's sense of purpose, self-efficacy and work effectiveness (Anspal et al., 2012). It is also associated with job satisfaction and prevents burn out (Gaziel, 1995), as a professionals' positive self-perception of their professional identity appears to ameliorate poor working conditions (Moore and Hofman, 1988). Measures taken to improve working conditions may also positively influence perceptions of professional identity (Gaziel, 1995). The notion of similarities amongst a group and differences it has with others allows professionals to recognise that other groups have certain rights and needs that they have a responsibility to meet (De Weerdt et al., 2006).

Although professional identity is beneficial, it can also have negative implications. New identities develop or are rejected based on the existing value placed on that identity in different contexts (Goldie, 2012, Levine and Cote, 2002). A new identity integrates more easily if it is consistent with the individual's personal identities. However, it can be traumatic if the new identity is dissonant, and may result in the person dropping out or malpractice (Monrouxe, 2010, Weaver et al., 2011). A strong professional identity can cause resistance to change, both from within and outside that profession, as

professionals become concerned about losing a sense of themselves (Beijaard et al., 2004, Connelly and Clandinin, 1999). For all these reasons, it is essential to have a clearer understanding of professional identity and take measures to ensure its development in professional development initiatives.

### *Influence of the Curriculum on Professional Identity Development*

Walkington (2005) argued that although professional practice has a major role in professional identity development, it begins with individuals' formal education. In educational programmes, these identities are thought to be developed under the influence of informal and hidden curricula, and then their formal teaching experiences (Monrouxe, 2010). The elements of a university course such as curriculum, location and duration all influence epistemological perspectives, professional inclusivity, social exclusivity and in turn professional identity (Chapman and Pyvis, 2006, Weaver et al., 2011). The daily routine, role models and mentors among faculty also contribute towards learning and identity formation (Baernstein et al., 2009, Bandura, 1991, Finn et al., 2010, Goldie et al., 2007). The interactions within a community of practice or institution and the linguistic rituals, rules, norms, values and beliefs forming part of the hidden curriculum are also influential (Monrouxe, 2010, Wenger, 1998). Therefore, it is essential for curricula to provide appropriate support structures and to facilitate the transformation of individuals into professionals (Monrouxe, 2010, Siry and Lara, 2012).

An unfavourable workplace environment can have a strong impact on professional identity with professionals quickly unlearning what they have been taught in the university. For a smooth transition into the workplace, professional educational programmes should offer a shared playground where the learners not only learn the game but also understand the culture and values of their professional field (Brownell and Tanner, 2012). However, this work readiness involves a superior body of formalised knowledge, skills, social and ethical components that needs continuous refinement through analytical thinking over experiences and developing an understanding of oneself as a professional (Sutherland and Markauskaite, 2012).

Even though the traditional focus of professional educational programmes are knowledge and skills, it is essential for the programme content to offer authentic learning experiences with an explicit relationship to future professional practice (Anspal et al., 2012, Sutherland and Markauskaite, 2012). Sutherland and Markauskaite (2012)

suggested that an authentic experience encourages motivation, engagement, collaboration and reflection within students, all of which are prerequisites for identity development. However, there is limited direct evidence to support this claim (Sutherland and Markauskaite, 2012). Newmann and Wehlage (1993) suggested five characteristics of authentic instruction i.e. encouraging higher order thinking, deep knowledge, connection between the classroom and real world practice, providing opportunities for conversations, and social support for learners. This requires a free-from-coercion learner-centred environment that is participatory and interactive with equal opportunity to advance views and guide actions in participants' own context (Mezirow, 1997).

### 1.7.4 Research on Professional Identity Formation

There is limited research on professional identity among healthcare educators (Sabel and Archer, 2014). Research exploring professional identity formation has focused on young adults, who are either student teachers or medical students (undergraduate) or residents/physicians. Becoming a teacher or doctor is the first professional identity they construct during the period of the course. These are not the same as participants enrolling on postgraduate medical education courses. In fact, they are graduates with well-developed professional identities as health professionals at various stages of their career. Still, some of the findings may be transferrable. In this section, first I briefly discuss the ways in which different scholars have theorised the acquisition of professional knowledge. Then I provide a detailed account of some of the factors contributing towards professional identity formation among student teachers, teachers in higher education, medical students and residents/physicians. Factors explored include the formal, informal and hidden aspects of a programme, workplace learning experiences, interpersonal expectations and the associated tensions.

Earlier research on the training and practice of healthcare professionals focussed on reproduction of knowledge and professional socialisation to explain how learners come to identify with and become committed to professional norms (Atkinson, 1981, Becker et al., 1961, Fox, 1957, Merton et al., 1957, Sinclair, 1997). Merton et al., (1957) portrayed medical school as a socialising agency and explained that the transformation of novice to professional is essentially an acculturation process, where learners gradually acquire and internalise the norms, values, attitudes and dispositions of

predecessors as they become members of a profession. The traditional apprenticeship (learning on the job) in which the practices are modelled by the experts successfully affected this professional socialisation (Pugsley, 2012). The concept of socialisation is criticised in professional contexts upon its portrayal of the students as a passive vessel for the knowledge, skills and values that are accepted in the profession. It also implies an unquestioned acceptance and absorption of the values of the professional group by the learners. However, learning is a complex process and the students are active constructors of their own reality. In addition, this concept failed to account for learners' resistance towards cultural norms, and the multiple and diverse professional identities that they may aim. Becker et al., (1961) focussed on ways in which medical students 'learned the ropes' and highlighted that learners needs to adapt in order to 'fit into' the professional culture. This notion of an active learner challenged the notion of passive acquiescence within professional education (Pugsley, 2012). Atkinson (1981) noted that medical students highly valued their diagnostic capabilities and took pride in successful diagnosis. This pride can be a response to the uniqueness of this ability to a doctor's role that has also been built into the structure of knowledge sharing and assessment of the profession. Anspach (1990) added that listening and giving case presentations is a key learning experience for medical students, where they learn the tacit, taken-for-granted aspects of practice and language conventions with colleagues or patients. This highlights the importance of the learning environment. In line with the earlier work of Becker et al., (1961) and later work by Sinclair (1997), his research identified the dramaturgical nature of the socialisation process in the clinical practice. Clouder (2003) advocated for a social constructionist perspective on professional socialisation. However, she still concluded that ultimately those who wish to gain the membership of a profession need to adapt according to 'the game' prescribed by the profession. This suggests that profession is a fixed and unified group, whereas, it is an evolving social entity characterised by diversity and debate. However, in all of these accounts, the professional values seemed to be absorbed in a rather disembodied fashion. Fox (1957) documented three types of uncertainty in professional practice that medical students must confront and come to terms with: imperfection in their mastery of medical knowledge, limitations of that knowledge and the difficulty in distinguishing between these two. She also referred to the occupational rituals (white coat) as facilitators towards becoming a professional. By assuming a knowledge hierarchy that places scientific knowledge at the top, she failed to account for the complexities in the form and structure of medical knowledge. Embodied knowledge of healthcare practitioners

goes beyond the written word. Moreover, this notion of uncertainty threatens the medical profession and must be controlled (Light, 1979). As the healthcare environment has evolved, there is a need to replicate these ethnographies of the socialisation of professionals in variety of settings for further insights (Pugsley, 2012).

Beijaard et al., (2004) reviewed 22 studies from 1988-2000 on professional identities of teachers. Most of the studies were focussed on teachers' professional identity formation and their characteristics. This review showed that many authors did not give any explicit definition of professional identity, while others only provided teachers' perceptions of their roles or profession that were quite variable. This indicates an absence of a shared sense of professional identity within the literature and difficulty in articulating one's own professional identity. In addition, it was hard to see which characteristics influence the professional identity. According to the review, most of the researchers considered professional identity as a complex, dynamic, active and continuous process. The studies mainly focussed on the personal aspects of professional identity, while the impact of the workplace was not considered. Such an impact can be supportive, neutral or restrictive. The review concluded that the process of professional identity development is in line with a constructivist view of learning. The explicit role of theories in teachers' professional identity formation was not explored in any of the studies reviewed.

Trede and colleagues (2011) carried out a systematic review of higher education literature on the philosophical stances, theoretical frameworks and pedagogies of professional identity development from 1998-2008. Their search excluded articles on professional identities of academic teachers. In the 20 articles reviewed, they also wanted to determine the role of university and teaching approaches on professional identity development, along with its impact on the workplace. The review showed that most of the articles provided a loose description, the exception being Paterson et al., (2002) which defined professional identity as 'the sense of being a professional'. This review also showed that authors have little agreement on the theoretical frameworks for professional identities. They used a range of different theories including communities of practice, activity theory, reflective practice, structuration theory, professional learning and social constructionism. Students were considered to have an active role in developing their own professional identity. The role of universities in professional identity development was not a prime focus of the studies, which were described only as facilitators for students' knowledge acquisition, self-assessment, participation and

engagement. This review showed an underdevelopment of a research base for professional identity development in higher education. It also highlighted a need for studies focussing on the role of university courses in the formation of a professional identity. Such studies are necessary to conceptualise the support required in the transformation of beliefs and practices, which should be a goal of these courses.

Anspal and colleagues (2012) explored identity development in teachers using narratives. Student teachers in various years of training were asked to write reflective narratives on 'Myself as a Teacher Today' to understand how they see themselves now as compared to the previous year. The reflections were analysed using Kelchtermans' (1993) conceptualisation of self, which has been used in the current thesis to guide interview questions (explained in the section 1.7.5). Findings suggested that immersion in authentic learning experiences throughout the programme is influential towards identity development. They recognised the role of educators in supporting student teachers to develop solid professional identities for their careers in primary schools. However, the reflections of students in various years of their training were compared and only one student was followed longitudinally.

Ajjawi and Higgs (2008) studied the development of clinical reasoning among physiotherapists and found similarities between learning to reason and learning to become a professional. They associated the professional's journey towards identity development with professional socialisation, which is an individual's ongoing learning journey through the profession including their education (both formal and informal), work experiences and other influences. They asserted that developing a professional identity involves reflexivity that goes beyond reflection. The learners adopt their talk, thinking and way of being to become a member of a community of practice (Wenger, 1998) (see section 1.7.5).

Helmich et al., (2010) explored the impact of a nursing attachment on professional identity development of the medical students. This experience offered opportunities to develop collaborative and patient-centred behaviours. The study found that the medical students developed an ambivalent view of the doctors. They also started to see nurses and their own future roles differently. These differences varied based on participants' gender, age and place of attachment. For example, female students were highly ambivalent with respect to the personal attitudes of doctors and had greater appreciation for the nursing profession. Similarly, nursing attachments in a hospital resulted in more

negative perceptions of the doctors. This suggests an influence of personal and contextual factors on professional identity development.

Jarvis-Selinger et al., (2012) reviewed the literature with a focus on understanding the relationship between competency and identity development during medical training. They emphasised reframing approaches in medical education, from an exclusive focus on competency towards a broader focus on being a physician. They explained that medical education involves not only competency but also a succession of adopted identities (student, resident and physician) with their individual process of developmental stages. The transition from resident to physician is not smooth but discontinuous, and encompasses a struggle to incorporate expectations associated with the new roles (construction of physician identity) as well as the deconstruction of their old identity as a resident). The influence of the social context of learning (socialisations and immersion) on identity development was also explained. They maintained that while those external to the individuals define roles and behaviour, identity is consolidated internally. Their conception of identity development highlighted the interplay between the social and personal aspect of identity formation and its implications for medical education.

Blakey et al., (2008) employed a questionnaire for assessment of the social life patterns among students from economics and medicine. They found that medical students are more socially exclusive than economics students because of high workload, location of the medical school in the main campus and high numbers of contact hours away from the university. This exclusivity is disconcerting because it may lead to prejudiced attitudes and discriminatory behaviour between in-groups and out-groups. Medical students need to develop inclusive social attitudes in order to integrate and communicate with diverse patient and colleague groups. Hence, this study suggests a strong influence of formal, informal and hidden aspects of a programme on professional identity formation.

Weaver et al., (2011) explored the elements contributing to medical students' sense of professional identity. They used social identity theory (see section 1.7.5) to explicate the link between professional identity and the sense of inclusivity/exclusivity. They found that clinical exposure and the way they are seen by others i.e. as medical professionals is useful for identity development. They also asserted that professional inclusivity and social exclusivity have a reciprocal and reinforcing relationship in contributing towards

a strong sense of professional identity. However, they only did a content analysis and their work would have benefitted more from an in-depth analysis. Konkin and Suddards (2012) also found that the student took responsibility for patient care and developed a professional identity when trained longitudinally in a safe environment with meaningful patient-student interactions. Thus, workplace experiences contribute towards professional identity formation.

Clandinin and Connelly (1996) noticed that school teachers are more concerned about who they were (identity) and less about what they know (content expertise). The answers to questions about knowledge were actually about identity. According to Bleakley et al., (2011) in a moment of insecurity, the junior doctors try to appear competent. This role-playing by novices represents a coping mechanism for 'shaky' professional identities in professional situations (Monrouxe, 2010). However, this can prevent learning in experienced professionals because an impression of competence and control becomes more important than asking for help and continuing to learn. This shows that professionals are conscious about how they are being perceived by others in professional practice, and that suggests an influence of professional role recognition, and expectations by others on professional identity formation in the workplace.

Brownell and Tanner (2012) explored the tensions that faculty with a scientific background may encounter in the development of an identity as an educator. Faculty members feared being marginalised and discriminated against by their research-centric peers who considered an 'identity as educator' to be of lower status than a researcher. They were encouraged through incentives to focus more on research than teaching. Connolly (2010) noted that some faculty members even advised their students to hide their interest in teaching. Hu et al., (2015) explored the sustainability of academic careers in medical education. They found that universities valued research output over high quality of teaching. The appointments and promotions were based on clinical experience rather than formal qualifications or scholarship in medical education. In addition, there was a lesser economic capital in education as opposed to their clinical and research roles. As a result, teaching was seen as a liability and distraction in many communities. However, Hu et al., (2015) only interviewed early career professionals with experience and academic roles in education from Australian and New Zealand medical schools. Therefore, it is important to explore if the experiences of professionals differ with postgraduate qualifications in medical education and at various stages in

their career from academic centres worldwide. Such studies will have profound implications for the curriculum and faculty development (Monrouxe, 2010).

Helmich et al., (2012) explored the lived emotional experiences of medical students and their interplay with the identity development in clinical practice. They found four experiences: feeling insecure, complying, developing and participating. The study concluded that students differ in their experiences, emotions and abilities to engage in clinical practice as future doctors. They suggested a need to help the students recognise, accept and value their emotions to foster the desired professional identities. Longitudinal studies to explore such experiences across other transitions of medical professionals were also recommended.

#### *Methods used for Researching Identity*

Interviews have been commonly used to assess professional identity development (Abednia, 2012, Bamberg, 2006, Beijaard et al., 2004, Grealish and Trevitt, 2005, Hunter et al., 2007, Monrouxe, 2009a, Reid et al., 2008, Weaver et al., 2011). Critical incidents/stories can reflect changes experienced by the individuals and explicate their beliefs during transformation and identity development (Anspal et al., 2012, Blanton and Stylianou, 2009). Some researchers have also developed questionnaires with open and closed ended questions to measure identity such as social patterns of inclusivity/exclusivity (Blakey et al., 2008, Crossley and Vivekananda-Schmidt, 2009, Helmich et al., 2010). Monrouxe (2010) suggested using newer methods such as audio or video diaries, online discussion fora and blogs to get a deeper insight into the processes of identity development. Observations and video recording (ethnography) have also been recommended (Heath et al., 2006, Pink, 2006, Rees, 2009, Rose, 2011).

### 1.7.5 Theoretical Perspectives on Identity and Identity formation

Theories offer complex and comprehensive understanding of events that are difficult to understand (Reeves et al., 2008). They help researchers make choices about methods and analysis in their studies. The 2020 vision for medical education warrants the inclusion of a theoretical basis (Steinert, 2012). However, various perspectives on identity exist and it may mean different things to different people. Smith and Sparkes (2008) described five contrasting perspectives on identity with a focus on the social

dimension from diverse disciplines. These are psychosocial, the intersubjective, the storied resource, the dialogic and the performative perspectives. Based on the emphasis, these perspectives can be organised along a continuum of 'thick individual and thin social relational' to 'thin individual and thick social relational' based. For example, one end emphasises on the individual context, whereas the other end focuses more towards the social context. However, the boundaries between these perspectives are vague and therefore, may need further refinement. Monrouxe (2010) also contended that the psychological and social processes are dynamically intertwined. Since, identity involves psychological development at the individual level and socialisation into the roles of the community through interactional relationships at the collective level (Jarvis-Selinger et al., 2012). Monrouxe and Gary (2013) also discussed various concepts about identity - from it being an internal representation of self and captured within the cognitive schemas to it being socially constructed.

An explicit theoretical framework to understand the processes of identity formation as healthcare educators has not been reported in the literature. Also, Trede and colleagues (2011) found little agreement among researchers on the theoretical frameworks for professional identity development. Based on the literature reviewed, here I discuss the theoretical understandings on identity formation with individualistic (Bearman et al., 2014) and social focus (Ajjawi and Higgs, 2008). Subsequently, I briefly describe Intersectionality theory (Tsouroufli et al., 2011), which looks at the relationship of multiple identities. Finally, I explain Kelchtermans' conceptualisation on professional self (Anspal et al., 2012) that served as a guide for interview questions in this thesis.

### *Social Identity Theory*

Social Identity Theory, originally developed by Tajfel and Turner (1979) and explained further by Hogg and Abrams (2012), is a psychological theory with an individualistic focus. It suggests that society develops social and professional categories by defining some boundaries. These boundaries help individuals develop an understanding of themselves i.e. a sense of belonging and thereby derive an identity. According to this theory, individuals construct multiple social identities as they move through different social gatherings. They *categorise* some people as similar to themselves (in-groups) and others as dissimilar (out-groups). The individuals *compare* themselves with others and thus see themselves as members of a group that is positively perceived. Once

membership of the in-group is adopted then the norms, values and beliefs of the in-group are uncritically adopted. The theory also proposes that individuals develop meaning about themselves through feedback from others and when these appraisals are incongruent with an individual's self-perception, the behaviour is changed (Burke, 1991, Stryker, 2001). However, Swann (1987) argued that individuals do not change behaviour and alternatively, they search for individuals who confirm their self-perception. Self-Categorisation Theory by Turner et al., (1987) also looks at how people shift from seeing themselves as individuals to members of a group with a shared identity based on social comparison (Weaver et al., 2011). It also leads to the identification of 'in-groups' and 'out-groups'.

Helmich and Dornan (2012) suggested that self-categorisation and group membership are the central components of Social Identity Theory. Social Identity Theory and Self-Categorisation Theory together are known as the Social Identity Approach. These theories provide useful insight into the individual's perception about self and give a concrete conceptualisation of identity. They help in exploring the opportunities of participation, which are important for familiarisation with the expectations, values and behaviours in different learning environments and professional communities. The social identity theory's emphasis on accessibility and fit of a social category has implications for medical education. It can help explore the impact of learning environments, for instance, educators' role in giving or denying learners the opportunities to participate in professional communities (Helmich and Dornan, 2012). However, these theories do not provide any explanation for individual variations in the identity development process. They consider identity as dichotomous and static categories, thus fail to take the intersection of multiple identities into consideration. This focus on 'in-groups' or 'out-groups' of people also seems more sensitive to the distinctiveness and boundaries among groups and in doing so, it does not attend to the dynamic nature of group identity and its constant renegotiation (inter-professionalism) in today's healthcare practice (Helmich and Dornan, 2012).

### *Community of Practice Theory*

Community of Practice (CoP) theory (a social learning theory) draws upon theories of situated experience and considers learning as a social practice (Wenger, 1998). This theory shows a relationship between the process of learning and identity formation with

construction of meaning (Bleakley et al., 2011). It states that identity is constructed through participation and interaction in a social activity (Bleakley et al., 2011). It responds to the dynamic nature of identity with the recognition of how an individual joins a group; learn its practices and moves from being a legitimate peripheral participant to a core expert. However, this process involves real-life engagement in activities that have shared meaning for the participants along with an active exchange of knowledge between people and the social learning systems that leads to learning of professional roles, responsibilities and culture. The individuals also understand the limitations and boundaries of their profession as part of the professional socialisation process. This interplay changes both the learner and the contexts in which they are situated. Though incorporation of the individuals' perspectives into the community practices is inconclusive due to the power relationships, it also strengthens the belongingness and identities of the individuals. Moreover, new knowledge constructs as the members bring their own perspectives and contribute towards the practices of the community.

In contrast with social identity theory, a CoP theory explicitly puts practice at its centre and offers a good understanding of identity construction (Helmich et al., 2012). According to Higgs et al., (2008) the responsibility for mentoring and support is distributed across health professionals. Besides, the effective collaboration, role modelling and focussed discussions also offer opportunities for learning. However, the individuals differ in relation to the value they give to these practices defined by the community (Beijaard et al., 2004). Tensions and challenges may also arise as individuals mediate their understandings between the boundaries of different communities of practice.

According to CoP theory, the prerequisites for identity construction are the presence of a legitimate peripheral participant, community of practice with expertise, meaningful participation and sense of belonging (Ajjawi and Higgs, 2008, Bleakley et al., 2011).

### a. Legitimate Peripheral Participant

The term 'legitimate peripheral participant' was coined by Lave and Wenger (1991), and means a legitimate novice who is a learner at the periphery of the community. Their gradual increasing participation and responsibility in the community helps them move towards the centre as an expert (Mann, 2006, Robertson, 2005). This movement from

periphery to the centre involves learning to adopt the knowledge, behaviours, values and norms of the community. Thus, creating meaning and identity.

### b. Community

Barab and colleagues (2003, p.238) defined a community of practice as:

> *'persistent, sustaining, social network of individuals who share and develop an overlapping knowledge base, set of beliefs, values, history, and experiences focused on a common practice and/or mutual enterprise'.*

This community may develop when certain motivated professionals participate in a joint enterprise at various levels from the core (Blanton and Stylianou, 2009). The mutual engagement, negotiated participation, joint enterprise and shared repertoire are the basic elements of a community (Wenger, 1998). Unlike social identity theory, the individuals can also participate in more than one community at a time (multi-membership) or move between them. Boundary encounters between the communities results in the negotiation of new meanings within the respective communities.

### c. Participation

Wenger (1998) emphasised that participation or interactions should be meaningful otherwise learning will not occur. It is this meaningful engagement, which gives us a sense of who we are and our roles within the society (Bleakley et al., 2011). Early in the learning process, the focus for the novice is on simple tasks with the community initially defining their various roles. However, through participation in the community they become proficient. Therefore, learners have an active role to play within the social world throughout the process of learning with a natural consequence of deepening and maturing identity (Bleakley et al., 2011).

### d. Belonging

The experience of involvement in the activities of the community and becoming an integral part of it refers to the sense of belonging (Levett-Jones et al., 2007). According to Wenger (1998), this need for belonging is a central concept in the communities of practice theory. It involves being recognised, valued and accepted by other members of the community. This sense of belonging is also fundamental to development, progress and success in a profession (Levett-Jones and Lathlean, 2008).

CoP theory has been built into a framework for enhancing organisational performance (Wenger et al., 2002). In education, it is used to describe learning in the virtual environment, institutions, higher research degrees and continuing professional development (Blanton and Stylianou, 2009, Higgs et al., 2008). Its analytic perspectives may also be useful in considering the experiences of beginners in medical education as they develop a new professional identity. However, Varghese et al., (2005) contended that CoP theory was developed based on observations, and many professional development initiatives may not have all its features. Also, it does not explicitly reflect on the role of formal qualifications in the learning process (Fuller and Unwin, 2003). Storberg-Walker (2008) suggested that CoP is an umbrella concept without specification or internal clarity. There may be participants with transformed practices to whom a stable community of practice is not readily available after joining their workplaces (Sykes and Bird, 1992). Various power relations exist in communities and this theory has weak considerations for them within a group (Varghese et al., 2005). In addition, this model of learning does not include the recipient such as patients and students, who are an important source of learning and development. Cox (2005) argued that the terms ‘community’ and ‘practice’ are a source of ambiguity, thus allowing CoP theory to be re-appropriated for different purposes. Although, authors contended over the usefulness of a CoP for building new theories and conceptualisations of learning but it is too limiting for considering the wide range of workplace contexts such as healthcare (Eraut, 2002, Fuller and Unwin, 2003). Furthermore, present-day healthcare system frequently involves restructuring, temporary contracts and individualised tasks heavily mediated by computers (Cox, 2005). Such conditions may inhibit sustained collective participation or engagement required in a CoP theory.

### *Intersectionality Theory*

Intersectionality is sociological theory that helps to explore the disparities experienced by discriminated individuals due to inherent power inequalities (Monrouxe, 2015). The intersection of multiple biological, social and cultural identities such as sexual orientation, gender, race, religion and ethnicity uniquely shape an individual’s view, needs and experiences (Tsouroufli et al., 2011). For instance, being a coloured female medical student within a male dominated clinical speciality such as surgery. This theory recognises that it is impossible to separate multiple identities of an individual, and encourages addressing the intersection of these categories for a deeper understanding

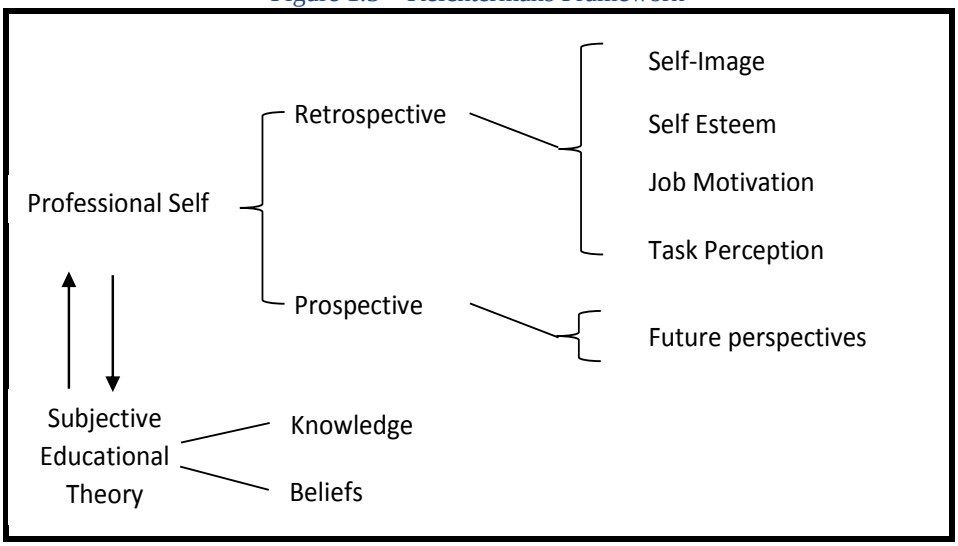
(Monrouxe, 2015). However, this theory has focused on multiple social identities of marginalised groups rather the multiple professional identities. Moreover, it has not been extensively used in medical education literature (Tsouroufli et al., 2011) and lacks a defined intersectional methodology.

### *Kelchtermans Theoretical Model for Professional Self*

The notions of the self and identity are often adopted uncritically as interchangeable terms in the literature (Skelton, 2012). According to Nias (1989) identity and self are related but different concepts, where identity forms a part and can influence the self. The 'self' is an organised representation of our theories, attitudes and beliefs about ourselves (McCormick and Pressley, 1997). Like identity, the professional self is also dynamic and evolves over time through interaction with the environment. Based on a comparative analysis of career stories, a conceptual model was presented by Kelchtermans (1993) to grasp professional self of teachers. This model offers rich, refined and in-depth understanding of professional self and its influence on professional behaviours. It has been used to study the transformation process and development of professional identity among teachers (Abednia, 2012, Anspal et al., 2012, Canrinus et al., 2012).

The professional self has two dimensions: retrospective and prospective. The former is the concept about self as one looks back from present to the past and the latter as one looks to the future. This professional self is interrelated with the professional's subjective educational theory (epistemic beliefs) developed under the influence of their experiences in a career (Figure 1.3).

Figure 1.3 – Kelchtermans Framework



### a. Retrospective Dimension

The retrospective dimension comprises of four components as follows:

i) Self-image is the description of oneself or by others about the general principles governing one's professional behaviour.

ii) Self-esteem closely ties to valuing and evaluating oneself as a professional. It involves the judgement of performance that is connected to and driven by comparison with others. Kelchtermans' definitions of teachers' self-image and self-esteem closely relates to teachers' self-efficacy, which is an indicator of professional identity (Canrinus et al., 2012).

iii) Job motivation involves the motives behind entering and staying in the profession. It also includes the commitment towards a profession and factors effecting it. The judgement by others has an important influence on self-esteem and job motivation.

iv) Task perception is the understanding of one's professional responsibilities i.e. how the individuals define their professional work, relationships and behaviours.

### b. Prospective Dimension

The prospective dimension comprises of one component i.e. Future perspectives. It is about how the professionals see their role or career progress in the future. Additionally, it includes their evaluation of the job situation and opportunities for future development.

## 1.8 Summary and Rationale

The previous studies on professional development initiatives are mostly simple short-course evaluations, USA-centric and focused on participants' satisfaction or gain in knowledge and skills. Only a few studies included longitudinal programmes. The only studies published on postgraduate qualifications from the UK are scoping studies to give an overview of medical education programmes and the quality of Masters' research to inform educational interventions (Pugsley et al., 2008a, 2008b). The General Medical Council, UK is now implementing an 'approval of trainers' process (GMC, 2012), making it mandatory for all named roles involved in educating medical students and trainees to have minimum competencies in education. Hence, there is a need for well-designed and rigorous studies on the impact of these degree-awarding programmes to inform policy and practice, thereby justifying the time and resources requested of institutions.

Many previous studies' positive results may be skewed because they evaluated the effectiveness of their programmes on highly motivated participants with support and opportunities for productivity in the workplace (Gruppen et al., 2003, Searle et al., 2006b, Steinert and McLeod, 2006). O'Sullivan and Irby (2011) asserted that organisational and contextual factors strongly influence the impact of professional development initiatives. Hence, there is a need to study the impact of these qualifications on graduates who are working in diverse range of contexts and cultures worldwide, which may or may not be conducive for their newly learnt educational practices. Moreover, it may be useful to determine if the impact is different for graduates at various stages in their career. Additionally, it is essential to explore the career pathways of these educators after a qualification in medical education i.e. a follow-up from qualification on the career ladder in terms of current development or future career intentions (Davidson et al., 1998).

The literature search identified one study (Lown et al., 2009) reporting the impact of a fellowship on a highly motivated faculty of Harvard Medical School in terms of identity and careers in medical education. Abednia (2012) called for research on long-term changes in teachers' identities after interaction with their workplace environment. Bleakley et al., (2011) also emphasised the need to study professional identity development of medical educators. Therefore, researching their professional identities is necessary in order to conceptualise the support required in the transformation of beliefs and practices, which is a goal of these postgraduate qualifications in medical education (Tekian and Harris, 2012). Understanding how participants learn the skills, attitudes and values needed to become active participants of the community, and develop an educational identity during the period of the course is a contemporary phenomenon. Hence, there is a need to understand the processes and provide a conceptualisation of identity formation of healthcare educators.

There is also a need to overcome the limitations of previous studies. Hence, studies on bigger cohorts, taking context into account and the long-term impact of such initiatives are required. Since the impact of these professional development initiatives is affected by various factors occurring after its completion. Therefore, it may not be easy to separate the effects of a degree-awarding programme from these other influences in the workplace. Steinert et al., (2006) recommended rigorous research methods assessing the change over time in their systematic review on faculty development initiatives. For that reason, a longitudinal study on the impact of these programmes over the period of the

course to the workplace is also required. Furthermore, the various challenges or enablers towards productivity in the workplace needs further research. Similarly, little is known about the complex and multi-faceted set of tensions medical educators encounter towards their enculturation into the workplace environment. Understanding these have implications for improving their experiences as an educator and in turn further professionalisation of medical education.

## 1.9 Research Question

The overarching research question for this thesis is:

- How does a qualification in medical education influences graduates' educational identities, practices and career pathways?

Table 1.3 below provides a matrix of all the supplementary research questions addressed in each of the three studies reported in this thesis.

Table 1.3 - Supplementary Research Questions

| | Chapter 3: Study one | Chapter 4: Study two | Chapter 5: Study three |
|---|---|---|---|
| What is the impact of qualifications on graduates' practices and involvement in medical education? | X | X | X |
| Are there differences between those graduating at different levels? | X | X | |
| Is the impact influenced by age and nationality? | X | | |
| What are the motivations for enrolling in a qualification in medical education? | X | X | X |
| How does a qualification impact on the graduates' educational identities? | X | X | X |
| How does a qualification impact on the graduates' careers? | | X | X |
| What are the tensions towards being and becoming an educator? | | X | X |
| How does a qualification in medical education impact productivity in the workplace? | | X | |
| What factors enhance or hinder productivity in a workplace? | | X | X |
| What aspects from the course foster behavioural changes? | | | X |
| Do interpersonal expectations influence the impact of these qualifications and identity development? | | | X |

# Chapter 2: Methodology

## 2.1 Introduction

The previous chapter showed how quantitative and qualitative study designs have been used to determine the impact of faculty development initiatives. The studies on professional identities have predominantly utilised qualitative methods such as interviews and observations. This thesis employed a mixed methods approach to study the impact of postgraduate qualifications in medical education on educational identities, practices and career pathways.

The chapter begins with a description of mixed methods as a methodology and the justification of their use in this thesis. It also briefly discusses pragmatism as a paradigm in relation to positivist and interpretivist perspectives. The final part of the chapter outline measures undertaken for ensuring quality in this research project followed by an overview of the study design and study setting.

## 2.2 Mixed Methods

In the literature, there is a clear distinction between methods used for quantitative and qualitative approaches (Creswell, 2008, Crotty, 1998). However, Lincoln and Guba (1985) pointed out that the methods are just tools and they should not be associated with any one particular form of research. They asserted that each method has its strengths, which suits the goals associated with one form of research more than the other. Morgan (2013) explained it further, stating that for research emphasising induction, subjectivity and context, the methods most likely to help would be interviews, focus groups and observation, whereas surveys and experimental interventions favour research based on deduction, objectivity and generality. The methods in themselves do not automatically define the type of research approach, but rather their purpose and the manner in which they are applied. This concept resulted in the evolution of ‘mixed methods’ research, which involves the use of both quantitative and qualitative approaches for data collection, and analysis within a single study (Morgan, 2013, Schifferdecker and Reed, 2009, Teddlie and Tashakkori, 2010).

Mixed methods research is now well supported in the literature and has become common in practice (Creswell, 2008). It accomplishes what is difficult using either

qualitative or quantitative approaches alone, by creating a dialogue between different ways of seeing, interpreting and knowing (Bryman, 2006, Morgan, 2013, Schifferdecker and Reed, 2009). However, it can be very demanding and one needs to consider the benefits against the cost, the time and the expertise required (Morgan, 2013). Those who use a mixed methods approach are not only required to know the different methods used in each of the qualitative and quantitative approaches, but also when and how these different methods can be integrated in one project at different levels. Therefore, it all comes down to reflecting on what a mixed methods approach can accomplish that would be difficult to achieve from either qualitative or quantitative approaches alone (Morgan, 2013). Without this understanding, using mixed methods will only generate more results and redundant data with no value for the additional effort (Bryman, 2006).

### 2.2.1 Justification

The current research employed a mixed methods approach for a variety of reasons. The first study surveyed graduates that allowed for a purposive sample to be used in the interview study. The intent here was the sequential use of different methods to help inform the second study i.e. its 'development' (Greene et al., 1989). The findings from the questionnaire measured the impact of the qualification and highlighted areas that needed further exploration. Therefore, the second study was carried out with the intent of understanding 'overlapping but also different facets of a phenomenon' (Greene et al., 1989, p. 258). These qualitative interviews gave an enhanced and in-depth understanding of professional identity and various other aspects of the impact of the qualification. It also helped understand the influence of motivations and contextual factors on the impact of these qualifications. Using a mixed methods approach for such intentions is termed 'complementarity' (Greene et al., 1989). A third study was then carried out to understand the processes, and extend the range of inquiry through longitudinal follow-up of a cohort of face-to-face students. Here multiple interviews carried out over a period of time from another stakeholder group helped to complement the findings from previous studies, overcome their limitations, and also revealed different perspectives i.e. 'expansion' (Greene et al., 1989).

The professional identity of healthcare educators is a new and complex concept, therefore it necessitated employing a mixed methods research approach for relevance, depth and applicability of its findings (Schifferdecker and Reed, 2009). According to Bryman (2006), using both quantitative and qualitative methods may 'strengthen' the

overall study; ‘offset’ the weaknesses of each method; and bring ‘completeness’ to the account. The quantitative findings from the survey presented the breadth of impact on practices and scholarly activities. The qualitative data added depth to these findings and helped to contextualise the impact and understand its influencing factors. The interviews complemented and enriched the findings from the survey and helped in understanding the process of identity development (Bryman, 2006). The third longitudinal study involving face-to-face students away from their workplace, confirmed the developing theoretical framework along with the identification of new perspectives. In light of these benefits, a mixed methods approach appeared most appropriate in answering the overarching research question.

### 2.2.2 Design

Schifferdecker & Reed (2009) described four overarching design models in mixed methods research. The current thesis used an explanatory model where the quantitative data was explored and explained using qualitative interviews. The qualitative findings helped to complement, clarify and extend the quantitative results. The survey of the graduates used both closed and open-ended questions i.e. within-stage mixed model design (Johnson and Onwuegbuzie, 2004). In addition, this is a multi-strand study as more than one research method (questionnaire and interviews) and source of data (students and graduates) were used (Tashakkori and Teddlie, 2002). Defining these aspects of mixed methods research conveys rigor and explains the intentions behind using a mixed methods strategy.

## 2.3 Philosophical Perspective

According to Rossman and Wilson (1985), there are three stances on quantitative and qualitative approaches: ‘purism’ i.e. they are exclusive and cannot be used together; ‘situationalism’ i.e. they can be used in the same study but are only valued in their own place; and ‘pragmatism’ i.e. they are both valuable and their combination in study design, data collection or analysis increases the value (Maudsley, 2011). The current research study is informed by a pragmatic stance. Pragmatism upholds the importance and value of both qualitative and quantitative methods to the study design (Maudsley, 2011). It attempts to integrate them based on the assumption of mutual relevance (Morgan, 2013).

Mixed methods research is sometimes conceptualised and labelled as casual i.e. merely incorporating different methods in one project. A pragmatism approach is more than just the format of the data or methods used. It is something that reaches into our assumptions about reality and the kind of knowledge attained by the research (Crotty, 1998). With increasing interest in the value of qualitative and quantitative methods, the paradigms have become crucial and it is important to explicitly discuss these in the research study. However, before understanding pragmatism as a philosophy and paradigm, a brief overview of other common paradigms such as 'positivism' and 'interpretivism' is provided.

### 2.3.1 Positivism/Objectivism

The positivism paradigm (used interchangeably with objectivism) believes in the notion that reality exists independently from our consciousness and it is there to be discovered (Crotty, 1998). This stance assumes that reality is observable and can be measured. Controlled experimental studies and surveys usually follow a positivist paradigm. These studies use valid instruments, technical procedures and replicable research designs to accumulate verifiable and generalisable knowledge about the world. Crotty explained this perspective further with an example of a tree. He stated that a tree in the forest exists prior to or even without our awareness of it. Therefore, what can be known about that tree is just waiting for it to be observed and discovered. The positivist observer only collects facts, separate from values in an unbiased manner rather than participating to create them.

### 2.3.2. Interpretivism/Subjectivism

The interpretivism paradigm (used interchangeably with constructivism) assumes that reality/meaning is not discovered but constructed (Crotty, 1998). It means that there is no single objective truth or observable reality waiting to be discovered by us, but multiple constructed realities or interpretations. The knowledge is constructed and meaning emerges by conscious engagement of the mind. The research interest in this paradigm lies in understanding the phenomenon and its meaning for those who are involved with it (Merriam, 2009). According to this perspective, it is acceptable for different people to construct meaning/reality differently even for the same phenomenon (Crotty, 1998). Most qualitative research is located in this paradigm. Here using the

same example of a tree, Crotty explained that the tree is subject to human interpretations by giving it a name and associated properties, and interpreting its meanings. It holds no meaning until our conscious interprets it as a tree. A botanist will conceptualise and interpret a tree differently from an artist, likewise for those in a different cultural or emotional state.

### 2.3.3 Pragmatism

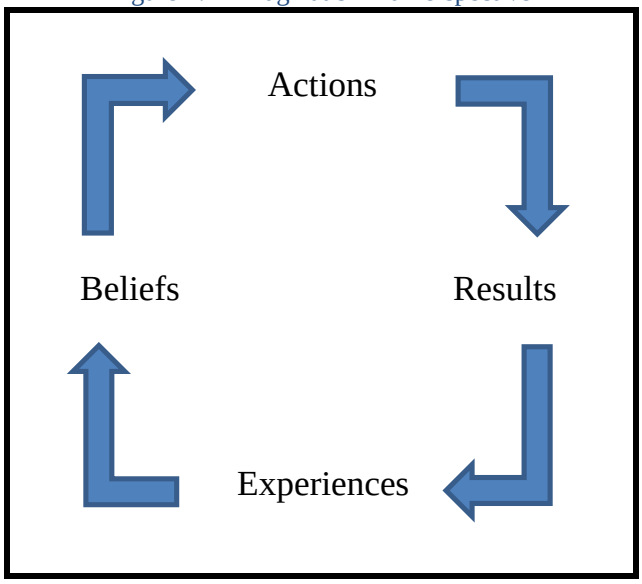
Pragmatism as a philosophical notion originating in the 19th century in the United States. According to Peirce (1878, p.293), pragmatism implied that we should 'consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object'. Building on Peirce's lead, William James provided a detailed summary in his book, Pragmatism (James, 1907). He stated that the 'cash value' of an expression/action is determined by the respective experiences or consequences. It is an attitude of looking at outcomes and consequences, away from principles or supposed necessities. Dewey (1933) extended the works of Peirce and James, and focussed on the concept of inquiry as a form of experience to resolve uncertainty or problems. Such situations are answered by careful reflection on the likely consequences of various lines of action (contingencies) and deciding on the best way forward. It involves not only reflection on the nature of the problem but also its possible solution. A satisfactory conclusion forms a warranted belief. Such warranted beliefs about the likely consequences of using one research design over another, then inform various decisions/actions in a research project. Shared beliefs within the field of research becomes worldviews. Patton (1988) called it a 'paradigm of choices' due to this decision-making process. The specific version of pragmatism in this thesis is based on the works of Peirce, James and Dewey. This classical pragmatism has been refined and systematically developed in newer directions (Post-Deweyan pragmatism) by the neo-pragmatists such as Donald Davidson, Nicholas Rescher, Richard Rorty, Hilary Putnam, Susan Haack, Robert Brandom, and Cornel West (Johnson and Onwuegbuzie, 2004). Neo-pragmatism is influenced by the linguistic turn in philosophy, which reduced talk of mind, ideas, and the world to language and the world. The focus has shifted from the ideas or concepts in one's mind to the 'mental language' and terms used to employ these concepts.

Pragmatism was heavily criticised for being 'uncritical'. Lewis Mumford (1950) described it as an 'attitude of compromise and accommodation' (cited by Crotty, 1998, p. 61). However, it is important to note that 'pragmatism' used synonymously with 'pragmatic' does not mean 'whatever works in a situation', and it pays due attention to the ethical aspects of paradigms (Morgan, 2007). It is a liberal approach to seeking the truth, and believes in the most effective way of determining a truth i.e. efficacy of practical application (Crotty, 1998). Pragmatists believe in the joint action of different research fields for the workability and success in a common project (Morgan, 2007). Pragmatism research is driven by its research questions, the methods used being secondary to those, and it strives for practical solutions to real life problems (Creswell, 2008, Maudsley, 2011, Morgan, 2007, Tashakkori and Teddlie, 1998).

### *Pragmatism as a Philosophy*

Pragmatists believe that an action cannot be separated from past experiences and the beliefs that have arisen from them (Morgan, 2013). This means that we take actions, which have likely consequences, and the results of those actions form a part of our experiences, influencing our beliefs, which in turn influence future actions (Figure 2.1). Therefore 'the meaning of our actions and beliefs is found in their consequences' (Morgan, 2013, p.26).

Figure 2.1 - Pragmatism - a Perspective



According to Morgan (2013) three fundamental beliefs of pragmatism are:

a. Actions are contextual and cannot be separated from the situations in which they occur. Therefore, pragmatists believe that no single objective (universal) truth can be assigned to any action but there are 'warranted beliefs' (Morgan, 2013). Thus, by taking similar actions repeatedly with associated consequences, we learn the likely outcome of our actions in a given situation or context. The outcomes of our actions then become predictable and these develop warranted beliefs.

b. Actions are associated with consequences in ways that are open to change. This means that even though our actions are linked with certain consequences, such consequences can change as the situation or context changes (Morgan, 2013). For example, consequences of weight gain are different at different ages and for different occupational groups. Pragmatists argue that someone is unlikely to experience the exact same situation again. Therefore, all previous beliefs about actions are provisional. Meanings of actions will change with changing consequences over time and thus, beliefs are continuously evolving with ongoing experiences.

c. Actions depend on socially-shared sets of beliefs or worldviews. Pragmatists believe that because no two people can have exactly identical experiences, no two worldviews are alike. However, there are varying degrees of shared experiences between people, and thus, varying degrees of shared beliefs. People with shared beliefs are likely to act in similar ways and assign similar meanings to the outcomes of those actions. Therefore, worldviews are both individually unique at the most detailed level but socially shared at a broader level.

In the light of these beliefs explained above, pragmatism is philosophically unique. In comparison to other paradigms, it focuses on the nature of experiences in place of reality, and outcomes of actions in place of questions about nature of truth, and examines shared beliefs instead of concentrating on individuals as isolated sources of beliefs (Morgan, 2013). This philosophy of pragmatism is robust and applicable to a constantly changing reality with new problems, and we need to apply our experiences to each problem to produce useful knowledge about the best way forward.

### *Pragmatism as a Paradigm*

The two competing paradigms, objectivism and interpretivism, have distinctive characteristics. They are different in terms of purpose and procedures used for research. However, it is argued that their reasons for division is well outside the philosophy of knowledge and these divisions fail at every level in actual research conduct and practice (Morgan, 2007). They operate in the same socially shared world and therefore, the results from these two forms of research need not be 'incommensurate' (Morgan, 2013). In fact, the mutual relevance of the result from these two approaches may find areas of complementarity between the knowledge they produce. Thus, pragmatism as a paradigm tries to integrate these two based on this assumption of mutual relevance. The fundamental triad of concepts in pragmatism are:

a. Pragmatists believe both in the concept of reality, i.e. it may exist apart from human experience, and that it can be encountered through human experience, but it rejects the rigidity of these knowledge claims and takes a middle road (Shaw et al., 2010). The focus is on mutual relevance as all knowledge of the world is socially constructed, and a particular version of it is more likely to match individual experiences (Morgan, 2013). Therefore, no matter what we believe in, some of those beliefs are more likely than others to meet our goals and needs.

b. In terms of epistemology, pragmatists believe that all knowledge of the world is based on experience (Morgan, 2013). Combined with the belief of knowledge as both objective and constructed, they also believe that all knowledge is social knowledge. This means that an individual's knowledge is unique, based on an individual's experiences, but it is socially shared as it comes from shared experiences with others. Thus, individuals are likely to act similarly and assign similar meanings to the outcomes of those actions (Morgan, 2013).

c. In terms of methodology, the pragmatists focus on reflection on ways of doing research (why this way and not the other) and type of knowledge to be produced (type of outcome) (Morgan, 2013). They believe in justifying the plausibility of using any methods to achieve the goals and meet the needs (Morgan, 2013). Thus for pragmatists, surveys are not associated with a belief in the existence of an external independent reality or observation of participants with its denial.

This triad of concepts influenced the study design, data collection and analysis methods. Therefore, I used both quantitative and qualitative methods based on both my

supervisory team and socially shared research experiences to assess and understand the phenomenon in the best possible way.

### 2.3.4 Pragmatism and its Distinctive Qualities

A positivist approach involves deduction, objectivity and generality (Crotty, 1998, Morgan, 2007). It relies on standardised protocols for data collection and randomly selected participants with minimal researcher bias. The results are therefore applicable to a wide range of settings and circumstances. In contrast, an interpretivist approach involves induction, subjectivity and contextualisation (Morgan, 2007, Morgan, 2013). Such studies have an emergent design and use the researcher's experiences to interpret purposively selected participants' perspectives. The results are only applicable to specific research settings and circumstances. On the other hand, the pragmatism paradigm offers a new range of opportunities. The connection of theory and data is based on abduction, the relationship of the researcher to the research process is inter-subjective, and inferences from data are transferable (Morgan, 2007).

#### *Abduction*

In theory there is a sharp division between deduction and induction. However, in practice the connection of theory and data is not straightforward. Study design, data collection and analysis can neither be purely driven by data (inductive) nor theory (deductive) (Morgan, 2007). Pragmatism relies on the practical approach of 'abductive reasoning that moves back and forth between induction and deduction' (Morgan, 2007, p. 71), thus, offering an opportunity to explore the potential of both approaches in a single study (Morgan, 2007). For example, in the second study of this thesis I carried out an initial purposive sampling to make a logical inference (inductive). This inference was then evaluated by a theoretical sample of participants (deductive).

#### *Inter-subjectivity*

The pragmatism approach promotes duality i.e. an inter-subjective approach, which considers both the single real world and the unique individual interpretations as a key element of social life. Pragmatists believe that it is only possible in theory to have 'complete objectivity' or 'complete subjectivity' (Morgan, 2007). For example, in the

first study of this thesis the questions for the survey were derived from the literature review. However, there were some subjective judgements involved in designing the questionnaire as well.

#### *Transferability*

Pragmatists reject the extreme approach of knowledge being general or context dependent. They claim that practically it is not possible for research results to be unique with no implications for those in other settings nor is it necessarily generalisable to every cultural setting. To some extent, knowledge from both positivist and interpretivist approaches can be taken and put to appropriate use in various other circumstances (Morgan, 2007). However, there is a need to investigate the factors affecting the transferability of the findings to other settings. For example, understanding the learning conditions from the course that influenced behavioural changes in the third study made the findings transferrable to other contexts (Morgan, 2007).

## 2.4 Quality

There are always concerns about ensuring quality in research. As it is a mixed methods research, a combination of quality criteria set out for quantitative (Norman and Eva, 2014, Ringsted et al., 2011) and qualitative approaches (Cote and Turgeon, 2005, Kitto et al., 2008) was ensured. Now I briefly discuss the various measures undertaken to enhance the quality of this research thesis and improving its plausibility.

### 2.4.1 Quantitative Research Criteria

#### *Validity and Reliability*

The purpose of each question in the questionnaire along with the review of wording, sequencing and layout was thoroughly discussed with three senior academics in medical education having expertise on questionnaire and interview design. These actions ensured the content validity of the questionnaire i.e. it measures what it is intended to measure (Norman and Eva, 2014, Ringsted et al., 2011) and also improved the rigor (Rees and Monrouxe, 2010). The questionnaire was piloted with colleagues, and the suggested changes were discussed with the supervisors to ensure face validity. To ensure internal consistency, I performed Cronbach's alpha on the Likert scale items. It

came out as 0.8, which implies a high probability that the items in each scale are measuring the same construct (Ringsted et al., 2011).

#### *Representativeness*

The questionnaire was emailed to all those who graduated from the Centre for Medical Education, University of Dundee courses between 2008 and 2012 via the university's alumni office. Though I tried to give everyone an opportunity to participate, I was unable to ensure representativeness due to data protection.

### 2.4.2 Qualitative Research Criteria

#### *Transparency*

To enhance the transparency and credibility of research (Kitto et al., 2008, Ringsted et al., 2011), the philosophical paradigm i.e. pragmatism as well as justifications for employing mixed methods have been discussed in this chapter. The research questions, related methods of data collection and analysis for each study have also been clearly discussed in subsequent chapters of this thesis. Moreover, the data collection tools have been described in detail for each study and a copy has been added to the appendices. An alignment between philosophical assumptions, methods and methodology brings an internal coherence, and this makes the outcomes robust, defensible and credible (Rees and Monrouxe, 2010).

#### *Rigour*

To improve the methodological rigour, a diverse range of participants was selected in each study to explore the similarities and differences, and to capture unique and deviant experiences. An informed consent along with frequent engagements with the participants in the third study helped to build rapport and trust (Dicicco-Bloom and Crabtree, 2006). An iterative approach was adopted towards data collection and the analysis. Every decision made during the data collection, management and analysis was thoroughly discussed between the researcher and his three supervisors before subsequent actions, providing researcher triangulation. I also did deliberate searches for positive and negative examples of each theme and coded them accordingly. Moreover, the work in progress was presented at various internal and external seminars/ conferences to seek feedback from peers. A thesis monitoring committee comprising of three external researchers also reviewed the progress and gave useful input. Publications

within international peer reviewed journals were also sought. All these measures helped to enhance interpretative rigour and thereby trustworthiness of the findings (Cote and Turgeon, 2005, Kitto et al., 2008, Kuper et al., 2008a).

Sending analysis to the participants for their feedback is recommended in the literature to ensure its face validity (Cote and Turgeon, 2005). The interpretations were not submitted to the participants because member checking assumes a fixed truth of reality that can be confirmed by a participants, whereas there is a change over time of the positions and purposes of the participants and the researcher (Kitto et al., 2008). The researcher may look at the data in new ways or may come across an implicit phenomena, which the participants may or may not be aware of or in agreement with. Also, it would have been another time-consuming expectation from the very busy participants.

### *Reflexivity*

My professional background, that of my supervisors, and our relationship with the participants along with any influences have been discussed in the ethical application and following chapters. I also kept a research diary to jot down my personal reflections throughout the research process. This reflexive process also served to identify my training and supervision needs.

### *Transferability*

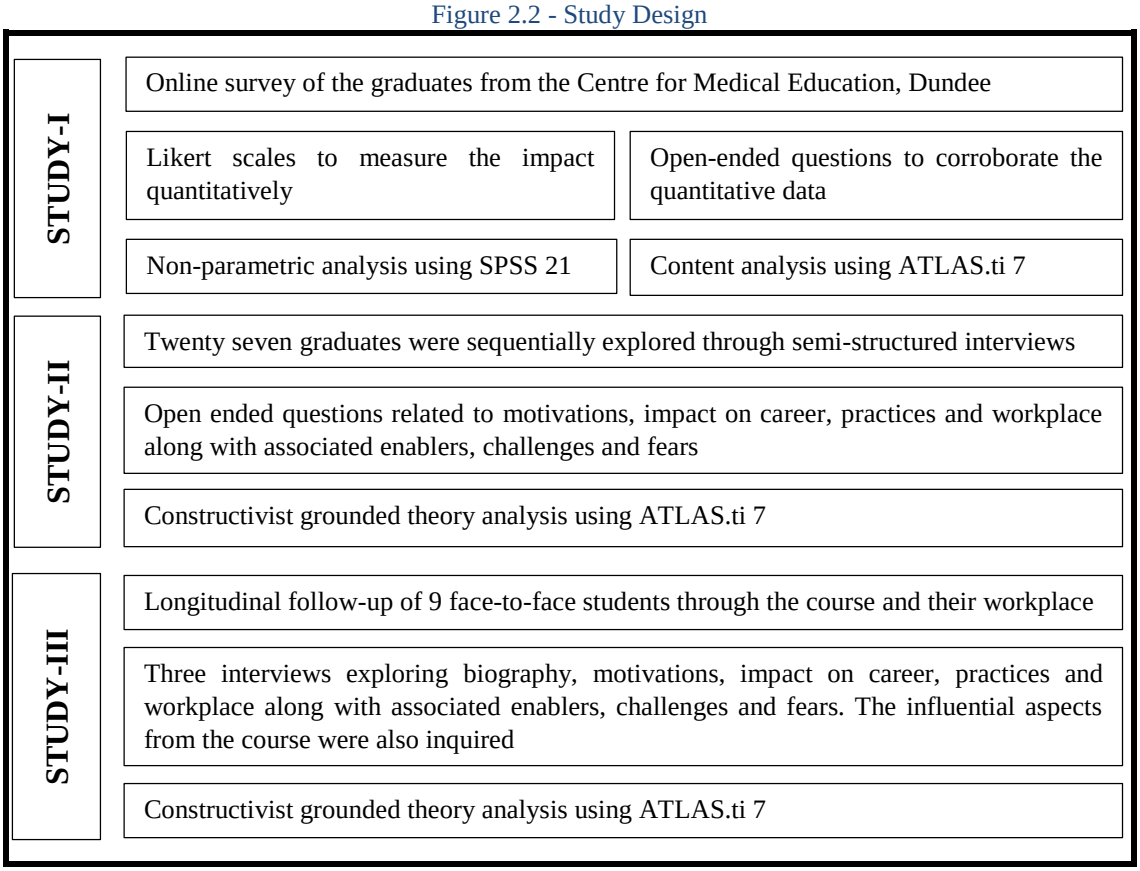
The context and various factors affecting the results have been adequately discussed in each chapter to enhance the transferability or relevance of findings from this research (Kitto et al., 2008, Rees and Monrouxe, 2010).

## 2.5 Study Design

Three studies were carried out to answer the overarching research question (Figure 2.2). Study one involved an online survey of the graduates (2008-2012) from the Centre for Medical Education, University of Dundee measuring their self-reported shifts in educational competencies and scholarship activities. The open-ended questions gave an insight into graduates' experiences and enabled sampling for the second study. Study two employed a constructivist grounded theory approach and used semi-structured

interviews to explore the influence of these qualifications on epistemic beliefs, practices, careers and workplaces of the graduates. These studies were retrospective and focussed on the graduates who are currently engaged in medical education activities. Study three is prospective and involved a 10-month longitudinal follow-up with a cohort of face-to-face students (2013/14) from the Centre for Medical Education, University of Dundee.

Figure 2.2 - Study Design




## 2.6 Study Setting

The study was conducted with graduates and students from the Centre for Medical Education (CME), University of Dundee. The CME was established in 1973 and is a world leader in medical education. It is a pioneer of medical education in UK with degree-awarding programmes at various levels i.e. Certificate, Diploma, Masters and PhD. These qualifications are offered to a diverse range of national and international students from various health professions e.g. medicine, dentistry and nursing. According to CME records (Nov 2015), the total number of current graduates and students worldwide are 2992 and 2144 respectively. Ninety percent of the participants are distance learners (originally paper-based and moved online in 2011) who undertake

the course while they are working. The course can also be completed full-time face-to-face.

## 2.7 Summary

The study design was mixed methods using an explanatory model. It was underpinned by the pragmatism paradigm, which is focused on the research questions and encourages the use of pluralistic approaches to answer the problem. The first study, an online survey was employed to measure the perceived impact of the programmes on medical education competencies and scholarly activities. Study two used grounded theory and semi-structured interviews to explain and elaborate the research phenomena developing a provisional model of professional identity formation of medical educators. The third study, also using grounded theory, involved multiple longitudinal interviews to confirm the provisional model and explore the influence of context on professional identity formation as it occurred during the programme. A detailed account of each study and their findings are presented in the following chapters.

# Chapter 3: Study 1 - Exploring the Impact of Qualifications on Medical Education Competencies and Scholarly Activities

## 3.1 Introduction

The impact of postgraduate qualifications in medical education on educational identities has not been researched before. For this reason, some preliminary investigation into the phenomenon was necessary. The representative population is dispersed over a broad geographic range in the UK and worldwide. Therefore, my first study employed a survey to explore the graduates' perspectives on the impact of qualifications in medical education. The survey also helped to recruit the participants for in-depth interviews in the second study.

The chapter begins with a brief discussion on questionnaire design, data collection and analysis. Next, I present the results from the survey followed by a discussion. This study's research questions are:

- What is the impact of qualifications on graduates' practices and involvement in medical education?
- Are there differences between those graduating at different levels?
- Is the impact influenced by age and nationality?
- What are the motives behind enrolling in medical education course?
- How does the qualification influence perceptions of self?

## 3.2 Methods

### 3.2.1 Survey

A survey is an efficient means for systematically gathering information from large numbers of the population through their responses to questions (Check and Schutt, 2012). It can collect information and enhance understanding about individuals' characteristics, actions or opinions using standardised questionnaires or interviews (Glasow, 2005, Pinsonneault and Kraemer, 1993). It can also help in identifying the needs, measure impact, evaluate demands and determine specific areas for improvement with minimal administration time and cost (Salant and Dillman, 1994). Further, a survey

can be used to compare the attitudes of different populations or look for changes in attitudes over time. It consists of a predetermined set of questions, and is usually given to a representative sample of the population of interest (Shaughnessey et al., 2011). The advent of computers and the internet have created possibilities for electronic surveys. They are even more flexible and inexpensive than paper-based surveys (Check and Schutt, 2012). Although survey data are relatively easy to make generalisations from, they can only provide an estimate for the whole population (Salant and Dillman, 1994). They are prone to biases on account of respondents' possible poor recall of circumstances and assessment of behaviours (Check and Schutt, 2012). In addition, the respondents may give socially acceptable responses. Therefore, a survey requires careful thought and planning to get valid and reliable results.

### 3.2.2 Questionnaire

A questionnaire was developed using Bristol Online Survey (University of Bristol, 2013), as the University of Dundee has a licence for the product and provides support. Also, its servers are in EU, thereby conforming with the Data Protection Authority. The questionnaire (Appendix 3.1) had four pages online: The first page introduced the study and a link to participants' information sheet (Appendix 3.2) was provided. The participants were asked to give informed consent online by clicking the 'continue' button. The survey was anonymous to encourage freedom in responses. However, an optional field for respondents to share their name and email address was provided on the third page for future contact. The final page acknowledged participation and provided contact details of the researcher. The second page was comprised of three sections: demographics, impact on practices, and impact on professional self. The demographics included: age, gender, nationality, profession, workplace and graduation details. The participants were also asked about other education-related qualifications and any current education related roles. This information helped in the selection of participants for the second study (follow-up interviews).

The next two sections comprised of both closed and open-ended questions. The closed-ended questions provided quantifiable measures. They concentrated on two areas: impact of the qualifications on the graduates' practices and their involvement in education. Two Likert scales were used. One asked graduates to rate on a five-point scale their degree of preparedness to carry out six tasks. The items were adapted from

the recent Approval of Trainers' documents (GMC, 2012), themselves based on the domains underpinning the expert professional practice of medical educators set out by the Academy of Medical Educators (2012). This acquisition of professional competencies, associated values and confidence in ones abilities are essential for professional identity development (Sutherland and Markauskaite, 2012). The second Likert-based question asked them to rate on a four-point scale the extent of their involvement in educational research and scholarship activities. I included various education scholarship activities such as attendance, presentations at scientific meetings, workshops and publications that were not explored in Goldszmidt et al.'s, (2008) study on the impact of Masters in Education programme, resulting in an underestimation of participants' scholarly involvement in their study. Involvement in these activities measures the sense of belonging to an educational community of practice (Wenger, 1998). The choices ranged from *not at all prepared* (1) through to *very well prepared* (5) and *never* (1) through to *frequently* (4) respectively.

The open-ended questions sought additional insight into experiences and allowed respondents to answer in their own words (Salant and Dillman, 1994). One of the questions explored participants' motives, as a wish for identity runs ahead of its development and the establishment of expertise (Bleakley et al., 2011). These motivations for pursuing advanced qualification in education have not been addressed in previous research. Goffman (1990) described perception of self as who participants think they are, who they think others are and who they think others think they are. Therefore, the participants were also asked about the difference in how their colleagues see them as well as how they see their colleagues as educators after the qualification. These comparisons reflect the individuals' evaluation of their professional self and relations with other colleagues (Anspal et al., 2012). The open-ended questions also explored the key influences on participants' educational practices along with examples of successful educational changes in the workplace to gather self-reported data on impact.

### 3.2.3 Piloting of the Questionnaire

The questionnaire was piloted with 10 colleagues, which included Masters' students, PhD colleagues and academics (not part of the sampling frame) to clarify issues related to wording, sequencing and layout (May 2013). As a result of feedback from the pilot,

all questions were made optional and 'Medical Educator' was added to the professions category. An online link to the participants' information sheet was also added to the questionnaire. The pilot revealed that the questionnaire took approximately 10 minutes to complete.

### 3.2.4 Subjects and Settings

The target population was graduates from the Centre for Medical Education, the University of Dundee between 2008 and 2012. They were identified through graduation ceremony booklets published by the University of Dundee each year. The one to five years interval between graduation and the follow-up questionnaire (2013) allows for the long-term effects to be measured. The Table 3.1 represents the total number of graduates (1988–2015) at various levels of postgraduate qualifications in Medical Education from the Centre for Medical Education, University of Dundee.

Table 3.1 - Graduates 1988–2015

| Year | Certificate | Diploma | Masters | Research Masters | PhD/MD | Annual Total |
|---|---|---|---|---|---|---|
| 1988 | | 2 | | | | 2 |
| 1989 | | 5 | | | | 5 |
| 1990 | | 11 | 1 | | | 12 |
| 1991 | | 16 | 9 | | | 25 |
| 1992 | | 18 | 10 | | | 28 |
| 1993 | | 22 | 9 | | | 31 |
| 1994 | | 31 | 5 | | | 36 |
| 1995 | | 45 | 6 | | | 51 |
| 1996 | 1 | 34 | 13 | | | 48 |
| 1997 | 2 | 31 | 13 | 3 | | 49 |
| 1998 | 5 | 21 | 10 | 7 | | 43 |
| 1999 | 15 | 17 | 18 | 3 | 1 | 54 |
| 2000 | 12 | 16 | 11 | 1 | 2 | 42 |
| 2001 | 16 | 20 | 31 | | | 67 |
| 2002 | 25 | 34 | 19 | | | 78 |
| 2003 | 39 | 21 | 28 | | 1 | 89 |
| 2004 | 42 | 30 | 21 | | | 93 |
| 2005 | 67 | 27 | 24 | | 1 | 119 |
| 2006 | 55 | 39 | 20 | | 1 | 115 |
| 2007 | 97 | 39 | 26 | | | 162 |
| 2008 | 122 | 48 | 17 | | | 187 |

| Year | Certificate | Diploma | Masters | Research Masters | PhD/MD | Annual Total |
|---|---|---|---|---|---|---|
| 2009 | 128 | 40 | 18 | | 2 | 188 |
| 2010 | 121 | 47 | 28 | | | 196 |
| Nov 2010 | 57 | 18 | 15 | | | |
| June 2011 | 119 | 39 | 19 | | | 267 |
| Nov 2011 | 67 | 20 | 13 | | | |
| June 2012 | 116 | 31 | 16 | | | 263 |
| Nov 2012 | 68 | 25 | 13 | | | |
| June 2013 | 94 | 36 | 10 | | 1 | 247 |
| Nov 2013 | 58 | 13 | 11 | | | |
| June 2014 | 92 | 34 | 9 | | | 217 |
| Nov 2014 | 61 | 16 | 11 | | | |
| June 2015 | 81 | 22 | 11 | | 2 | 190 |
| Nov 2015 | 40 | 24 | 9 | | 1 | |
| **Totals** | **1,600** | **892** | **474** | **14** | **12** | **2,992** |

The programme has three levels: Postgraduate Certificate, Diploma and Masters (60 Scottish Credit and Qualifications Framework credits each). The Certificate and Diploma comprises four modules each (2 core + 2 optional) with the addition of a research dissertation for the Masters. These modules cover topics on teaching and learning, assessment, curriculum and research methodology to meet the needs of the diverse range of health professionals around the world. The mode of learning is flexible and can be taken face-to-face, by distance or a combination of both over a period of one to nine years. For admission, the participants are required to have an educational or professional background in healthcare. Almost 80% of the enrolments are from doctors, the remainder being from other health fields. The participants come from all around the world, with approximately 70% being based in the UK. The minimum IELTS for those for whom English is not their first language is 6.5, so all should have sufficient command of English.

### 3.2.5 Recruitment and Ethical Considerations

Ethical approval for the study was granted by the Research Ethics Committee, University of Dundee (Appendix 3.3). The contact details of the participants were not readily available and the course's office liaised with the university's alumni office to

update their records. The alumni office invited 1006 graduates through an e-mail to participate in an online survey (Appendix 3.4). The email carried an online link for the survey and a participant's information sheet. Two reminders were sent one month apart to encourage participation, each time removing the graduates, who responded to the survey and have provided their names for the interviews.

As the participants are graduates of the programme, there are no existing power-over relations with any of the researchers. The alumni office only shared the statistics on number of emails sent, received and opened with the researcher. The responses were recorded over a period of three months (Aug-Oct 2013) on the Bristol Online Survey servers. I had sole access to the responses to the survey, and my supervisors had access to anonymised responses only. The data were downloaded from the website in Excel sheet format and stored on a password protected computer in my office, itself in a secured building. The data were anonymised by myself, and the identifiers were stored separately.

### 3.2.6 Data Analysis

Each questionnaire was numbered sequentially (R#1: 1$^{st}$ Respondent, R#2: 2$^{nd}$ Respondent … R#224: 224$^{th}$ Respondent). The quantitative data from the questionnaires were imported into IBM SPSS Statistics 21. The data were found to be not normally distributed from applying Kolmogorov-Smirnov and Shapiro-Wilk tests (Field, 2009). The Wilcoxon signed rank test was carried out to compare and determine any significant differences in preparedness and involvement, before and after the qualification (Field, 2009). Mann-Whitney U and Kruskal-Wallis tests were used to compare subgroups. However, Kruskal-Wallis test has an underlying assumption that the distributions are similar (Field, 2009). Therefore, a homogeneity of variance test was carried out. It was non-significant suggesting that the variances were homogenous. A post hoc test i.e. Bonferroni correction (0.05/no. of tests i.e. 0.05/6 = 0.0083) was also performed to control for type I error rate i.e. false positive (Field, 2009). The effect sizes were measured using Cohen's d formula (Field, 2009). Cohen's d explains effect size as small if r = 0.10 (explains 1% of the total variance), medium if r = 0.30 (explains 9% of the total variance) and large if r = 0.50 (effect accounts for 25% of the variance) (Field, 2009). These effect sizes gave an estimate of the effect of levels of qualification, age and nationality on the impact of a qualification in medical education.

The qualitative data were imported into ATLAS.ti 7 and a content analysis was carried out (Vaismoradi et al., 2013). A content analysis comprises an initial analysis and the coding process that may go towards quantifying the themes. The researcher read through the qualitative data and identified major categories based on the research questions. The categories were discussed with the supervisors to ascertain any categories that could be merged or were of interest.

## 3.3 Results

Of the 1006 emails sent, 50 were undelivered and 452 were unopened. Two hundred and twenty four participants responded to the survey (44.4% of opened emails). The respondents were equally distributed across gender and age groups. Only two participants were under 30 years old. The response rate was higher for recent graduates. The predominant professional background was medicine. Educational roles included deans, directors, senior consultants, lecturers, professors and heads of department. Half of the participants were UK nationals and the others were mainly from Canada (n=21), Thailand (n=9), Pakistan (n=9), Kenya (n=9), Ireland (n=6) and Australia (n=5). Most of the international respondents graduated with a Masters, whereas those from the UK graduated with a Certificate. As all questions were optional, respondents choosing not to answer certain questions resulted in missing data (Table 3.2).

Table 3.2 - Demographics

| Characteristics | | Certificate | Diploma | Masters | Total |
|---|---|---|---|---|---|
| | | n (%) | n (%) | n (%) | n (%) |
| Gender | Male | 42 (45.2) | 35 (54.7) | 34 (53.1) | 111 (50.2) |
| | Female | 51 (54.8) | 29 (45.3) | 30 (46.9) | 110 (49.8) |
| Age | < 30 Yrs. | 1 (1.1) | 0 (00.0) | 1 (1.6) | 2 (1.0) |
| | 30 - 45 Yrs. | 58 (62.4) | 32 (50.0) | 27 (42.2) | 117 (52.9) |
| | > 45 Yrs. | 34 (36.5) | 32 (50.0) | 36 (56.2) | 102 (46.1) |
| Year of Graduation | 2008 | 13 (14.0) | 5 (7.8) | 9 (14.1) | 27 (12.2) |
| | 2009 | 15 (16.1) | 10 (15.6) | 4 (6.3) | 29 (13.1) |
| | 2010 | 19 (20.4) | 8 (12.5) | 13 (20.3) | 40 (18.1) |
| | 2011 | 26 (28.0) | 10 (15.6) | 12 (18.8) | 48 (21.7) |
| | 2012 | 18 (19.4) | 29 (45.3) | 13 (20.3) | 60 (27.2) |
| | Others | 2 (2.2) | 2 (3.1) | 13 (20.3) | 17 (7.7) |
| Mode of Study | Distance Learner | 84 (97.7) | 55 (87.3) | 42 (68.9) | 181 (86.2) |
| | Face to Face | 1 (1.2) | 6 (9.5) | 11 (18.0) | 18 (8.6) |
| | Combination | 1 (1.2) | 2 (3.2) | 8 (13.1) | 11 (5.2) |
| Profession | Medicine | 85 (92.4) | 48 (76.2) | 48 (76.2) | 181 (83.0) |
| | Dentistry and related | 2 (2.2) | 1 (1.6) | 3 (4.8) | 6 (2.8) |
| | Nursing | 3 (3.3) | 2 (3.2) | 2 (3.2) | 7 (3.2) |
| | Pharmacy | 1 (1.1) | 1 (1.6) | 2 (3.2) | 4 (1.8) |
| | Teacher | 1 (1.1) | 1 (1.6) | 2 (3.2) | 4 (1.8) |

| Characteristics | | Certificate | Diploma | Masters | Total |
|---|---|---|---|---|---|
| | | n (%) | n (%) | n (%) | n (%) |
| | Medical Education | 0 (0.0) | 2 (3.2) | 1 (1.6) | 3 (1.4) |
| | Others* | 0 (0.0) | 8 (12.7) | 5 (7.9) | 13 (6.0) |
| Nationality | UK Nationals | 63 (68.5) | 34 (53.1) | 23 (36.5) | 120 (54.8) |
| | International | 29 (32.5) | 30 (46.9) | 40 (64.5) | 99 (45.2) |
| Workplace | UK | 66 (71.7) | 30 (48.4) | 19 (30.7) | 115 (53.2) |
| | Overseas | 26 (28.3) | 32 (51.6) | 43 (69.3) | 101 (46.8) |

***** Family Medicine, Medical Pharmacologist, Manager, Dietetics, Physiotherapist, Therapy and Rehabilitation, Laboratory Science, Medical Imaging, Respiratory Therapist, Allied Health, Complementary and Alternative Medicine and Therapies

### 3.3.1 Impact on Educational Practices

The vast majority of participants (94.5%) reported that the qualification influenced their educational practices. There were highly significant ($p<0.001$) differences between perceptions of practice before the qualification compared to after the qualification. Many participants who perceived themselves as being not at all or a little bit prepared before the qualification rated themselves as quite a bit or very well prepared afterwards. Examples of impact are represented by the following excerpts:

**Excerpt 1:** 'I was blissfully ignorant before!' (R#10)

**Excerpt 2:** 'Overall-one of the high points of my professional career' (R#22)

**Excerpt 3:** 'It opened a new world' (R#50)

The greatest difference was in their increased perceived ability to conduct a needs assessment for planning a curriculum and medical education research. The qualitative findings also pointed towards transformational changes in teaching, research and leadership practices. As one respondent stated:

**Excerpt 4:** 'My conception of 'teaching' totally changed not only in terms of moving from teaching to facilitating learning but also aiming for learners to use deep approaches to their learning' (R#75)

There were significant differences among those graduating with a Certificate, Diploma and Masters ($p<0.05$). The Masters graduates felt better prepared than Certificate graduates on all items with the greatest perceived impact being on their ability to carry out medical education research ($r = 0.47$ – medium to large effect size). The Masters graduates reported being recognised as educational experts in their department:

**Excerpt 5:** 'Get called upon for everything - assessment, teaching/learning, curriculum development, research, quality processes, etc.' (R#133)

The international participants started at a lower baseline in perceptions of their educational competencies except for curriculum planning but reported a greater increase than the home students (UK nationals) in all of these after the qualification. The difference was most evident in curriculum planning ($p<0.01$) and feedback abilities. One overseas graduate mentioned:

**Excerpt 6:** 'I have been able to plan and implement over 40 short courses per year' (R#57)

Another felt he had a better understanding of good feedback principles:

**Excerpt 7:** 'I value the provision of timely, appropriate and individualised feedback to students' (R#99)

Participants also reported having significant roles to play in curriculum reform overseas:

**Excerpt 8:** 'I was part of the team that led the curriculum reform from the traditional undergraduate medical curriculum to an integrated, hybrid with a problem based learning component' (R#68).

Participants over the age of 45 years started the course with a higher baseline mean rating in all areas of educational practice than their younger counterparts, yet still reported similar impact of the qualification. The differences were significant both before and after the qualification except in perception of teaching abilities, where the older participants showed more change ($p<0.001$). (Table 3.3)

Table 3.3 - Preparedness to Practise - Broken Down by Qualification, Nationality & Age

| Tasks | Before Qualification | | After Qualification | |
|---|---|---|---|---|
| | Mean (SD) | p value | Mean (SD) | p value |
| 1. Interactive teaching strategies | | | | |
| Certificate (n = 92) | 2.84 (0.95) | 0.966 | 4.20 (0.70)* | 0.007 |
| Diploma (n = 63) | 2.84 (1.00) | | 4.43 (0.56)* | |
| Masters (n = 62) | 2.81 (1.13) | | 4.50 (0.72)* | |
| UK Nationals (n = 117) | 2.85 (1.01) | 0.785 | 4.30 (0.71)* | 0.286 |
| International (n = 101) | 2.79 (1.03) | | 4.41 (0.63)* | |
| 30 - 45 Yrs. (n = 115) | 2.70 (0.95) | 0.052 | 4.18 (0.71)* | 0.000 |
| > 45 Yrs. (n = 101) | 2.98 (1.07) | | 4.55 (0.57)* | |
| 2. Needs assessment & curriculum planning | | | | |
| Certificate (n = 92) | 1.63 (0.82) | 0.496 | 3.45 (1.04)* | 0.000 |
| Diploma (n = 63) | 1.75 (0.95) | | 3.98 (0.83)* | |
| Masters (n = 63) | 1.87 (1.05) | | 4.17 (1.01)* | |
| UK Nationals (n = 118) | 1.69 (0.92) | 0.5 | 3.64 (1.03)* | 0.004 |
| International (n = 101) | 1.77 (0.95) | | 4.02 (0.99)* | |
| 30 - 45 Yrs. (n = 116) | 1.49 (0.72) | 0.000 | 3.59 (1.05)* | 0.000 |
| > 45 Yrs. (n = 101) | 2.02 (1.07) | | 4.11 (0.89)* | |
| 3. Valid and reliable assessment methods | | | | |
| Certificate (n = 92) | 2.02 (0.93) | 0.601 | 3.80 (0.87)* | 0.009 |
| Diploma (n = 61) | 1.98 (0.99) | | 4.06 (0.79)* | |
| Masters (n = 62) | 2.16 (1.06) | | 4.18 (0.93)* | |
| UK Nationals (n = 117) | 2.09 (1.01) | 0.568 | 3.94 (0.89)* | 0.344 |
| International (n = 100) | 2.00 (0.95) | | 4.05 (0.86)* | |
| 30 - 45 Yrs. (n = 115) | 1.77 (0.81) | 0.000 | 3.79 (0.94)* | 0.000 |

| Tasks | Before Qualification | | After Qualification | |
|---|---|---|---|---|
| | Mean (SD) | p value | Mean (SD) | p value |
| > 45 Yrs. (n = 100) | 2.37 (1.06) | | 4.25 (0.70)* | |
| 4. Plan, adopt and lead an educational change | | | | |
| Certificate (n = 92) | 1.84 (0.94) | | 3.60 (0.85)* | |
| Diploma (n = 62) | 1.74 (0.83) | 0.668 | 4.02 (0.84)* | 0.001 |
| Masters (n = 62) | 1.95 (1.05) | | 4.08 (1.02)* | |
| UK Nationals (n = 117) | 1.91 (0.99) | 0.337 | 3.78 (0.92)* | 0.137 |
| International (n = 101) | 1.76 (0.88) | | 3.96 (0.92)* | |
| 30 - 45 Yrs. (n = 116) | 1.66 (0.83) | 0.003 | 3.72 (0.89)* | 0.004 |
| > 45 Yrs. (n = 99) | 2.06 (1.02) | | 4.05 (0.93)* | |
| 5. Effective feedback | | | | |
| Certificate (n = 92) | 2.64 (0.97) | | 4.27 (0.75)* | |
| Diploma (n = 63) | 2.68 (1.09) | 0.394 | 4.52 (0.62)* | 0.045 |
| Masters (n = 63) | 2.87 (1.14) | | 4.51 (0.72)* | |
| UK Nationals (n = 118) | 2.91 (1.00) | 0.003 | 4.46 (0.66)* | 0.379 |
| International (n = 101) | 2.49 (1.09) | | 4.36 (0.76)* | |
| 30 - 45 Yrs. (n = 116) | 2.48 (0.89) | 0.001 | 4.32 (0.70)* | 0.007 |
| > 45 Yrs. (n = 101) | 3.00 (1.17) | | 4.56 (0.64)* | |
| 6. Rigorous medical education research | | | | |
| Certificate (n = 92) | 1.68 (0.95) | | 2.74 (1.10)* | |
| Diploma (n = 63) | 1.73 (0.88) | 0.833 | 3.66 (0.89)* | 0.000 |
| Masters (n = 63) | 1.73 (0.99) | | 3.87 (0.98)* | |
| UK Nationals (n = 118) | 1.76(0.98) | 0.428 | 3.20 (1.18)* | 0.070 |
| International (n = 101) | 1.64 (0.89) | | 3.50 (1.05)* | |
| 30 - 45 Yrs. (n = 116) | 1.52 (0.82) | 0.001 | 3.18 (1.15)* | 0.012 |
| > 45 Yrs. (n = 101) | 1.94 (1.02) | | 3.55 (1.06)* | |
| * | p<0.001-significant differences before and after the qualification | | | |
| | p value column indicate differences among qualification, nationality and age subgroups | | | |

### 3.3.2 Impact on Involvement in Education

Participants also reported highly significant ($p<0.001$) increased involvement in various educational scholarship and research activities in medical education after the qualification. A vast majority of participants who had never or rarely been involved before the qualification rated their engagement as occasionally or frequently after the qualification. A Certificate graduate reported:

**Excerpt 9:** 'I have expanded into educational activities I had not previously participated in' (R#13)

The greatest influence was reported over their engagement in educational dialogue and attendance at conferences. A comparison of graduates' engagement in educational scholarship showed significant ($p<0.05$) increase in those graduating with a Masters or a Diploma compared to a Certificate. The Masters' graduates compared to Certificate graduates reported significantly ($p<0.001$) greater contributions towards educational

conferences (r = 0.41 – medium to large effect size) and journals (r = 0.51 – large effect) with presentations and publications respectively. An Australian graduate stated she was:

**Excerpt 10:** 'Motivated to attend medical education conferences' (R#63)

One UK Masters' graduate mentioned:

**Excerpt 11:** 'I am now involved in education research even more and I now work with medical students re[garding]-education research' (R#18)

Another explained how the qualification met his needs:

**Excerpt 12:** 'I was able to conduct a research project of direct relevance to some of my training responsibilities … the project has … provided a sound scientific basis for changes that I have made.' (R#193)

A medical doctor overseas reported:

**Excerpt 13:** 'I have published over 10 papers in medical education (including 2 papers from my master's work), and my mid-career transformation to an education researcher was made possible by the initial grounding from my master's program' (R#213)

Although the international participants had a higher baseline mean rating of their involvement in scholarship activities before the qualification than UK participants, they also reported more impact on their involvement after the qualification. These differences were significant ($p<0.05$) for engagement in educational dialogue (r = 0.17 – small effect size), presentation at conferences (r = 0.40 – medium to large effect size) and contribution to journals (r = 0.33 – medium effect size). In the words of an Indonesian doctor:

**Excerpt 14:** 'I got to understand many aspects of medical education that I didn't have any idea before and I was able to develop a strong network among fellow medical educators' (R#62)

Participants over 45 years showed higher baseline mean ratings for their involvement in scholarship activities both before and after the qualification than their younger counterparts. These significant differences suggest a similar increase in their involvement in education. However, the younger participants showed more engagement in educational dialogues. (Table 3.4)

Table 3.4 - Involvement in Scholarship - Broken Down by Qualification, Nationality & Age

| Tasks | Before Qualification | | After Qualification | |
|---|---|---|---|---|
| | Mean (SD) | p value | Mean (SD) | p value |
| 1. Engage in education related dialogue | | | | |
| Certificate (n = 92) | 2.61 (0.91) | 0.35 | 3.55 (0.63)* | 0.062 |
| Diploma (n = 64) | 2.52 (0.93) | | 3.68 (0.56)* | |
| Masters (n = 62) | 2.76 (0.92) | | 3.79 (0.41)* | |
| UK Nationals (n = 118) | 2.63 (0.95) | 0.997 | 3.57 (0.61)* | 0.01 |
| International (n = 101) | 2.61 (0.88) | | 3.76 (0.49)* | |
| 30 - 45 Yrs. (n = 116) | 2.50 (0.93) | 0.029 | 3.62 (0.60)* | 0.183 |
| > 45 Yrs. (n = 101) | 2.78 (0.88) | | 3.73 (0.49)* | |
| 2. Contribute to journals or books on education | | | | |
| Certificate (n = 92) | 1.47 (0.78) | 0.196 | 1.84 (1.03)* | 0.000 |
| Diploma (n = 64) | 1.45 (0.69) | | 2.14 (0.96)* | |
| Masters (n = 62) | 1.65 (0.81) | | 2.98 (0.86)* | |
| UK Nationals (n = 118) | 1.47 (0.78) | 0.175 | 1.93 (1.01)* | 0.000 |
| International (n = 101) | 1.56 (0.74) | | 2.64 (1.02)* | |
| 30 - 45 Yrs. (n = 116) | 1.35 (0.70) | 0.000 | 2.13 (1.07)* | 0.043 |
| > 45 Yrs. (n = 101) | 1.70 (0.79) | | 2.42 (1.06)* | |
| 3. Attend seminars and conferences on education | | | | |
| Certificate (n = 92) | 1.92 (0.97) | 0.104 | 2.73 (0.94)* | 0.000 |
| Diploma (n = 63) | 1.90 (0.91) | | 3.05 (0.99)* | |
| Masters (n = 62) | 2.19 (0.92) | | 3.50 (0.62)* | |
| UK Nationals (n = 117) | 1.88 (0.94) | 0.046 | 2.71 (0.93)* | 0.000 |
| International (n = 101) | 2.12 (0.94) | | 3.44 (0.77)* | |
| 30 - 45 Yrs. (n = 116) | 1.17 (0.89) | 0.000 | 2.90 (0.99)* | 0.011 |
| > 45 Yrs. (n = 100) | 2.33 (0.90) | | 3.24 (0.83)* | |
| 4. Present in education seminars and conferences | | | | |
| Certificate (n = 92) | 1.53 (0.73) | 0.493 | 2.16 (1.07)* | 0.000 |
| Diploma (n = 64) | 1.64 (0.78) | | 2.75 (1.02)* | |
| Masters (n = 62) | 1.69 (0.86) | | 3.11 (0.94)* | |
| UK Nationals (n = 118) | 1.54 (0.79) | 0.089 | 2.20 (1.09)* | 0.000 |
| International (n = 101) | 1.68 (0.77) | | 3.09 (0.90)* | |
| 30 - 45 Yrs. (n = 116) | 1.42 (0.67) | 0.000 | 2.46 (1.15)* | 0.031 |
| > 45 Yrs. (n = 101) | 1.83 (0.85) | | 2.80 (1.01)* | |
| 5. Conduct professional development workshops | | | | |
| Certificate (n = 92) | 1.40 (0.70) | 0.062 | 2.02 (1.17)* | 0.000 |
| Diploma (n = 64) | 1.52 (0.65) | | 2.64 (1.07)* | |
| Masters (n = 62) | 1.68 (0.86) | | 2.98 (1.12)* | |
| UK Nationals (n = 118) | 1.44 (0.84) | 0.031 | 2.09 (1.20)* | 0.000 |
| International (n = 101) | 1.60 (0.81) | | 2.94 (1.03)* | |
| 30 - 45 Yrs. (n = 116) | 1.33 (0.62) | 0.001 | 2.29 (1.20)* | 0.006 |
| > 45 Yrs. (n = 101) | 1.74 (0.98) | | 2.73 (1.15)* | |
| * | $p < 0.001$ - significant differences before and after the qualification | | | |
| | p value column indicate differences among qualification, nationality and age subgroups | | | |

### 3.3.3 Reasons for Enrolment

The majority of respondents were interested in medical education. They had a desire to further improve their knowledge and skills. They believed that competency in education would help them perform in an informed manner. One Malaysian doctor described her reasons for enrolment as:

**Excerpt 15:** 'For my own continuous learning and self-improvement to better equip myself to perform as a medical teacher' (R#78)

Another gave her reasons as:

**Excerpt 16:** 'Interest, to gain further insight into the theory underpinning curriculum development, delivery and evaluation' (R#5)

A number of respondents gained these qualifications in order to improve their professional prospects. They asserted that educational qualifications helped to distinguish them for leadership positions among other contenders. One said:

**Excerpt 17:** 'I was about to apply for post of Teaching Lead when I started the Certificate, and felt a formal qualification would help' (R#6)

For many respondents from Canada, it was a University requirement for training and other academic positions:

**Excerpt 18:** 'My University required that I bring a "special skill" by way of a fellowship or master's degree if I wanted to be hired as an academic clinician' (R#147)

Some respondents also mentioned that it was recommended by their colleagues or departments. Even when coerced into the course, the graduates' interest in medical education grew through the course:

**Excerpt 19:** 'Firstly I was forced into it by my surgical training director, but later I really enjoyed and ended up going into medical education!' (R#173)

### 3.3.4 Impact on Professional Self

Around 78% felt themselves different from those with no formal qualification in medical education. The respondents mentioned that the qualification gave them a better educational grounding. They started using evidence to defend their ideas:

**Excerpt 20:** 'Better informed, use evidence base rather than winging it' (R#10)

A nurse from Oman mentioned peer assessment of herself as:

**Excerpt 21:** 'I got comment that my performance change dramatically since I came back from the course' (R#76)

A number of graduates also commented that the qualification gave them legitimacy in the eyes of their colleagues, who recognised, respected and consulted them as experts on educational matters since the qualification:

**Excerpt 22:** 'They have consulted me on various issues related to medical education and engaged me in reviews of various curricula in institutions' (R#12).

One early in her career responded with:

**Excerpt 23:** 'Got promoted [and] was nominated as an educational resource person on institutional committees, have been invited as an expert in the field of medical education within the country by various other institutions' (R#96)

The remaining 22% felt no difference after the qualification, either because they already had a well-established reputation or an unrelated job role, or because there was a lack of awareness of their medical education qualification on the part of their colleagues.

### 3.3.5 Impact on Career

Measuring the impact of these qualifications on the participants' careers was not an objective in this study, therefore not specifically asked for in the survey. However, the qualitative data did suggest some influence. A nurse from the UK working overseas said:

**Excerpt 24:** 'The PG Cert/Dip in Medical education … made me a more 'marketable' prospect for employers.' (R#75)

Another reported:

**Excerpt 25:** 'Has given me much more academic 'weight' and made me a viable candidate for the education positions I now hold' (R#106)

One medical doctor from Canada mentioned:

**Excerpt 26:** 'It has opened doors for me with the position at the Royal College of Physicians and Surgeons' (R#147)

## 3.4 Discussion

The current study assessed the impact of postgraduate qualifications in medical education on the graduates. The findings showed that the vast majority of participants

perceived an improvement across the Academy of Medical Educators (2012) competencies. They reported improved self-efficacy i.e. their belief in ability to complete educational tasks and reach goals. This is in line with a USA survey on the Harvard Macy Program for developing physicians as educators (Armstrong et al., 2003). However, the Harvard Macy programme was limited to applicants already having a strong commitment to education, good credentials and potential for productivity in the workplace, which may not be the same for participants enrolled in other courses from around the world. My findings also resonate with other studies on faculty development initiatives in medical education, where the graduates reported more confidence in educational abilities with an improved ability to lead an educational change (Gruppen et al., 2003, Robins et al., 2006, Searle et al., 2006b, Steinert and McLeod, 2006). Again, these initiatives enrolled highly motivated applicants from their faculty with evidence of commitment of the applicant's chairperson or immediate superior to support their prospective projects in medical education. The participants in the current study also reported experiencing a positive change in their behaviours since the qualification, and they embraced their educational roles with increased involvement in various educational scholarship activities. This increased involvement after the qualification in educational discussions, conferences and research publications also complements the literature (Geraci et al., 2010, Searle et al., 2006b, Steinert et al., 2006) and may be associated with an increased sense of belonging to the educational community (Levett-Jones et al., 2007).

### 3.4.1 Influence of Level of Qualification

The perception of impact of the qualification increases with the increasing level of qualification attained by the participants. The Masters' graduates felt more self-efficacy and sense of belonging than those with a Certificate on all items. A recent discussion at the Association of Medical Education in Europe (AMEE) on the Masters-level programmes in health professions education worldwide highlighted 'transformation' as an expected influence of these qualifications (Tekian and Harris, 2012). Postgraduate programmes immerse participants in an educational environment, focusing on educational theories with reflection over personal educational assumptions and practices (Hatem et al., 2009, Lown et al., 2009). This long-term engagement may result in transformative learning (Mezirow, 1990). Some of the qualitative data (e.g. excerpts 4 and 13) also indicates such transformation. The qualitative studies described in Chapters

4 and 5 give further insight into these transformations and development as a result of medical education qualifications.

Perhaps unsurprisingly Masters' graduates reported more contribution towards journals/books in education than graduates of the Certificate and Diploma. This is likely due to the increased education research teaching, completion of a research project and also having a product (their dissertation) to publish by the end of their qualification. In addition, the Masters' graduates have one-to-one research supervision for their dissertation, and the absence of research supervision/mentoring is a reported barrier towards research (Pugsley et al., 2008a). Moreover, those proceeding to Masters may already have an intention to publish in Medical Education and/or pressure to publish. Increasing the level of qualification seems to indicate a 'novice to expert shift' through strengthening of belonging and engagement in the educational community of practice (Bleakley et al., 2011, Sutherland and Markauskaite, 2012, Wenger, 1998).

The majority of participants graduated with a Certificate. This is in line with the enrolment pattern and supports the popularity of Certificate courses in the UK (Steinert, 2005). In addition, the significant improvement in educational practices and scholarly activities with a Certificate justifies many participants' choice to stop at it. Therefore, a need for maintaining Certificate as an exit point.

### 3.4.2 Influence of Nationality

Bland et al., (2002) highlighted that institutional factors such as workplace culture are important determinants of faculty vitality and academic productivity. The findings also suggest the influence of work environment on the impact of these qualifications in medical education. The international graduates reported more impact on practice than the UK nationals, significantly so for curriculum development. Although surprising, this may be because the amount of change that can be implemented by UK nationals is less. For example, UK nationals learning about integrated curriculum may already have those embedded. On the other hand, those overseas have to bring more educational changes as also evident from excerpts 6 to 8 above. This may be due to a rapid growth of medical schools internationally (Gadit, 2010) with medical education reforms as a primary focus (Lam and Bess Lam, 2009). Another possible explanation may be related to motivation for enrolling in a qualification. Competency in medical education is not a requirement in many countries; it is seen as a career path. This is distinct from participants in the

UK, where it is increasingly completed for accreditation requirements (Tekian and Artino, 2013). The international participants in the current study also reported a higher baseline in their educational involvement both before and after the qualification. The majority of them graduating with a higher qualification such as Masters also reflects that.

### 3.4.3 Influence of Age

Participants reported a positive impact of qualification on practices and involvement in education irrespective of their age. The baseline competency for participants over 45 years was higher due to more experience, as would be expected, but still there was a high level of impact reported. The qualification had impacted the older participants more in developing interactive teaching strategies as teaching effectiveness is associated with increased knowledge and experience in the subject (Singh et al., 2013).

### 3.4.4 Motivations

According to the theory of planned behaviour, intentions are indicative of effort, and the stronger the intentions, the more likely the improvement in performance (Ajzen, 1991). Most of the respondents were engaged in learning, with a desire to keep up with the growing evidence base in education and apply it for success in their roles. This practice is common among adult learners (Crawford, 2004). The identification of interests and purpose may help educators in finding the meaning of their profession, and this also promotes identity development (Sutherland and Markauskaite, 2012).

### 3.4.5 Influence on Professional Self

Findings suggested that the qualification provides legitimacy and acceptance from colleagues as an educational expert in the workplace. Participants perceived themselves competent in performing educational tasks and also reported educational changes in their workplace. This acquisition of professional competencies, confidence in professional abilities and recognition among peers as an educator also influences development of professional identities (Sutherland and Markauskaite, 2012, Trede et al., 2011). Moreover, the participants showed increased involvement in educational scholarship and research activities. During this socialisation process of participation in a

professional role or in its preparation, individuals are acquainted with motives, attitudes and ideologies related to their professional roles (Trede et al., 2011). Their involvement also indicates an increased acceptance of themselves and by others as an educator (Brownell and Tanner, 2012).

Some of the graduates (22%) felt no difference from those with no formal qualification in medical education. Some reasons have been reported in the current study, for example, unrelated job roles or an existent reputation as educationist prior to obtaining such qualifications. This suggests an influence of personal and contextual factors on the impact of these qualifications on identity development, and may be related to the fears associated with being isolated in the workplace for behaving differently. Also, their developing educational identity may have less identity capital (Sabel and Archer, 2014), which may be peripheral in relation to their core clinical or/and research identities (Beijaard et al., 2004). Moreover, their multiple diverse identities can be hierarchical in order of importance, where identity as a clinician is above an educator identity, or differentiated in compartments with preference for a particular identity in a specific context, or merging, which is flexible and no single identity is dominant (Monrouxe, 2010). Future studies should recruit such graduates to explore the diverse nature of factors influencing the impact of the qualifications in medical education on their identity development. This will help the course organisers in developing better support and learning opportunities for deeper engagement with educational practices and sustainable identity development.

### 3.4.6 Influence on Career

The graduates in the current study included current deans, directors, heads of department, senior consultants and professors with a range of educational responsibilities. Many recipients of educational fellowship programmes in the USA reported better career prospects (Gruppen et al., 2003, Steinert et al., 2003). No firm conclusion can be made that the qualification in medical education solely resulted in career progression, but the qualitative data (e.g. excerpts 24-26) did suggest some influence, warranting further investigation. The impact of these qualifications on career pathways is further explored in the Chapters 4 and 5.

It was interesting to see only two participants under 30 years of age in the sample. This is probably because unlike other postgraduate qualifications, medical education does not

build on the body of knowledge from an undergraduate period of study but are undertaken by postgraduates with professional qualifications and experience (Pugsley et al., 2008a). However, due to increasing competition in health professions and the development of career pathways in education (Heflin et al., 2009), an increase in numbers of younger participants is expected for future enrolments.

### 3.4.7 Limitations and Future Research

A review of the literature by Nulty (2008) suggested that face-to-face administration of paper-based survey results in higher response rates in comparison to an online survey. However, the geographical diversity of the participants justified the use of an online survey. The availability of current email addresses for the graduates also posed a challenge. Various measures were taken to increase the response rate such as providing a survey web-link in the email, explaining its purpose through an information sheet and sending two reminder emails from the course director (Zúñiga, 2004). Another limiting factor is that the findings were all self-reported. However, the graduates' commitment towards answering the questionnaire many years after graduation along with examples of educational changes suggest that the gains are real. Asking participants to rate both before and after the qualification at the same time was a strength and weakness (Davis et al., 2006, Khan et al., 2013). Although rating 'before' sometime after may be clouded by memory, a comparative/relative rating is more objective and it does balance the effects of individuals' over and under-rating. It may also improve the reliability of before rating, as they have become more familiar with the concepts during their course, and may have a better understanding of their abilities before the qualification.

Despite the limitations, the findings from this study reported the perceived effectiveness of postgraduate programmes in medical education to address academic skills and institutional priorities in terms of investment in medical education. They also provide insights for educators in planning their academic careers. Although much of the literature focuses on faculty development initiatives delivered by the same institution as the recipients and enrolling highly motivated faculty with feasible workplace environments, this study's graduates come from a variety of professional backgrounds, experience, work environments and cultures. A concern of such a generic qualification may be lack of generalisability and application of skills. This study suggests otherwise.

## 3.5 Summary

This is the first study on the impact of postgraduate qualifications in medical education on healthcare professionals worldwide. It quantitatively measures the perceived impact on specific competencies and scholarly activities of the graduates. Self-efficacy and sense of belonging increases among the graduates with the increasing level of qualification. In addition, these qualifications impact the graduates irrespective of age. However, the impact of these qualifications is influenced by the work environment. The various challenges or enablers to educational practices in the workplace may be worth exploring. The qualitative data highlighted motivations and influences on professional self along with transformational changes among the educators. The following Chapters 4 and 5 explore these insights and others in further detail by using the qualitative methodology.

# Chapter 4: Study 2 - Understanding Graduates' Experiences and Identity Development as an Educator

## 4.1 Introduction

In the previous chapter, the impact of qualifications on practices and scholarly activities in education was measured. It showed that a degree-awarding programme in medical education significantly improves self-efficacy in educational practices. These qualifications provide a sense of legitimacy and commitment to the educational community of practice. The survey also helped screen potential participants to enhance the performance of this second qualitative study (Morgan, 2013).

This qualitative study refines and extends the preliminary insights from the survey into transformative learning and professional identity development (Morgan, 2013). The findings offer rich descriptions of the processes of identity development of healthcare educators as experienced by the graduates. The literature on Communities of Practice and Social Cognitive Theory provided the analytical lens.

The chapter begins with a brief discussion on Constructivist Grounded Theory as a methodology followed by the data analysis and a discussion on how the findings have informed my understanding of the role of these degree-awarding programmes in the identity development of healthcare educators. A conceptual framework of healthcare educators' identity development is developed and discussed. The research questions for this study underpin the overarching research question for this thesis.

- What are the motivations for enrolling in a qualification in medical education?
- How does a qualification impact on the graduates' careers?
- How does a qualification impact on the graduates' educational identities?
- What are the tensions associated with being an educator?
- How does a qualification in medical education impact productivity in the workplace?
- What factors enhance or hinder productivity in a workplace?

## 4.2 Methods

### 4.2.1 Constructivist Grounded Theory

Glaser and Strauss (1965) developed grounded theory as a research methodology during their studies on dying in hospitals. The authors offered systematic strategies for qualitative research in their book '*The Discovery of Grounded Theory*' (Glaser and Strauss, 1967) and proposed the development of theory from qualitative analysis of data. According to the Glaserian grounded theory approach, the researcher 'discovers' the theory from the data and develops propositions to clarify a phenomenon, which is grounded in the views and experiences of the participants engaged in it (Creswell, 1998, Skeat, 2010). The approach emphasises studying processes and involves the development of a theoretical explanation of a phenomenon based on gathering, synthesising, analysing and interpreting practical experiences of the participants (Charmaz, 2003, Ng et al., 2014). It involves simultaneous data collection and analysis, thus following an iterative process based on emerging themes to saturate the various categories (Skeat, 2010, Watling and Lingard, 2012). With foundations in pragmatism, the Grounded theorists aim towards a fresh theoretical interpretation of the data rather than a complete or final interpretation (Schwartz and Jacobs, 1979). A conceptual framework or theory which is a close fit with the data and has an explanatory power is a legitimate outcome of the study (Glaser and Strauss, 1967, Ng et al., 2014). The theory produced is dynamic and flexible towards on-going development, with application in different situations (Charmaz, 2003, Skeat, 2010). This theory can be tested empirically based on categories identified (Creswell, 1998, Skeat, 2010).

Grounded theory fosters exploration of ideas in systematic ways with an original analysis and interpretation of the data (Charmaz, 2006). However, despite its systematic nature and new ways of thinking about knowledge, the key criticism is that in developing procedures and practices for qualitative data analysis, grounded theory failed to shake off its positivist origins (Bryant, 2002). Charmaz (1983) argued that such misinterpretations emerge from the tacit assumptions and language used in grounded theory such as coding, comparison groups and theoretical sampling, which reflect the terms commonly used in quantitative research. Also, the plausibility of discovering theory from the data in its original sense was questioned as researchers bring their own assumptions and biases. Therefore, researchers continued to adopt and adapt classical grounded theory as a flexible set of guidelines (Charmaz, 2006).

Charmaz (2006) emphasised the key role of the researcher and developed a constructivist grounded theory, suggesting that the researcher 'constructs' the theory based on past/present involvements and interactions with the participants rather than 'discovering' it from the data. She pointed out that researchers do not exist in a social vacuum. The data and its analysis are social constructions from shared experiences and relationships between researchers and their research participants. A constructivist approach advocates flexibility and builds on the strengths of grounded theory as a methodology. For constructivists, the research process is fluid and interactive in line with a pragmatism approach, with the researcher as an integral part of the study. The various themes and meanings attributed are influenced by the researcher's worldviews, assumptions and theoretical perspectives (Skeat, 2010).

The current study used a constructivist grounded theory as it is considered useful for understanding the processes of professional practice and role development (Skeat, 2010). Glaserian grounded theory cautioned against preliminary literature review or having any preconceived ideas (Glaser, 1998). I have myself completed the Masters in Medical Education course, so setting aside my background knowledge, experience and theoretical leanings seemed implausible. However, a consideration about my role in elaborating qualitative data does not mean that I abandoned grounded theory principles (Watling and Lingard, 2012). Moreover, a preliminary literature review was indispensable and it is a requirement for confirming PhD candidature and preparing an interview guide for ethical approval. Corbin and Strauss (2008) argued that researchers use the literature review as a source for a research problem and to become familiar with the concepts that might be of interest to their theory. Dunne (2011) also contended that a literature review sharpens the focus and improves research questions. However, it is important to remain reflexive so that any preconceived ideas should not be forced upon the data to find a fit (Charmaz, 2006).

### 4.2.2 Individual Interviews

Individual interviews were carried out to allow for focused two-way communication and to encourage rich descriptions of the phenomena experienced by the interviewee (Dicicco-Bloom and Crabtree, 2006). Barriball and While (1994) pointed out that individual interviews build rapport and increase familiarity, and are well suited to the exploration of attitudes, values, beliefs and motives. Individual interviews allow the

researcher to locate specific ideas and obtain in-depth information from those individuals (Denscombe, 2010). They give the interviewer greater control of the interview process, which is not always possible with focus groups due to the unpredictable nature of group interaction. Focus groups can generate rich data as participants can develop new ideas due to the synergistic interaction between group members or challenge ideas that have already been proposed (Kennedy et al., 2001), but they are more likely to produce statements from the participants that are in line with group norms (Lederman, 1990). On the other hand, interviewing participants individually allows for the sharing of sensitive information and prevents any single perspective from dominating. Also, the graduates in this study are professionals, based across the globe and finding a mutually-acceptable time for a focus group was not feasible.

A semi-structured interview approach was employed. This allows the interviewer to ask questions, not only specific to the topic but also about additional interests, emerging (i.e. inductive) during the conversation (Morgan, 2013). It also allows rewording of each question to help participants from non-English speaking countries to understand questions and respond adequately (Barriball and While, 1994).

### 4.2.3 Interview Schedule

The interview began with rapport-building and thanking the participants for their time. Participants were informed about the purpose of the interview and they were encouraged to respond to the questions with any comments, thoughts and stories. They were reminded about the time commitment (30-40 minutes), the interview being audio recorded, and the data confidentiality. Finally, a second consent was taken verbally before beginning the interview.

The questions were open-ended and broadly based on the research questions for the study: exploring motivations and impact on career, professional identity and the workplace of the graduates. The participants were asked about the reasons for pursuing a qualification in medical education and any growth in educational responsibilities or new jobs that this qualification helped them achieve. The next series of questions exploring impact on professional identity were guided by the Kelchtermans' (1993) conceptualisation of professional self because of its perceived face validity.

Interviewees were asked about the impact of qualifications on their epistemic beliefs and if they adopted any transformative practices.

A narrative interview technique (Riessman, 2008) was employed to reveal graduates' lived experiences of the impact of the qualification on their workplace. A narrative interview technique helps generate detailed accounts rather than brief answers. These stories from the workplace also offer an insight into the society and culture of the narrator. They reveal how the narrator wants to present him or herself and become known to others (Riessman, 2008). The participants were also asked about the challenges and enablers relating to those educational changes. The graduates were encouraged to share their fears/tensions (if any) towards being an educator as they influence identity development (Marks, 1999, Steinert et al., 2003). The interview concluded by thanking the participants and asking them if they would like to add anything else.

### 4.2.4 Piloting of the Schedule

The interview schedule was developed after a number of reviews and revisions (Appendix 4.1). It was then piloted in September 2013 with one Masters and two PhD student colleagues, who were not part of the sampling frame. One of the interviews was through Skype using call-recording software, whereas the other two were face-to-face using portable podcast recording equipment as both techniques would be used in the study. The participants were asked about their views on the interviewer's clarity and style of asking questions. They commented that the flow was good and the questions covered a range of areas. The interviews took 30–40 minutes each, and all the recordings were audible for transcription purposes. Some changes were suggested, and after discussing these with the supervisors, one question was revised to ask participants about particular events from practice, which involved applying their learning from the course. This critical incident technique has been used widely in research for capturing changes by individuals in their workplace as a result of an educational intervention (Flanagan, 1954).

### 4.2.5 Recruitment and Ethical Considerations

Ethical approval for the first and second study was obtained from the Research Ethics Committee, University of Dundee (Appendix 3.3). The study participants were those graduating between 2008 and 2012 from the Centre for Medical Education (CME) in Dundee who agreed to be contacted in the earlier survey study and provided their name and email addresses voluntarily. One hundred and twenty nine participants (57.6% of the survey respondents) from 27 different countries showed preliminary interest in this second study. An invitation email (Appendix 4.2) including a participant information sheet (Appendix 3.2) and consent form (Appendix 4.3) was sent to selected graduates by the researcher. Written as well as verbally informed consent was taken from each participant for the interview and for it being audio recorded.

Upon receiving the completed consent forms, participants were asked about their availability. The topic being researched here is one of very low risk in terms of causing psychological harm or distress to the participants. Participants were informed that they could decline to answer any questions and to have the recorder switched off at any time. Participation was voluntary, and as they had already graduated from the programme, there were no existing power-over relations with the researcher or supervisors. All the recordings and transcriptions were kept in a password-protected computer in a secure building and were only accessible to the primary researcher. These were kept separate from consent forms, identifiers and the audio recording.

### 4.2.6 Sampling Strategy and Sample Size

The purpose of qualitative research is to provide detailed data within a well-defined context (Morgan, 2013). The selection of participants is vital, as it requires a small number of rich data sources for studying a phenomenon (Morgan, 2013). As a random selection may result in wrong data sources, participants are usually purposively sampled based on specific research questions (Kuper et al., 2008b). The first study helped screen potential participants and recruit appropriate cases (Morgan, 2013).

#### *Sampling Strategy*

Charmaz (2003) reasoned that employing initial theoretical sampling may result in a premature closure to analysis. Therefore, theoretical sampling should be incorporated

after some preliminary data collection in order to ensure the emergence of significant data as important issues may be tacit or hidden. The participants were divided into strata on the basis of their level of qualification and year of graduation. Criteria were then defined for selection of sources i.e. graduating with Certificate 2008 and 2012; graduating with Masters 2008 and 2012. Initially 20 graduates (5 in each stratum) were invited via email along with two reminders. Of these, 11 graduates (two Certificate 2008; four Masters 2008; three Certificate 2012 and two Masters 2012) responded. This approach gives comparative data from participants with distinctively different experiences, perspectives and characteristics to refine the ideas and help inform the generation of theory (Charmaz, 2006, Creswell, 1998, Skeat, 2010). More graduates were invited from each of these strata for information intensity, but only three (Masters 2008) responded. Some participants with unique attributes (e.g. age: < 30 years or a PhD in medical education) were also selected to increase the diversity of the sample. Morse (1995) suggested that theoretical sampling of outliers and negative cases is productive and can facilitate delineation of concepts and development of theory. This diverse range of participants allows for various perspectives and makes the developing theory more broadly applicable (Skeat, 2010).

### *Sample Size*

In qualitative studies, the legacy of larger numbers having greater impact is not applicable, and more data do not necessarily lead to additional information (Mason, 2010). The sample size is not predetermined, instead it involves an iterative process of data collection and analysis until theoretical saturation is achieved i.e. thorough understanding of the phenomenon and further data collection eliciting no new themes (Dicicco-Bloom and Crabtree, 2006, Kuper et al., 2008b). In grounded theory, saturation is viewed at a conceptual rather than data level (Watling and Lingard, 2012). It is proclaimed when the researcher has gained adequate understanding, emerging themes/categories are fully accounted for, and a theory can emerge (O'Reilly and Parker, 2012). A decision is made based on the researcher's experience, judgement and resources for the study. Dey (1999) coined the term 'theoretical sufficiency' rather than claiming 'saturation'. A diverse range of 27 graduates participated in the study.

### 4.2.7 Data Management

The researcher conducted all the interviews over a period of five months (Oct 2013 - Feb 2014). For studying identity, a spontaneous, frank and unprepared discussion is important (Jenkins, 2008, Monrouxe, 2010). Therefore, I did not send the interview questions to the participants. Interviews took longer than I anticipated and ranged from 30 minutes to 1 hour in length and were audio-recorded. Participants were interviewed using landline, Skype and face-to-face meetings depending upon individual circumstances and their feasibility. The interviews from landline were recorded through a RETELL 156 Telephone Recording Connector device with its input into the stereo recorder. Skype interviews were recorded using MP3 Skype recorder 4.2. Two graduates from Dundee were interviewed face-to-face using an H-4 mobile field stereo recorder.

Each of the recording devices was tested prior to the interviews for their performance. However, due to an online software problem, two interviews were not completely recorded. Therefore, another software product, the I Free Skype recorder, was installed as a backup. The recordings were stored in an encrypted external hard drive and on a password protected computer in the researcher's office in a secure building (CME). Backups were created on a university server housed in another building.

The recordings were transcribed verbatim by the researcher using two software products: Transcriber and Express Scribe. During transcription, a single comma can result in changing the entire meaning (Bleakley, 2005). Therefore, each recording was heard along with reading the transcription twice to ensure accuracy. Although data transcription was time-consuming, it helped generate an understanding of the participants' experiences and informed subsequent interview questions and participants' selection. Other difficulties associated with transcribing data by the researcher included: capturing each spoken word, sentence structure, accent, and use of regional/professional jargon (Dicicco-Bloom and Crabtree, 2006).

### 4.2.8 Data Analysis

A constructivist grounded theory analysis was employed (Charmaz, 1983, 2006). The analysis started with immersion in the data where I listened to the audio recordings and transcriptions to become familiar with their meaning, range and diversity, and construct initial codes. Coding is the process of critically defining segments of data with a label

that summarises participants' views and gives analytic handle to develop interpretations of the phenomenon (Charmaz, 2006). It is a pivotal step towards developing an emergent theory and provides a skeleton for theoretical integration afterwards. I acknowledge that my prior perspectives may have influenced some of my codes. However, I saw it as representing one view, and focussed on bringing out fresh insights from the data. The codes can be descriptive, conceptual and theoretical. For example, in the current study: the descriptive code is the shift from teacher centred to student centeredness in teaching; a conceptual code is development as a teacher; and a theoretical code is transforming identity/identity development. The coding process has two main phases: An 'Initial Coding' followed by a 'Focussed Coding'.

### *Initial Coding*

During initial coding, the researcher studies emerging data for analytic ideas to pursue in further data collection and analysis (Charmaz, 1983, 2006). These initial codes helped to segregate data into categories and reveal processes. The codes emerged through active interaction with the data, and reading each line, incident and segment to *construct* codes for fit and relevance. Most of the codes comprised of words that reflect an action. The initial coding was kept open-ended. These codes were provisional, comparative and as close as possible to the data. They included *in-vivo* analytic codes i.e. innovative terms used by the participant that captures or condenses the meanings of the experience everyone shares. These *in-vivo* codes preserve participants' meanings of their views and fluidity of their experiences, and present a fresh perspective on the experience (Charmaz, 2006). Thus, by developing *in-vivo* analytic codes, the data forms the foundation of the theory. The initial coding phase helped with the structuring of participants' experiences, relative emphasis and interpretations.

Four transcripts were coded by the researcher and supervisors independently, ensuring that no single perspective dominated. Following extensive discussions, a provisional coding framework grounded in data was developed. The involvement of supervisors reduced personal bias. As the process is iterative, the coding framework was refined continuously throughout the analysis to represent the comprehensiveness and diversity of responses. However, coding is not a mechanical but an intuitive process (Charmaz, 2006). It involves logical thinking, making connections and subjective judgements. Every attempt was made to separate personal influences by keeping a research diary for

personal reflections and challenging taken-for-granted standpoints to maximise the trustworthiness of findings. The analytic process is made transparent and accessible to external audit by adding excerpts from the data in the findings.

### *Focussed Coding*

After initial coding, a focussed coding was performed. Theoretical integration begins with focussed coding (also known as selective or conceptual coding) i.e. examining and synthesising most significant initial codes (selective) into a number of conceptually related ideas (Charmaz, 1983, 2006, Watling and Lingard, 2012). It involves sifting and sorting large amounts of data into the newly devised categories. One can collect more data to explore any analytic categories which have been glossed over and are unstated. Most of the codes subsumed into analytic categories (themes). An 'other' category was made to avoid ignoring any data, which did not fit into themes initially. Later these codes were merged into previous and new categories. These categories were not treated separately but woven together into a process analysis to explicate experience. Like Charmaz (2006), I looked closely at how personal and contextual conditions influenced the impact on various participants. The literature helped to expand and clarify the emerging analysis.

### *Constant Comparison Method*

Grounded theory involves a systematic constant comparison approach towards data analysis to establish analytic distinctions (Charmaz, 2006, Ng et al., 2014, Watling and Lingard, 2012). It involves comparisons of data at each level of analysis to find similarities and differences, thus refining the themes and establishing analytic distinctions (Skeat, 2010). It also helps identify issues, which are implicit in one set of interviews but explicit in another. In the current study, the codes and associated data were categorised and each theme was compared across all the participants/groups. The participants were ordered into groups based on qualification, year of graduation, age and nationality in order to make comparisons and see the effect of a particular demographic on the patterns of experience or behaviours. During the constant comparison process, the negative/deviant cases are of particular importance and they can offer vital analytic insights towards theory development. These cases force the researcher to think beyond existing categories, therefore revealing conceptual principles and categories accounting

for the full range of data (Watling and Lingard, 2012). I compared and contrasted the data with data, data with themes, themes with themes, and themes with the concepts across all the participant groups. The data was interpreted from specific towards general concepts (known as process of abstraction) as a whole by searching for patterns, associations, concepts, and explanations (Skeat, 2010). This also helped to develop associations with various contextual factors, which is vital to the understanding of professional identity development (Starks and Trinidad, 2007).

Microsoft Excel was used along with query tool from ATLAS.ti 7 to make analytic comparisons. Although grounded theory guides the analysis, the software package allows for organisation of data into codes and its families. It ensures efficient data management and makes output of relevant codes readily available during write-up to support the core categories. In ATLAS.ti 7, the views of each participant on each theme remain connected to other aspects of their account. Thus, it does not lose its context and relevant data extracts can be reviewed for sufficient evidence with regards to a proposed theme.

### *Memo Writing*

During the whole research process, spontaneous informal analytic memos to self about codes or any other emerging ideas about the data were freely written and sometimes audio recorded in a natural voice (Charmaz, 1983, 2006). This is an intermediate step between data collection and writing the results. I used these memos as a record of my initial analytical thoughts, decisions, feelings and questions arising from the analytic process. They kept me actively involved in the analysis throughout the research process and made the comparisons across codes and categories explicit. These notes became further data to be analysed and served as prompts to develop an understanding from the data, elaboration of how codes fit together into theoretical categories and how various factors (personal and contextual) interplay with the impact of the qualification (theoretical notes). The memos helped knit concepts together in new ways, which rely less on schematically ordering the concepts, and more on the feel for the data and abductive thinking that flits back and forth from the data to the abstracted concepts. The constant comparison method and memos-writing promoted reflective thinking and theoretical dialogue with the data. These analytical strategies gave an analytical handle and coherence to the large amount of qualitative data. They facilitated the emergence of

new insights, signposted theory development and highlighted gaps in the analysis to inform further sampling (operational notes) (Skeat, 2010, Watling and Lingard, 2012). Hence, this stage strengthened the emerging analysis and also ensured groundedness of the theory in the data rather than the literature. Additionally, these memos helped me write this thesis and were useful in generating future research ideas. Feedback from supervisors on the analysis and revisions of this chapter also served as a memo, which polished the ideas developed in the finished thesis.

I found this methodical nature of constructivist grounded theory analysis easy to follow. It is dynamic and open to change, facilitating reviewing and amending throughout the analytical process with inputs from supervisors in the inductive process. Each new theme/category was discussed and agreed. The subsequent data collection and analysis refined the emerging analytic categories. However, despite being systematic, it ultimately relied on my interpretative ability to determine meanings and connections. I repeatedly immersed myself in reflective cycles into the transcribed data, until interpretations became clear. Although codes and categories form part of the analysis, the process of writing took the centre stage in the analysis. Not that codes were used any less, but writing as a process was used to think about and explore codes, rather than using a pre-existing coding family. In doing so, the analytic process challenged taken-for-granted ideas, resulting in an original contribution. My analysis revealed various themes and sub-themes (see section 4.3), culminating in an abstract theoretical understanding of the identity development of healthcare educators (see section 4.4.7)

### *Linguistic Analysis*

I also analysed for how these experiences were told i.e. pronominal talk. According to Monrouxe and Rees (2015), personal and professional identities are constructed and co-constructed through language and social action within the healthcare workplace environment. Therefore, examination of language (e.g. directives, questions and pronominal talk), para-language (e.g. laughter), non-verbal communication (e.g. eye gaze) and material use can reveal identities. In the current study, I analysed for pronouns such as I, we, us, they, them and you in the language of these graduates. The analysis unfolds ‘how’ graduates see themselves and others in the workplace (Rees and Monrouxe, 2008). It also gives insight into their interpersonal attitudes and social relations with other professionals (Mühlhäusler and Harré, 1990), which impacts

productivity in the workplace. As interview questions were not sent to the graduates beforehand, it helped ensure an informal dialogue, in which language is beyond their direct conscious control (Skelton et al., 2002). 'I' and 'we' are commonly used in spoken language and of potential interest (Skelton et al., 2002). The pronoun 'I' suggests agency and autonomy in educational decision making, whereas 'they, them and you' depersonalise, marking social distance from others. The pronoun 'we' can be an inclusive (you and I), demonstrating a connectedness between the graduates and their colleagues, constructing an amiable tone, and providing a conducive environment by inviting their colleagues to identify with their educational plans. It can also denote exclusivity (we educators, but not you without qualification in medical education) (Rees and Monrouxe, 2008).

## 4.3 Findings

I identified 11 themes after analysis of the transcripts (Table 4.1). Participants discussed their motivations for enrolling in this qualification, the impact on their career and its influence on their professional identity and workplace. They reflected on their educational practices and experiences. They shared thoughts and comments with narratives of leading educational changes within specific cultural and social contexts. The findings also highlighted their performance attainments as a result of this qualification, and the associated challenges and enablers. The pronominal talk and fears associated with becoming an educator also emerged as themes.

Table 4.1 - Overarching Themes

| | |
|---|---|
| Motivations | Fear/Concerns |
| Impact on Career | Performance Attainments |
| Self-Efficacy | Inhibiting Factors/Challenges |
| Development and Changes in Practices | Enabling Factors/Facilitators |
| Participation in learning communities | Pronominal Talk |
| Performance Influencing Factors | |

### 4.3.1 Personal Factors

Participants (n=27) were at different stages in their careers, from different countries, and with a diverse range of characteristics (Table 4.2). They were predominantly distance learners. Half of the participants were UK nationals and at various stages of

their career. Educational roles included deans, directors, professors, consultants, project leaders, lecturers, clinical registrar and PhD students.

Table 4.2 - Characteristics of Interview Participants

| Characteristics | Frequency | Characteristics | Frequency |
|---|---|---|---|
| **Gender** | | **Qualification** | |
| Male | 12 | Certificate | 9 |
| Female | 15 | Diploma | 2* |
| | | Masters | 16 |
| **Age** | | **Mode** | |
| Under 30 Yrs. | 1 | Face to Face | 6 |
| 30–45 Yrs. | 13 | Distance Learning | 20 |
| Over 45 Yrs. | 13 | Blended | 1 |
| **Profession** | | **Year of graduation** | |
| Medicine | 22 | 2008 | 11 |
| Medical Education | 2 | 2009 | 2 |
| Dentistry | 1 | 2010 | 4 |
| Nursing | 1 | 2011 | 3 |
| Pharmacy | 1 | 2012 | 7 |
| **Nationality** | | **Workplace** | |
| United Kingdom | 14 | United Kingdom | 12 |
| United States | 1 | United States | 2 |
| Canada | 2 | Canada | 2 |
| Pakistan | 2 | Pakistan | 1 |
| Thailand | 2 | Thailand | 2 |
| South Africa | 1 | South Africa | 1 |
| New Zealand | 1 | Australia | 2 |
| Egypt | 1 | Saudi Arabia | 1 |
| Sri Lanka | 1 | Sri Lanka | 1 |
| Chile | 1 | Chile | 1 |
| Denmark | 1 | Denmark | 1 |
| | | Nepal | 1 |

*currently enrolled for Masters

### 4.3.2 Motivations

Participants identified multiple reasons for enrolling in medical education qualifications based on their prior learning experiences in the workplace (Table 4.3). A desire to improve understanding and competency (intrinsic), and interest in the topic were commonly articulated reasons for enrolling on the course (Excerpt 1). Also, the participants who enrolled for other reasons (extrinsic) gradually developed an interest in medical education, and many continued from the Certificate to Diploma and then Masters (Excerpt 2). For many participants an intrinsic desire was associated with other extrinsic motivations. For example, participants enrolled because of recommendations by their colleagues who had found it beneficial for their own practices (Excerpt 3). Two participants from the UK with extensive experience in education enrolled for the

Certificate in response to their professional review (Excerpt 4). Some faculty members reported being sent by their universities for postgraduate qualifications, while others described educational reforms in their programmes as an impetus for the enrolment (Excerpt 5). Participants from Canada and USA enrolled for a qualification in medical education as it had become a requirement for an academic career (Excerpt 6). Some mentioned taking the Masters as part of their career pathway in medical education (Excerpt 7) or to enhance career prospects following a break from Medicine (Excerpt 8) or when moving to a new country (Excerpt 9). Since many participants were also working professionals, they were motivated by the feasibility/practicality of completing the qualification (Excerpt 10).

Table 4.3 - Reasons for Enrolling on the Programme

| | |
|---|---|
| **Intrinsic Motivations** | |
| Personal<br>i. Desire for competency (Interest) | **Excerpt 1:** 'I was interested in education, I just wanted to know the theoretical aspects and to find out ways how I could improve my teaching' (Female C#142)[3] |
| ii. Evolving Interest | **Excerpt 2:** 'I started with the certificate and … I was receiving very highly appreciating feedback from tutors so I started to think that I had to continue into that … because I feel myself more here than working with patients … so I started to focus on this, I took it very serious and I proceeded to Masters' degree' (Male M#30) |
| **Extrinsic Motivations** | |
| Recommendation<br>i. Colleagues | **Excerpt 3:** 'It was actually through contacts with my fellow examiners … and discussing it with them they felt that they had benefitted from undertaking some more formalised training' (Male M#163) |
| ii. Professional Review | **Excerpt 4:** 'Continuously came up in my professional development and review that probably I should have a professional qualification' (Female C#144) |
| Requirement<br>i. Educational Reforms | **Excerpt 5:** 'There was a reform of the specialty training … and in all specialities you have to educate some people, who could who could lead this process … and that was the reason that I enrolled' (Female M#151) |
| ii. Academic Positions | **Excerpt 6:** 'The reason I'd wanted that is the American Medical Association and various other governing bodies had … decided that … every faculty that involved teaching should have an education person' (Male M#18) |
| Retention<br>i. Med Ed Career | **Excerpt 7:** 'To basically pursue my plans of becoming a specialist medical educationalist, I then enrolled in … an advanced Masters level … in medical education, the one which I knew will be recognised around the world' (Male M#81) |
| Professional Prospect<br>i. Enhance CV | |

[3] The identifiers for the participants are based on a combination of gender; Certificate, Diploma or Masters (C D M); and their sequential number from the survey.

| | |
|---|---|
| ii. Exposure | **Excerpt 8:** 'Let me get something else for my career CV that will help me and something that will interest me … and go on the career ladder quickly' (Female C#149)<br><br>**Excerpt 9:** 'Since I had also moved from a different country, I wanted to know how the medical education continuum work and to get some further knowledge about it before I actually started teaching' (Female C#142) |
| Feasibility/Practicality | **Excerpt 10:** 'I was at that time working full time and … I was drawn into the fact that Dundee will be purely on correspondence. There is no on-site requirements' (Male M#163) |

In the sample, participants who wanted to enhance career prospects or satisfy professional reviewers later in their career had only enrolled for a Certificate. The sample did not have any international participants doing the Certificate later in their career, and therefore, one cannot conclude if such behaviour is limited to the UK. However, most of the international participants in the sample enrolled for the full Masters' course, typically due to funding from their government or faculty for completing a Masters.

### 4.3.3 Impact on Career

Participants reported that a qualification in medical education influenced their career in a variety of ways (Table 4.4). The vast majority of participants attributed their career progression to the qualification, and this was associated with greater educational responsibilities. Many who took the qualification early in their career reported that the qualification made them confident in their abilities and they were able to compete for various educational roles and responsibilities in their workplace. It supported job applications and also gave them the required skills for these positions (Excerpt 11). The participants believed that having the qualification gave their potential employers confidence in assigning to them various educational roles and responsibilities. This was reported for both Certificate and Masters' graduates. Masters' graduates reported that taking the qualification early in their careers not only resulted in career promotion but also acted as a stepping-stone for a PhD and an academic career in medical education (Excerpt 12). Such a trend towards a further qualification was more common among the international graduates with a Masters. However, this is probably associated with their moving to a career focussed on academic medical education, where PhD is an entry-level requirement.

Table 4.4 - Impact on Career

| | |
|---|---|
| Roles & Responsibilities | **Excerpt 11:** 'Had an opportunity to take on an extra role that's foundation programme director … and I also understand the fact that I had postgraduate medical education qualification helped me get that post, I have also become medical ethics and law lead for the medical school … I don't think previously I would have felt that I had the knowledge or experience even to put myself forward for some of these posts' (Male M#106) |
| Further Education | **Excerpt 12:** 'I was at a probationary lecturer ship before I did my Masters and after that I was confirmed as a lecturer and I got a permanent position in the university and … there were invitations for doing workshops in medical education … and actually it was the basis for me to start the PhD.' (Male M#59) |

### 4.3.4 Self Efficacy

The participants had varying levels of self-efficacy based on their prior learning experiences in the workplace. Irrespective of this level, they reported a further increase in self-efficacy after the qualification (Table 4.5). The qualification raised graduates' confidence in performing various educational tasks (Excerpt 13). It enriched their understanding of the core concepts in medical education with a grounding in educational principles and learning theory (Excerpt 14). They now knew why things needed to change, and had a broad range of strategies for helping students and colleagues. The qualification also honed their skills in medical education. They were able to perform better in various educational tasks (Excerpt 15) and contribute towards educational discussion and debate (Excerpt 16). Graduates with a Diploma or Masters also become more focussed and reported an increased commitment towards medical education, with some even diverting from their clinical careers (Excerpt 17). These findings suggested an impact on self-efficacy, which influences development and performance attainments in the workplace.

Table 4.5 - Impact on Self-Efficacy

| | |
|---|---|
| Confidence | **Excerpt 13:** 'The process of doing the course has just made me more confident in taking on new roles so people give me things to do and then I find that I am very confident in doing them.' (Female M#73) |
| Knowledge/ Understanding | **Excerpt 14:** 'I felt that having the qualification gave me background knowledge which allowed me to be a far more effective person when developing strategies in education, not just on the ground teaching but actual strategy (Female C#168) |
| Skills | **Excerpt 15:** 'I was not a born teacher so I had to be trained for it. I learned everything from this course, how to deliver a lecture, how to make MCQs and how to do evaluation and standard setting and all these things' (Female D#46) |
| Competence | **Excerpt 16:** 'If there is a discussion … about the future of GP training within the region I feel I can contribute effectively to that debate' (Male M#163) |

| | |
|---|---|
| Commitment | **Excerpt 17:** 'So if you want to put it in one way what has changed in myself through the education qualification, I would say commitment, I felt more committed to my career and far more committed to educate more people and … contribute to research' (Male M#30) |

### 4.3.5 Development and Changes in Practices

The analysis also revealed changes in practices, with the development of graduates as teachers, researchers, leaders and learners in medical education.

#### *Development as a Teacher/Practitioner*

All the participants discussed, explicitly or implicitly, the impact of the qualification in terms of changes in educational practices. The qualification made them critically analyse their teaching, and they found evidence-based strategies helpful in becoming effective as a teacher. They gave many and varied examples of these changes, implying development in various roles (Table 4.6). The majority of graduates reported developing their capabilities as facilitators of learning, moving from tutor-centred to a more learner-centred approach, and they now encouraged self-directed learning (Excerpt 18). Participants reported that teaching had become a planned activity and now included a diverse range of activities to meet the needs of various students (Excerpt 19). They were able to introduce simulation and role-play in their clinical teaching. The graduates also developed as educational mentors and reported different ways in which they supported others (Excerpt 20). They shared their approach with others and modelled good educational practices. They also reported that their colleagues had borrowed various evidence based educational practices from them (Excerpt 21). With an enriched understanding of the principles of assessment, the participants reported becoming student assessors and course evaluators. Understanding the evidence base, enabled them to defend decisions in developing assessments (Excerpt 22). They mentioned doing item analysis, standard setting and replacing assessment practices with more valid and objective ones. They also carried out continuous evaluations to improve the quality of their programme (Excerpt 23). The graduates reported being part of various educational committees as curriculum planners and course organisers. They reported pursuing current educational trends and ensuring alignment in the curriculum (Excerpt 24). The graduates gave specific examples of developing new modules and redesigning various

undergraduate, postgraduate and continuous medical education programmes. Many said that they were able to develop and implement various learning resources and educational innovations in practice such as study guides, reflective portfolios and professionalism guides (Excerpt 25). The graduates also learnt about various aspects of giving feedback, its importance and ways to make it more effective. Instead of employing just praise and/or criticism, they spoke about giving structured feedback (Excerpt 26).

Table 4.6 - Development and Changes in Teaching Practices

| | |
|---|---|
| Facilitator | **Excerpt 18:** '[I'm] more into peer group and student centred and how to sort of facilitate [learning], I would not have known how to facilitate a peer group teaching earlier on and allowing the junior trainees to sort of do the teaching amongst them' (Female C#142) |
| Lesson Planner | **Excerpt 19:** 'I lesson plan much better now, I used to in the past just have a rough thing in my head but now I lesson plan quite formally so I put timings and prepare my teaching material well before so I have a much more fixed lesson plan now a days.' (Female C#168) |
| Mentor | **Excerpt 20:** 'I am mentoring, one of my tutors is doing a medical education degree … I helped her think through how she might design her research, enabled her to do the research within my school and my students and my staff.' (Female M#89) |
| Role Model | **Excerpt 21:** 'I actually tried it [problem based learning] in my histology and cell biology course … and because it worked so well … all decided that they are gonna actually include it somewhat and my colleague who is … assistant dean for education development … has taken some of the stuff that I have instituted … I took that by and large from the Masters papers and module that I did on PBL.' (Male M#18) |
| Assessor | **Excerpt 22:** 'This time it was sort of more methodological and we kind of started out using the theory to produce the exam rather than sort of say what you think should be in the exam and … if we were questioned about anything about why you have done anything in a particular way, you could actually show it.' (Female C#144) |
| Evaluator | **Excerpt 23:** 'I am responsible for quality assurance … now we recognise the importance of what we have is it good or not … for students who graduated from our medical education centre … we get them and not only them but other doctors and the patients and ask about what they have worked is it good and not and in which way and … we do it every year so for the information each year that we try to improve our students who are going to be a doctor in the near future' (Female D#202) |
| Curriculum planner | **Excerpt 24:** 'We have changed the module structure to rationalise it with increased integration of teaching both horizontally and vertically through the course. So the whole thing I think has become more coherent … the things follow on one from another more logically and we introduced more small group teaching' (Female M#89) |
| Resource developer | **Excerpt 25:** 'I designed that [study] guide actually I put it in for my assessment for that module but then I used it in the school and it's still being used so I would not have done that if it had not been for the course really' (Female M#89) |
| Feedback provider | **Excerpt 26:** 'It [course] has probably helped me do those [work based assessments] more effectively and concentrate on the learning points, rather than the tick boxes … and has helped me moved to … relative constructive feedback than just say well you were okay.' (Male C#32) |

### *Development as a Researcher*

The participants also learnt about various research paradigms and methods during the course. They were able to implement their learning in the form of a research dissertation as part of the Masters and develop as researchers (Table 4.7 – Excerpt 27). Many participants continued with educational research projects after the qualification and reported gaining several publications (Excerpt 28). The participants mentioned that they would not have done any education research if it had not been for the course in medical education. The Masters' graduates also highlighted that their qualification in medical education encouraged and enhanced their commitment towards inquiry and innovation in education. They specifically associated their scholarship and research in medical education with the qualification (Excerpt 29). They disseminated their research in education through participation in various national/international conferences and journal publications, thus having an international impact. Some Masters' graduates also reported that the qualification had influenced their views of paradigms in research and they had developed an understanding of qualitative research (Excerpt 30). Research methodology is usually taught during the Diploma for students continuing onto the Masters. Certificate graduates reported no development as researchers except that they now viewed medical education research positively (Excerpt 31).

Table 4.7 - Development and Changes in Research Practices

| | |
|---|---|
| Researcher | **Excerpt 27:** 'So the thesis … empowered me to do research, the processes of writing protocol and getting it through ethical approach committee and then doing the project and writing up stuff in a format … the Masters' component has really developed me as a researcher … it's given me exposure to help other researchers in areas which are not of my primary interest.' (Male M#81)<br><br>**Excerpt 28:** 'I now do some education research and I have published 3 education papers in the last 18 months, that's something I would have never done before getting this [MMEd].' (Male M#18) |
| Educational Scholarship | **Excerpt 29:** 'Now I am starting to write articles and may be some innovations we are using already in our practice and I understand that these innovations will advance medical education worldwide … I presented this [anonymised] model in the … international faculty development conference … and I received very good appreciation from people who are leaders in faculty development' (Male M#30) |
| Paradigm shift | **Excerpt 30:** 'It has given me a lot more skills in research, it has moved me from quantitative researcher you know that kind of evidence based medicine quantitative researcher to over past 3 years and its part of doing this my thesis learning qualitative skills much more, I have much more interest in using qualitative methods so therefore as you know I can ask much different questions than I used to be able to ask.' (Male M#16) |
| Views education research positively | **Excerpt 31:** 'It had opened my eyes to educational research and made me feel like I should be involved ... Actually you could put that in the bit of the things I'd like to do but have not done yet' (Female C#168) |

### *Development as a Leader*

Various characteristics of being a leader were highlighted such as recognition by others, providing educational support and being a change agent (Table 4.8). The graduates mentioned that the qualification gave them recognition and legitimacy as an educator and their colleagues followed their lead with a lot less resistance (Excerpt 32). The participants also mentioned that their colleagues now come to them for advice on educational matters and educational support (Excerpt 33). They formed networks with other medical educationists and also received invitations for workshops overseas. The early career Masters' graduates also acted as consultants on different aspects of medical education. Almost every participant reported seeking constructive and adaptive changes in their organisations. They developed as change agents and led various educational reforms in their workplace (Excerpt 34). They gave specific examples of educational changes, indicating an impact of the qualification at organisation level. The graduates were also involved in a continuous process of improvement. After implementing an educational change, they evaluated and improved it further with an active change approach.

Table 4.8 - Development and Changes in Leadership Practices

| | |
|---|---|
| Recognition as Leader | **Excerpt 32:** 'It has given me a great license and it has given me influence and it has given me leadership responsibilities and career progression beyond what I would have had at all. It has given me credibility in my in my peers eyes.' (Male M#81) |
| Educational Consultant | **Excerpt 33:** 'I am certainly viewed as an educational leader in my current position, even though I am appointed in a department in a medical school but I have a role in a wider role in the medical school I consult, many other departments consult me, ask my opinion and I help them with their assignments, in assessments and stuff like that but that's more on an Ad hoc basis.' (Male M#81) |
| Change Agent | **Excerpt 34:** 'Following the study I have done at certificate and diploma level, I had come to a conclusion that our assessment processes within the [school name] were not following best evidence in medical education and think it be a bit random … but we examined the [practical] module with a written exam paper, an essay question, so I looked at this for my project … and came up with an action plan, how we could make things better and we did actually then follow that out in the school and changed the module' (Female M#89) |

### *Development as a Learner*

The graduates reported developing as learners (Table 4.9). They started questioning their educational beliefs and practices, and reflected at length over various educational norms in their workplace (Excerpt 35). They also began to self-assess in order to

improve their educational practices (Excerpt 36). These included both the Certificate and Masters' graduates at various stages in their career. The Masters' graduates also become self-directed lifelong learners as they continued in their pursuit of knowledge in medical education, even after the qualification (Excerpt 37). The youngest graduate (<30 years) also mentioned that the qualification gave her an awareness and understanding of the learning process. She felt her learning approach had moved from superficial to deep (Excerpt 38).

Table 4.9 - Development and Changes in Learning Practices

| | |
|---|---|
| Reflection | **Excerpt 35:** 'Each module I took, it made me think and compare what we were doing in this course, was it good or bad … I was able then to think more deeply, just step back and think about the situation and try make it better.' (Female M#89) |
| Self-assessment | **Excerpt 36:** 'I think maybe the biggest shift is about kinda standing back and critically thinking more, reflecting so if we are doing something or we are involved in something I'd be more inclined just to step back and say but why? Why are we doing it? Why we are doing it this way? and you know what's the better evidence for suggesting this, is this the right approach or not' (Male M#34) |
| Self-Directed Lifelong Learner | **Excerpt 37:** 'I use a lot of the skills and knowledge from the course and on those you build, you go on learning for the rest of your life from the time you start so it's not steady, you go on learning more and more' (Female M#90) |
| Meta Learning (Deep Learner) | **Excerpt 38:** 'It really helped me to learn better as well, to see what is important, to understand that you know, what really helps you learn rather than just memorising and rote learning sometimes, which was more promoted when I was doing my undergraduate degree, so it really helped me how to get things into perspective and especially now when I am sometimes involved in clinical scenarios and things in the scenario group session, I am able to understand them better first so it definitely helped my learning.' (Female M#68) |

### 4.3.6 Participation in Learning Communities

A key impact of qualifications was the increased participation of graduates in various activities of medical educators, thus suggesting an increased sense of belonging to the community of practice (Table 4.10). Early career Masters' graduates reported a change in their career towards medical education (Excerpt 39). The majority of Masters' students also played a vital role in the formalisation of medical education processes (Excerpt 40). The participants reported developing their departments/institutions educationally. Some introduced teaching/training components in their department and encouraged employment of those with qualifications in medical education, while others contributed towards developing postgraduate modules/courses and programmes in medical education. They also felt that through their teaching, they might have

influenced their students' interest in medical education. The qualification also helped the participants learn the language (vocabulary) of the community (Excerpt 41) and they continued to interact and network in the educational community. During this interaction with the educational community, they not only learned from the community but also played an active role in its further development.

Table 4.10 - Participation in Learning Communities

| | |
|---|---|
| Career change towards medical education | **Excerpt 39:** 'Once I did the qualification, I moved solely towards this field, before I was both the clinician and in medical education but now I am predominantly doing medical, studying medical education, working in medical education and I am not doing any more clinical practice at the moment, so it's a huge shift in my career yeah … now I have moved on to a PhD in medical education, where when I initially joined the course, I never intended to doing more than a Masters in medical education' (Female M#68) |
| Formalisation of medical education | **Excerpt 40:** 'After my qualification and with the progress I made they decided to recruit new people for medical education and now it's an effective centre … in the institution … it plays major role in running the curriculum … it's going to be a department in the future' (Male M#59) |
| Language (Vocabulary) and Networking | **Excerpt 41:** 'I think it has given me a better vocabulary with which to discuss issues with people' (Female C#178) |

### 4.3.7 Performance Influencing Factors

The impact of these qualifications was influenced by the graduates' personal and contextual factors in their workplace. These factors influenced participants' learning experiences, which in turn impacted their self-efficacy in various educational tasks. These personal and contextual factors also influenced participants' motivations towards enrolling in the qualification. Hence, these qualifications had impacted on some participants more than others (Table 4.11).

#### *Motivation*

One Master's graduate who achieved the qualification early in his career solely as a job requirement reported no impact on his development, workplace or his students. He mentioned lack of development as a researcher, and made no contribution towards scholarship and research in education (Excerpt 42). Learning about the research process was never his focus at that time. This highlights the importance of motivation and interest in medical education on the impact of the qualification.

### *Personal Factors*

One graduate expressed how her personal circumstances prevented any impact, as she went on maternity leave soon after her Certificate and then returned into a clinical department (Excerpt 43). However, she felt that the Certificate would help her in future. A few graduates explicitly reported no impact and the qualification only gave them 'reassurance' about what they had already been doing over many years (Excerpt 44). However, they did report changes in practices later in their interviews. These graduates were from the UK and they did their qualification later in their career on account of recommendations by senior colleagues and professional reviews. They included a retired Head of School, a GP trainer/MRCGP Examiner, a Course Director and a Professor of Family Medicine. They already occupied senior positions and any progress in career had been through their years of experience rather than this qualification.

### *Contextual Factors*

The graduates also reported the influence of the workplace. Some did not have protected time for educational tasks and the job role was not relevant to their expertise in medical education (Excerpt 45). Some of these influences were also associated with systemic factors such as structural re-organisation, where the educational commitment of the organisation ceased to exist. One graduate also reported frustration towards medical education research as the ethics committees in his region made things difficult and this discouraged his interest in research (Excerpt 46).

Table 4.11 - Performance Influencing Factors

| | |
|---|---|
| Influence of Motivation | **Excerpt 42:** 'I think the educational degree was more as a means to be hired as opposed to the educational degree being a good set for what I wanted to do with my career at that time … so now that I am thinking more about sort of research activities that I am involved with … I wish I have learnt more about those.' (Male M#94) |
| Influence of Personal Factors | **Excerpt 43:** 'Not at this point but I still feel it might be useful in the future cause unfortunately I went on maternity leave shortly after starting the qualification … and then after that I was actually on sort of extended part time maternity leave for a couple of years so I have not really gone back into full time' (Female C#148)<br><br>**Excerpt 44:** 'I think because I had been involved in education for such a long time, I learned a lot by experience … perhaps I sound a bit big headed but I actually felt that doing the qualification actually assured a lot of what I had been [doing] previously' (Female C#144) |
| Influence of Contextual Factors | **Excerpt 45:** 'My thesis was around the idea of curriculum development so I … can legitimately provide input into … curricula … [but] my role in my division has changed where I do not have to deal with anything in curriculum development and it's pretty lowered down in terms of what my division wants me to do' (Male M#94) |

| | |
|---|---|
| | **Excerpt 46:** 'It [medical education research] was an exercise in just recurrent frustration … the Masters' project that I undertook was simply developing a questionnaire … you know utterly benign exercise ((laugh)) but the act of having to get it through the online ethics approval and then because I was to test it out on three schemes having to get it assessed and approved by three departments took 18 months it was disappointing … what I then learnt about the process was I hated the process and it made me do no further research' (Male M#163) |

### 4.3.8 Fears Towards Being an Educator

The graduates expressed various fears and concerns as a medical educator (Table 4.12). They had to juggle clinical and educational roles. Having multiple academic responsibilities while trying to maintain a work-life balance made it challenging (Excerpt 47). The graduates also observed a negative bias towards those wishing to pursue a career in education (Excerpt 48). Education was seen as unimportant and unrewarding in comparison with other career tracks of a health professional. Many graduates stated that an educator career track was not defined in their institutions (Excerpt 49). Job descriptions and promotion policies were not clear, and they were judged on the same criteria as clinicians or researchers. They expressed a concern that being an emerging speciality, people did not have much idea of how medical educators impacted on healthcare.

The graduates found a gap between theory and practice (Excerpt 50). It was challenging to enact their learning due to various factors involved in the process beyond their control. They were concerned about the contextual nature of medical education and its transferability (Excerpt 51). They believed that medical education was a vast speciality with sub-specialities in teaching, learning, assessment and curriculum. Therefore, it had become difficult as a generalist to keep up-to-date in all areas of medical education (Excerpt 52). Medical educationists were expected to know everything about education in their institutions and they were asked to take on responsibilities that were not relevant to their interests or competencies (Excerpt 53). Pursuing a career focussed on medical education placed them in a weak financial position in comparison to their clinical colleagues (Excerpt 54). Moreover, the funding for educational projects was less than in biological and medical sciences. Thus it was difficult to receive equal funding for their institution.

Post qualification, they also experienced a conflict between their identities as clinicians and educators. They expressed a concern that choosing one would result in losing the other identity. The clinical society might disregard them as educators and they might not be taken seriously in the medical world (Excerpt 55). These participants used some strong metaphors such as 'cannibals' to define their clinical colleagues. Interestingly, the graduates with extensive experience in education reported no fears, rather asserting that the qualification gave them job variety (Excerpt 56).

Table 4.12 - Fears Towards Being a Medical Educator

| | |
|---|---|
| Finding the balance in teaching and clinical roles | **Excerpt 47:** 'The time it takes to do it properly, I worry that it could impact on my patients and … the impact that it has on my home life as well … so those tension between my clinical work but also my home, my work life balance' (Female C#168) |
| Regard for clinician or researcher is more than educationist | **Excerpt 48:** 'Part of it [being an educator] is you know the institutional bias towards kind of clinical research above education and educationist kind of always seen as the kind of second tier of academia, so that's been a problem on and off at this institution.' (Female C#178) |
| Educator Career is least well defined | **Excerpt 49:** 'So my job description is as a clinician educator which is probably the least well defined of all the job descriptions in terms of what the expectations are and what the criteria are for promotions.' (Male M#94) |
| Difference in theory and real life practice | **Excerpt 50:** 'In the accident and emergency unit that for me it is difficult to do it [feedback] readily because I had to practice at the same time … I had read about feedback that … need to be done immediately but for me it's very difficult in real practice' (Female D#202) |
| Contextual nature of medical education | **Excerpt 51:** 'Unfortunately you cannot impose any programme on professionalism from another country … because professionalism is a cultural specific issue, what is professional for you in Pakistan, may not be professional for me in Egypt or in UK … even the way of dressing of a doctor makes it different … so you need to tailor your own programme on professionalism which is a challenge' (Male M#30) |
| Trying to keep yourself up to date in medical education | **Excerpt 52:** 'You like a little bit of everything so I am not going to be a specialist in assessment. In terms of the education, I like to double in all sorts, so trying to find the balance to keep up-to-date with all is interesting' (Male M#34) |
| Expected to know everything in medical education | **Excerpt 53:** 'People have a belief with someone involved in medical education, I think people end up assuming that education is just one thing and that someone who has an interest or training in education can do everything related to any aspect of education, so … my thesis was in postgraduate education but the responsibility I was given when I started here was more in a realm of continuing education.' (Male M#94) |
| Financially disadvantaged | **Excerpt 54:** 'The financial issue for example in [country name] majority of doctors do private practice and they earn a lot in my case I depend highly on the salary I receive from the university which is not great … there are tensions about whether I took the right decision because I am at a relatively financially disadvantaged position' (Male M#59) |
| Possible clinical identity loss | **Excerpt 55:** 'Maybe some worries were after some advice from sincere people they said that do not leave your medical career keep it in your hand because you will need it.' (Male M#30) |
| No Fears | **Excerpt 56:** 'I do not think I have any fears I think it gives me lots of options I think it gives me variety at my job because … I facilitate research … I do a lot of clinical work and about a third of my job plan is involved in teaching now, so it's a nice mixture.' (Female M#72) |

All these fears towards being an educator come from the organisational culture and policies in the workplace. Participants' fears were influenced by contextual factors, and their response to these factors was determined by personal factors. The graduates extensively used 'you know' while describing their fears. This suggests that the graduates did not think these fears specific to them as individuals, but rather were associated with being a medical educator in general.

### 4.3.9 Performance Attainments

Participants were encouraged to identify specific events where they had benefitted from the qualification. They reported leading educational activities and innovations such as faculty development, curriculum reforms, course organisation and performing evaluations at institutional, national and international level. These activities resulted in substantial performance attainments in the workplace (Table 4.13). The participants felt satisfied with the impact they had on their students. This impact was also appreciated by their senior colleagues (Excerpt 57). They mentioned that the changes had better outcomes in terms of quality as evidenced from various external reviews (Excerpt 58). The qualification enabled them to create better learning experiences and they received highly positive feedback from their students and colleagues (Excerpt 59). Students also showed marked improvement in their performance. In addition, the better alignment in teaching and assessment led to an increased pass rate, with a marked reduction in struggling students (Excerpt 60). Some Masters' graduates also won competitive grants for educational projects (Excerpt 61). Others working in Nepal, Pakistan and Saudi Arabia reported obtaining accreditation for their courses and registrations for the institute (Excerpt 62). All these performance attainments in the workplace fed back into the participants' learning experiences and enhanced their self-efficacy encouraging further involvement in educational activities.

Table 4.13 - Performance Attainment

| | |
|---|---|
| Self-Satisfaction | **Excerpt 57:** 'I feel like it has a great impact … senior people like professors who are coming to attend the courses ... the president and the vice president … so that really gives you the … feeling of fulfilment and satisfaction that whatever you are doing has a big impact' (Male M#30) |
| Better Reviews | **Excerpt 58:** 'We had you know a safety culture survey of our whole maternity department, which demonstrated improvement in teamwork climate, staff satisfaction and safety climate and that is a very positive impact in terms of organisational outcome.' (Female C#149) |
| Better Feedback | **Excerpt 59:** 'I have delivered better teaching, so the reproductive system teaching for last three years has had the best student feedback so you know I think the system works well and some of that will be, because I |

| | |
|---|---|
| | have spent a lot of time and effort, while doing my thesis and have a better knowledge' (Female M#72) |
| Better Performance | **Excerpt 60:** 'Since I have improved teaching and outcomes and … changed the assessment practice … the pass rate has gone up and the students are getting through the course much more as they should in the time scale … we are not finding that the good students are suddenly failing something because the assessment is poor. So it has enabled the course to run much more smoothly' (Female M#89) |
| Won Grants | **Excerpt 61:** 'I have won … three different grants from the government to improve teaching labs, simulation centre and now I am working in a project with other universities in order to obtain my grant from USA … because we want to design a national OSCE for final year medical students' (Female M#207) |
| Accreditation & Recognition | **Excerpt 62:** 'Getting the institute accredited by HEC Higher Education Commission … as a degree awarding institute … and get it [different training programmes] recognised with CPSP [College of Physicians and Surgeons] … and develop a new course for postgraduate nurses [and get it recognised] with Pakistan Nursing Council.' (Female D#46) |

### 4.3.10 Inhibiting Factors/Challenges

The graduates reported various challenges towards leading educational initiatives in their workplace. These challenges were organised into personal, systemic and resource factors.

#### *Inhibiting Personal Factors*

Personal inhibiting factors included age, attitudes of colleagues and negative feedback from different stakeholders after an educational intervention (Table 4.14). The attitudes of colleagues emerged as the most common inhibitor. The participants reported that their colleagues believed in traditional ways of doing things and any form of educational change resulted in individual or communal concerns about its impact and resentment towards change (Excerpt 63). Younger Masters' graduates mentioned their age as a barrier towards implementing educational change. Their senior colleagues did not trust them, viewing them as inexperienced, thus affecting their credibility as a leader (Excerpt 64). Negative feedback upon implementation of an educational change was also demotivating (Excerpt 65).

Table 4.14 - Inhibiting Personal Factors

| | |
|---|---|
| Attitudes of Colleagues | **Excerpt 63:** 'A lot of the work I do involve the royal colleges it can be terribly difficult to get any change implemented there because there is just that often a few in that mood 'that's really not the way we do things here' ((laughs))' (Female C#144) |
| Age of the Educator | **Excerpt 64:** 'I did experience a bit of because I was still quite young and these were people in 50s with grey hair and they knew it all |

| | |
|---|---|
| | because they were here 100 years so that was sort of the challenge' (Male M#81) |
| Negative Feedback | **Excerpt 65:** 'I faced resistance from everybody, residents hated it faculty didn't see the point of it … in fact the first time we introduced reflective practice we had to shelve it … cause it [feedback] was so negative and we reframed the whole thing' (Male M#16) |

### *Inhibiting Systemic Factors*

Systemic impeding factors included policy and practice, interdepartmental factors and issues of hierarchy within the system (Table 4.15). The participants mentioned that the policies and practices within an organisation dictated the resources and the educational change process. They as individuals did not enjoy much freedom in such matters (Excerpt 66). Some other participants reported interdepartmental factors as barriers towards educational change. These factors could be structural i.e. ways in which different departments' individual systems inhibited the process of an educational change (Excerpt 67). Also, these could be inter-professional and bureaucratic i.e. cognitive and administrative divide between different professional groups from various departments (Excerpt 68). The graduates early in their careers also mentioned issues of hierarchy and associated power relationships among individuals within the system as inhibitors. They expressed how superiors could influence any educational change (Excerpt 69).

Table 4.15 - Inhibiting System Factors

| | |
|---|---|
| Policy and Practice | **Excerpt 66:** 'Most of them are institutional structural problems, which I really have no control over … just institutional system things that dictate where resource, issues of whether actually what to put them versus what their educational needs are … so much higher level than I have any sort of jurisdiction over' (Female C#178) |
| Interdepartmental Factors | **Excerpt 67:** 'Where I am now have a very complex structure … there is actually five different hospitals each with its own administrative structure and then beyond that there is university structure that is something independent of the hospital structure … so I think … the way that things are administered and … organised … is probably the biggest challenge towards making anything work.' (Male M#94)<br><br>**Excerpt 68:** 'I work with lots of basic scientists that they are quite challenged when as a clinician, you are trying to integrate it likewise I am a bit challenged cause its quite hard for me to understand all the basic sciences so change is difficult' (Female M#72) |
| Hierarchy | **Excerpt 69:** 'In this place it's all about who got the power you know so if the person sitting at the top does not like you then the ideas also thrown into the water' (Male M#81) |

### *Inhibiting Resource Factors*

Lack of resources could also inhibit the implementation of an educational change (Table 4.16). Many graduates commonly referred to a lack of protected time (Excerpt 70). They mentioned that due to various responsibilities in the workplace, they were not able to invest much time towards educational changes. Also, their colleagues were busy professionals and it would be an unreasonable demand to ask them to participate in any form of educational intervention. An international graduate referred to lack of financial resources as a barrier towards educational change (Excerpt 71), while others mentioned limited numbers of staff/faculty in the hospital (Excerpt 72). Technological issues could also hinder an otherwise successful educational intervention (Excerpt 73).

Table 4.16 - Inhibiting Resource Factors

| | |
|---|---|
| Protected time | **Excerpt 70:** 'The challenges are lack of time on my behalf, lack of engagement from colleagues', time I guess time for learning time for education for me but time for particularly my consultants colleagues for learning … I think that working lives are busy and pressured and its lack of time on their part' (Female C#16) |
| Financial resources | **Excerpt 71:** 'We had very few resources and we had no money to spend around huge curriculum changes' (Male M#59) |
| Human resources | **Excerpt 72:** 'Our hospital and our medical education centre … lack doctors … to do the medical service and that doctors at the same time have to teach, this is a big problem' (Female D#202) |
| Technology | **Excerpt 73:** 'We did the reflective exercises and that was going just great and we kept them all on in this computerised portfolio and then … they stopped development … now we can't find the portfolio that will house this so we have lost the ability to track residents completion of these reflections' (Male M#16) |

## 4.3.11 Enabling Factors/Facilitators

A range of factors that facilitated an educational change process was identified. These factors could be organised into personal, systemic and resource factors. All these challenges and facilitators stemmed from the personal and contextual factors in the workplace.

### *Enabling Personal Factors*

Personal enabling factors included participants' attitudes and abilities as educators, attitudes of their colleagues and the positive feedback received from stakeholders after an educational intervention (Table 4.17). The participants drew heavily on their personal abilities i.e. self-confidence and solid grounding in education as an intrinsic

part of being a successful educator (Excerpt 74). They also believed that having good interpersonal skills was a pre-requisite, as buy-in from various stakeholders was essential (Excerpt 75). Participants relied on their leadership skills and found these skills helpful in managing the educational changes. The attitudes i.e. the enthusiasm and willingness of their colleagues to engage in the educational process was another enabler (Excerpt 76). Interestingly, both the ability and inability of their colleagues in medical education were reported as facilitators. Having colleagues with a competency in education was useful due to their understanding of the need for change and its process (Excerpt 77), whereas, colleagues with a lack of understanding in educational matters could make them more receptive towards those with a competency in educational matters (Excerpt 78). However, this was associated with the educators already holding a higher position in the organisational hierarchy. Positive feedback on educational interventions from various stakeholders encouraged the educators and also helped convince their colleagues to trust them with educational changes (Excerpt 79).

Table 4.17 - Enabling Personal Factors

| | |
|---|---|
| Attitudes & Abilities of the Educator<br>i. Knowledge | **Excerpt 74:** 'When you give them a solid argument whenever you talk to people in meetings and one on one as well … people do understand and people do get convinced that change is important so I think having a solid background and you know knowing what you are talking about are all facilitating factors.' (Female M#68) |
| ii. Interpersonal skills (Leadership) | **Excerpt 75:** 'I think you have to be good at motivating others to get involved … you have to have people's skills if you are looking at getting people … to contribute to that something that you might be developing and … you really got to get them on your side' (Female C#144) |
| Attitudes of Colleagues | **Excerpt 76:** 'My colleagues are very relaxed about this, so there is no body who feels precious or upset if sessions are changed so … there has been a willingness to accommodate any change' (Male M#106) |
| Abilities of Colleagues | **Excerpt 77:** '80% of our tutors and teachers have taken the Diploma in medical education, so now it's easier' (Female M#207)<br><br>**Excerpt 78:** 'Having not studied much medical education … they usually happy to accept what we are telling them, the ones who are studying it.' (Female M#89) |
| Positive Feedback | **Excerpt 79:** 'There was a very strong positive feedback from registrars when we started to implement this they liked it enormously … which frankly allowed any objections from the other side to be put aside … so what facilitated it was the fact that A it worked and B was liked' (Male M#163) |

### *Enabling Systemic Factors*

Systemic facilitators included policy and practice, and hierarchy within the system (Table 4.18). A number of participants mentioned that working in an organisation, whose policies and practices supported educational change efforts or encouraged reforms was a facilitator (Excerpt 80). In addition, the recommendations and requirements from external regulatory bodies in the region could facilitate educational change (Excerpt 81). The vast majority of participants referred to hierarchical relationships as an enabler. More senior participants mentioned that being in a position of power gave them the required influence in their organisations, and the educational interventions they proposed often remained unquestioned (Excerpt 82). Being supported by those in leading positions also helped reduce opposition from those reluctant to embrace the change (Excerpt 83).

Table 4.18 - Enabling System Factors

| | |
|---|---|
| Policy and Practice | **Excerpt 80:** 'I think partly its institutional desire to happen … and having some people in leadership who recognize the importance of education' (Female C#178)<br><br>**Excerpt 81:** 'We do not have a good portfolio system to keep track of everything but we have new requirements in United States … that would require us to do that, so now that's going to … move us forward' (Male M#16) |
| Hierarchy<br>i. Position of Educator | **Excerpt 82:** 'It's gonna sound a little bit big headed but when you are superseding your consultants and head of school, the college examiner. You could pretty much do what you like ((laughs)) no one questions you very much' (Male C#32) |
| ii. Support from leadership | **Excerpt 83:** 'I also had the support of the revalidation lead … so it always helped to smooth the change, I mean probably it does happen but it always helps to have these people sort of supporting you, so that the change can be slightly easier.' (Female C#142) |

### *Enabling Resource Factors*

For productivity in the workplace, enabling resource factors (Table 4.19) included protected time (Excerpt 84), financial incentives (Excerpt 85) and the mode of utilisation of the course. The vast majority of participants were studying part-time in their institutions (distance learners) and they reported applying their learning from the course to day-to-day educational practices during this time (Excerpt 86). In such processes, learning not only comes from the course but also from its implementation and use in practice, thus enhancing the competency of graduates iteratively. It is an incremental iterative process - a term used in software development, where the software

is built in smaller sections, and the system is then used and built further based on learning derived from it in repeated cycles (Larman and Basili, 2003). The graduates also reported using course material at various stages as a guide (Excerpt 87). They utilised these resources to defend their ideas and help their colleagues in medical education. It also aided exploring further learning resources.

Table 4.19 - Enabling Resource Factors

| | |
|---|---|
| Protected time | **Excerpt 84:** 'I think careful job planning for consultants to allow enough supporting activity time to teach and to learn, I think that's one of the key things' (Female C#168) |
| Financial resources | **Excerpt 85:** 'We got financial support for practices to change, so we actually got funded to do some of the things we were asking them to do and that's probably the biggest facilitator ((laugh)), because … people have got be rude spending time extra time doing something which is extra beyond their everyday work' (Female M#90) |
| Mode of utilisation<br>i. Incremental iterative process | **Excerpt 86:** 'It became much easier to do the modules because … I kind of timed it you know having it with OSCEs was a good time to do the module on OSCE … it made much more contextual sense because you were doing the stuff as well as reading about it and you know writing it up … so I picked and choose the modules so that you know it was relevant to day to day practice … and it was not just a case of going along, you know having a bit of calibration and discussion about what we are doing with the OSCE … to be able to read around the kind of underlying theory about it at the same time. So it made … much more sense to me doing that way so I think that certainly what I did when I was kinda working my way through.' (Male M#34) |
| ii. As a Guide | **Excerpt 87:** 'Right behind where I am sitting I am looking at all of the notebooks [paper version] that I have gone through and they are right there because I pull them out all of the time to look at something to get ideas on how to do something … so specifically we are doing a good greater curriculum redesign now in our residency and I oversee that and I regularly use materials from Dundee modules or review the module in whatever aspect we are talking about' (Male M#16) |

### 4.3.12 Pronominal Talk

From the position of an educator, participants often used the pronoun 'I' to describe themselves within their interviews (Table 4.20: Excerpt 88-89). Such pronominal use served to underscore their authority as educational leaders, simultaneously illustrating others follower status. They also used exclusive 'we' and 'us', which suggested their partnership with colleagues having a qualification or competencies in medical education (Excerpt 89-90). Participants used 'you', 'they' and 'them' to exclude other colleagues with no qualifications or competencies in medical education (Excerpt 88-90). The active

voice within the interviews expressed their colleagues' views, and the participants used 'you' to address themselves. This use of pronouns indicates a perceived separation between the participants and their colleagues.

Table 4.20 - Linguistic Features – Pronominal Talk

| | |
|---|---|
| **Pronominal talk**<br>e.g. I, You¸ Us, They | **Excerpt 88:** 'This is more back at the practice where I am working or doing something with the rest of the partners and they will laugh or tease and then I say you know if you got the medical student … then my approach to how I will question the partners or the students about it is different from how they will do it and they were just kinda joke a bit about it in terms of we can tell you that you are educationalist' (Male M#34)<br><br>**Excerpt 89:** 'They tend to take a lead quite a bit from me as I say it could be good it could be bad ... I am quite passionate about assessment now and getting it right and they can see the logic of what I am saying ... I can produce evidence from some of the papers I have read if necessary but most of them are not in position having not studied much medical education yet and so they usually happy to accept what we are telling them, the ones who are studying it [medical education]' (Female M#89)<br><br>**Excerpt 90:** 'They make MCQs but they are like just testing the recall, … so like we have to guide them how to make an MCQ … testing higher degree of knowledge and … they do not know how to do this … so then these professors or supervisors they do come to us and ask us how to make them and all that (Female D#46) |

## 4.4 Discussion

The findings revealed a positive impact of these postgraduate qualifications on the graduates' personal and professional development. The graduates felt an enhanced sense of self-efficacy and belonging to the educational community. They reported transformative changes in practices with development in various educator roles such as a teacher, researcher, leader and learner. Through the qualification there were opportunities to take on leadership positions and pursue higher career trajectories with expanded responsibilities in medical education. Despite the challenges, the graduates translated their learning to practice with various performance attainments in the workplace. Although the qualifications resulted in identity development of the educators, the process remained under the influence of personal and contextual factors along with the related concerns.

### 4.4.1 Motivation and Interest

Bligh and Brice (2009) identified an extremely diverse workforce involved in medical education. Participants reported various motivations towards enrolling in a qualification based on their diverse professional and contextual backgrounds. According to self-determination theory (Williams et al., 1999), motivations have a direct relationship with learning and this in turn may influence the impact of the qualification. Intrinsic motivation for learning is theorised to promote self-regulation, which mediates better conceptual understanding with enhanced performance and achievements in learning tasks (Froiland and Oros, 2014, Lee et al., 2014, Walker et al., 2006). Wenger (1998) emphasised having a meaningful participation in the community of practice for learning to occur. It is this meaningful engagement, which gives us a sense of who we are and our roles within society (Bleakley et al., 2011). On the other hand, extrinsic motivators are correlated with superficial engagement and shallow processing of the learning material (Walker et al., 2006). However, this dichotomy of motivation appears simple as pursuing any task involves a complex interplay of both intrinsic and extrinsic motivations. The various extrinsic motivations of the participants also suggest an increasing recognition of medical education as a speciality with further investment, and its uptake being encouraged in various contexts (Tekian and Artino, 2013). Most of the international participants in the sample enrolled for the full Masters' course, suggesting it more authentic as an exit point for full-time medical educators overseas. It is seen as a more legitimate endeavour by external funding bodies overseas than the Certificate alone. Goldszmidt et al., (2008) found no association between formal training of the medical faculty in education and their future interest in pursuing education scholarship. They concluded that an advanced education programme might not be enough to increase involvement in educational scholarship unless supported by the workplace environment. This is in contrast with the current findings, where the participants reported an evolving interest, with further enrolment and involvement in medical education. This may be associated with these qualifications becoming more relevant to their practices and professional identity formation as an educator.

### 4.4.2 Career Opportunities

Career growth was directly attributed to the qualification, as the graduates reported new job opportunities, leadership positions and academic promotions with greater educational responsibilities such as faculty development and course organisation.

Academic promotions and career progress have been reported by longitudinal programmes from the USA as well (Gruppen et al., 2003, Robins et al., 2006, Steinert and McLeod, 2006, Wilkerson et al., 2006). However, the selection criteria for these programmes demanded good credentials and strong commitment from applicants towards medical education. Those obtaining a Masters' degree earlier in their career also started working in the field of medical education. This could be either an influence of the qualification or because the qualification came at a particular time in their careers when they were open to new ways of thinking and being. For some the impact was so powerful that they reported the pursuit of advanced studies in medical education such as a PhD. Such consideration suggests a drive towards obtaining further credence as leaders among early career medical educators. A change in career paths towards medical education has been described by graduates from Rabkin and Mount Auburn fellowships in medical education (Lown et al., 2009). These fellowships were established at Harvard teaching hospitals and their study participants included highly motivated faculty affiliated with Harvard Medical School, all of whom may have achieved the same development without the fellowship. Contrariwise, most of the participants in the current study were not working within the University of Dundee but in other institutes around the world. Lown et al., (2009) also mentioned that some fellows had difficulty in distinguishing the impact amongst fellowship and other significant faculty development activities.

### 4.4.3 Educational Identities

Graduates reported a greater sense of empowerment and self-efficacy in educational practices as a result of participating in the programme. High self-efficacy is thought to encourage individuals to persist in the face of challenges and to adopt effective strategies resulting in performance attainments (Walker et al., 2006). Lown et al., (2009) suggested that a key factor in identity development is having a strong knowledge of educational principles and applied skills. The graduates experienced transformational changes with development as teachers, researchers, leaders and learners.

The participants learn new teaching skills, become learner-centred and show development in various roles of a teacher beyond a lecturer as reported by Harden and Crosby (2000). They develop the traits of being an effective medical educator as identified in the literature such as knowledge of educational theory, role modelling,

mentoring, showing respect for learners and giving appropriate feedback (Duvivier et al., 2009, Hueppchen et al., 2011, McLean, 2001, Thurgur et al., 2005). The participants also learn specific skills such as small group teaching and curriculum development. They offer and proactively seek feedback in the workplace as reported by peers and supervisors of fellows from a Master Teacher Leadership Development program in USA (Plack et al., 2015). Graduates also developed as mentors, which has been cited as a catalyst for facilitating career satisfaction, selection, advancement and productivity for peers and students (Sambunjak et al., 2006).

The graduates reported shifts in leadership capacity and felt empowered to take on new challenges to effect institutional change. They implemented educational innovations and contributed towards various educational committees. The graduates willingly described themselves as ‘change agents’ (Lown et al., 2009). This ability to challenge the status quo shows successful internalisation and understanding of the intricate and nuanced ways in which educational practices occur and change. It also represent ways in which individuals protect their newly formed identities (Ewick and Silbey, 2003, Monrouxe, 2010). The graduates reported that the qualification conferred legitimacy for their educational roles and they are recognised and ascribed as educational leaders, which also facilitated the implementation of educational changes. This aligns with the experience of early career educators from Australian and New Zealand medical schools, who also agreed upon the importance of having an additional qualification for career advancement and recognition as an educator (Hu et al., 2015). According to Northouse (2013), a leader can derive personal power from being seen by followers as knowledgeable/competent or can have position power from their position or rank in a formal organisation. However, youth had been reported as a challenge towards productivity in the workplace by the early career medical educators in this study. Stability is associated with the systematic exploitation of existing resources and knowledge, whereas change is associated with the exploration of new resources and knowledge (Spisak et al., 2014). In situations that require knowledge about norms, values and traditional ways of doing things, older leaders are endorsed for their wisdom. In the current rapidly changing educational landscape, for instance, increasing use of technology, healthcare education needs to invest in younger individuals to remain adaptive and competitive. Entrepreneurial exploration of alternatives and displaying creativity to solve problems in novel situations are more often exhibited by younger

leaders (Spisak et al., 2014). However, this does not mean dismissing the wisdom of elders. Both stability and exploration of new opportunities are essential.

The graduates not only helped their students but also colleagues in their educational practices. Such supportive behaviours are characteristic of being a leader (Northouse, 2013). These developments as a leader complement findings from faculty interventions focussed on leadership (Robins et al., 2006, Searle et al., 2006b, Steinert et al., 2003). However, these programmes demanded commitment from their superior to mentor and support their activities, which is not the same for participants pursuing medical education qualifications and working in diverse cultures worldwide.

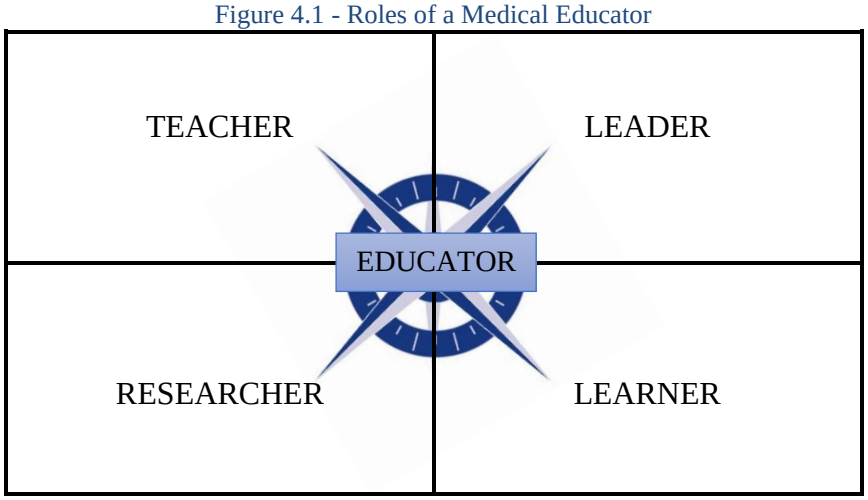
Graduates learned about various research paradigms and methods for conducting a research. They developed collaborations, delivered seminars and gained peer-reviewed publications in education. A qualification seems to help educators conduct rigorous research and translate their findings to the wider healthcare community, research commissioners and the public, thus can play a key role in overcoming the current lack of funding for medical education research (Archer et al., 2015). Hence, these postgraduate programmes are not only a product of professionalisation in medical education but their graduates also contribute further towards professionalisation of the speciality. Unsurprisingly, only Masters' graduates in the current study reported developing as researchers. This is probably due to the one-to-one research supervision in selection of an original topic, research process and write up during the course. Absence of such supervision have been reported as a barrier towards writing for publications in medical education (Simpson et al., 2000). Goldszmidt et al., (2008) also found that protected time, exposure to the education literature, linkages with full-time education researchers and completion of a thesis as part of the degree impacts on the ability to do research positively. The results are in line with the findings of Steinert et al., (2008), who carried out a faculty development workshop with peer writing groups, small group discussion, workbooks, independent writing and feedback designed to support and assist the writing process in medical education. However, all the participants in their workshop had had some previous experience in writing and presenting scholarly work, and they came to the workshop with a particular writing goal in mind, which was not the case for most participants in the current study.

The roles of a medical educator as a teacher, researcher and leader have been recognised by Bligh and Brice (2009) as the three vertices of an equilateral triangle. However, the

graduates in the current study also developed as learners. They reported becoming critical and reflective in their approach to life. Becoming reflective about educational practices and subsequent engagement in literature to validate or dispose these practices is an important educational objective for adult learners and a key to transforming one's taken-for-granted assumptions, norms and practice (Mezirow, 1997). It also allows learners to evaluate and identify specific learning needs (Boud et al., 2013). Moreover, the qualification heightened participants' sense of how much more there was to know, and the graduates developed an acute sense of the need to improve and become self-directed lifelong learners. As there are always limitations to what can be taught in a given time, the development as a self-directed learner is important for practitioners to keep up with the ongoing exponential growth in medical education.

This 'keeping up' was also expressed as a fear among the graduates in this study. The formal continuing medical education activities intended to keep health professionals up to date with rapidly expanding medical information and meet the accreditation requirements is a large enterprise (Davis et al., 1999). The General Medical Council (2009, p. 11) suggested that organisations are responsible for 'releasing doctors and other staff to complete the training needed to be teachers, and to take part in professional development and quality assurance activities'. Therefore, I have expanded Bligh and Brice's (2009) model and added 'Learner' as another dimension to the roles of medical educator (Figure 4.1). I believe that this will encourage the educator's role as a learner, as excellence is not possible without being a learner at the same time. It will also make the model more relevant to medical educators taking advanced qualifications such as a PhD. It can be argued that Fincher and Work (2006) may have had something like this in mind when they made reference to 'consulting the relevant educational literature' as part of the role of a scholarly teachers or when Bligh and Brice (2009) mentioned medical educators as PhD students on the Research–Management Continuum. However, all these scholarly activities are mentioned in the context of improving the learning of their students rather than the educators themselves. This conceptualisation of learning as a significant part of the medical educator's role should promote recognition of the need to continue to learn about education. This inclusion will also help acknowledge that continuing to learn about medical education is just as much a scholarly activity as developing excellence in teaching, research and leadership.

Figure 4.1 - Roles of a Medical Educator




The experience of involvement in the activities of the community and becoming its integral part refers to the concept of belongingness (Levett-Jones et al., 2007). This need for belonging is a central concept in the communities of practice theory and identity development (Wenger, 1998). It involves being recognised, valued and accepted by other members of the community. The graduates also experienced an increased sense of belonging towards the medical education community after the qualification. The graduates understood the vocabulary of the community and shared common interests. Their interaction with the members of the community also increased as they felt supported through a network of educators locally, nationally and internationally. Through this participation in educational activities, one begins to identify with his/her role as an educator (Wenger, 1998). This sense of belonging is also fundamental to development, progress and success in a profession (Levett-Jones and Lathlean, 2008).

Previous research on professional identity has highlighted the importance of analysing language for pronoun use (Monrouxe, 2009a, 2009b). Participants often used the pronoun ‘I’ to describe themselves. This suggests a difference in power structure and indicates their autonomy in decision-making with regards to education. The use of ‘we’, ‘us’, ‘you’, ‘they’ and ‘them’ can be interpreted as the image of self in the eyes of others. This kind of talk indicates a variable degree of distance (Cramer, 2010, Rees and Monrouxe, 2008, Skelton, 2012, Skelton et al., 2002). Those with an educational qualifications are seen as partners in educational decision-making (inclusiveness), while those without as followers in the educational process (exclusiveness). Such professional inclusiveness and exclusiveness contributes toward a strong sense of professional identity (Blakey et al., 2008, Weaver et al., 2011). However, the graduates’ ability to integrate with diverse range of health professionals enabled productivity in their

workplace. Therefore, educators need to develop inclusive social attitudes. This has implications for the curriculum development of these postgraduate qualifications in medical education, as discussed in Chapter 6.

### 4.4.4 Tensions as an Educator

The graduates reported multiple fears and tensions associated with being an educator. Understanding these are critical to the development of educational identity and successful academic careers (Marks, 1999, Steinert et al., 2003). The graduates found it difficult to balance their educational roles or pursue scholarly activities with other clinical responsibilities and administrative loads as also reported by Edwards (2002). They reported multiple time demands with no protected time for carrying out scholarly activities. They often sacrificed personal time, thus affecting their personal lives. Zibrowski et al., (2008) also reported similar constraints on the faculty with interest and involvement in educational scholarship. Such time related constraints with little time to improve teaching, assessment or curriculum makes acquisition of further competencies in education impossible for the educators (Riesenberg et al., 2009).

The complexity of practice made the graduates inquisitive about the gap between theory and practice. They were concerned about the contextual nature of practice in medical education. For example, professionalism in healthcare is attributable to the cultural and socio-economic factors (Chandratilake et al., 2012, Schouten and Meeuwesen, 2006). Graduates also reported being seen as an expert in medical education. They were concerned about their inability to stay current with the literature in medical education, a competency Duvivier et al., (2009) found to be desirable in expert teachers. Faux (2000) estimated that for each working day, it would take 75 minutes for a physician to keep themselves up-to-date with the medical education literature, which is not practical given current demands in the healthcare field. All such concerns highlight a need towards developing sub-speciality courses and for preparing specialists in medical education with deeper expertise in particular areas such as assessment, curriculum development, research methodology and technology. A specialised Masters' programme or postgraduate programmes with optional specialist modules can be offered. This will give them recognition as experts in these advanced core areas and also they will be able to adapt or develop innovations in medical education with relevance to their settings. However, universities also need to offer these specialised positions. Tekian (2014)

recommended that to allow for necessary focus and intensity, development of the individuals in these areas may be best pursued outside of medical education in collaboration with faculty from other departments. For instance, sophisticated work in assessment of medical education would require training in an appropriate programme of statistics.

Brownell and Tanner (2012) found that many universities offer no rewards for excellence in teaching or introducing evidence-based strategies. The graduates in this study reported a similar lack of appreciation for educational roles in their institutions. In the literature, many such challenges are common to teaching in clinical environments (Spencer, 2003). Despite improved self-efficacy and development as leaders, faculty who feel their contributions are unrecognised are more likely to burn out and less likely to continue contributing (Schindler et al., 2002). Therefore, in terms of policies and practices of the institution, it is important to give due consideration and reward the scholarly activities of educators in the workplace as much as research. The Research Excellence Framework (2014) is currently used for assessing research and allocation of governmental funding to British higher education institutions. However, its impact on improving the quality of research has not been established yet (Martin, 2011). Implementing a Teaching Excellence Framework (TEF) may support a dynamic and internationally competitive UK teaching sector and also encourage the professionalisation of medical education (Tatlow and Phoenix, 2015). However, teaching and learning is complex, multi-faceted and dynamic, thus identifying TEF assessment metrics will be a challenge.

Graduates felt that medical education, being a relatively new field of practice was poorly defined as a career. Job descriptions and promotion policies were not clear, and often judged on the same criteria as clinicians or researchers. This resentment towards assessment when seeking promotion against a metric that did not relate to teaching quality was also reported by early career medical educators in Australian and New Zealand medical schools (Hu et al., 2015), suggesting a worldwide phenomenon. Bligh and Brice (2009) highlighted that medical educators represent a heterogeneous workforce with varying responsibilities for curriculum design, assessment, research or management. Therefore, it is difficult to encompass their roles and competencies within a set of standards. Hueppchen et al., (2011) also reported that the attributes of medical educators such as approachability, friendliness, enthusiasm and being sensitive to needs of the learners are difficult to measure and reward in an objective manner. Moreover,

there is a need to develop separate career routes (e.g. in planning, policy, delivery or research) with appropriate promotion criteria for educators. Without this the educators will be under pressure to spend the majority of their time in clinical practice or research rather than developing and delivering high quality of teaching or innovations in practice.

As with any new field of scholarly activity medical education faces multiple challenges such as low levels of funding, lack of recognition and reduced opportunities for career development (Bligh and Brice, 2009). The graduates mentioned that their efforts are undervalued and under-supported financially in comparison with those working in other areas. Despite the need to grow the evidence base in medical education, lack of research funding has been highlighted worldwide (Archer et al., 2015, Hu et al., 2015). Goldszmidt et al., (2008) reported that faculty do not receive financial support for their work and they are discouraged from participating in educational conferences because of the associated costs. Moreover, the graduates were concerned that a full-time career in medical education might be personally financially disadvantageous, as academic salaries rarely match those of clinicians (Hu et al., 2015). Despite all these concerns, the graduates continued to invest in education owing to their interest and passion. Most of them struggled but continued to work out-of-hours, affecting personal and family life. This is associated with altruistic behaviour, which is a common trait among those classifying themselves as members of a profession (Newlyn, 2015). However, society's acceptance of health professionals with full-time careers in medical education will be critical to their retention and success (Zibrowski et al., 2008).

Interestingly, most of the graduates who were senior in status reported no anxiety towards their development as educators. In fact, the qualification gave them job variety, which was valuable to them. However, this 'variety' gives the impression that medical education is an ordinary and routine professional activity rather than a career in its own right (Eyre et al., 2014, Hu et al., 2015). Helmich et al., (2012) explored the lived emotional experiences of medical students and their interplay with identity development in clinical practice. Those experiences were feeling insecure, complying, developing and participating. It seems that medical educators also move through these different paradigms of emotional experience. After being insecure initially upon entering an educational practice, the educators learn to comply, develop and participate as they find their place, and develop a sense of belonging. A longitudinal study to explore the

various paradigms of experiences and required support mechanisms across educators in different health professions at various stages of their career would be useful.

To my knowledge, this is the first study to explore the tensions of educators in greater detail, and with postgraduate qualifications in medical education. Previous studies have attempted to identify tensions medical faculty may encounter. However, the study by Zibrowski et al., (2008) was limited to time-related tensions, whereas this study presents a complex and multi-faceted set of issues. Hu et al., (2015) reported it for participants with educational roles, who may not necessarily have a qualification in medical education. These tensions may lead to detachment, cynicism and a weak sense of identity among those who are active within medical education, whereas, it is important to recognise and foster the development of educational identities in view of the multiple roles most of the educators fulfil (Bligh and Brice, 2009). However, the supporting mechanism will vary depending upon the context and target group, as the experiences may differ (O'Sullivan and Irby, 2011).

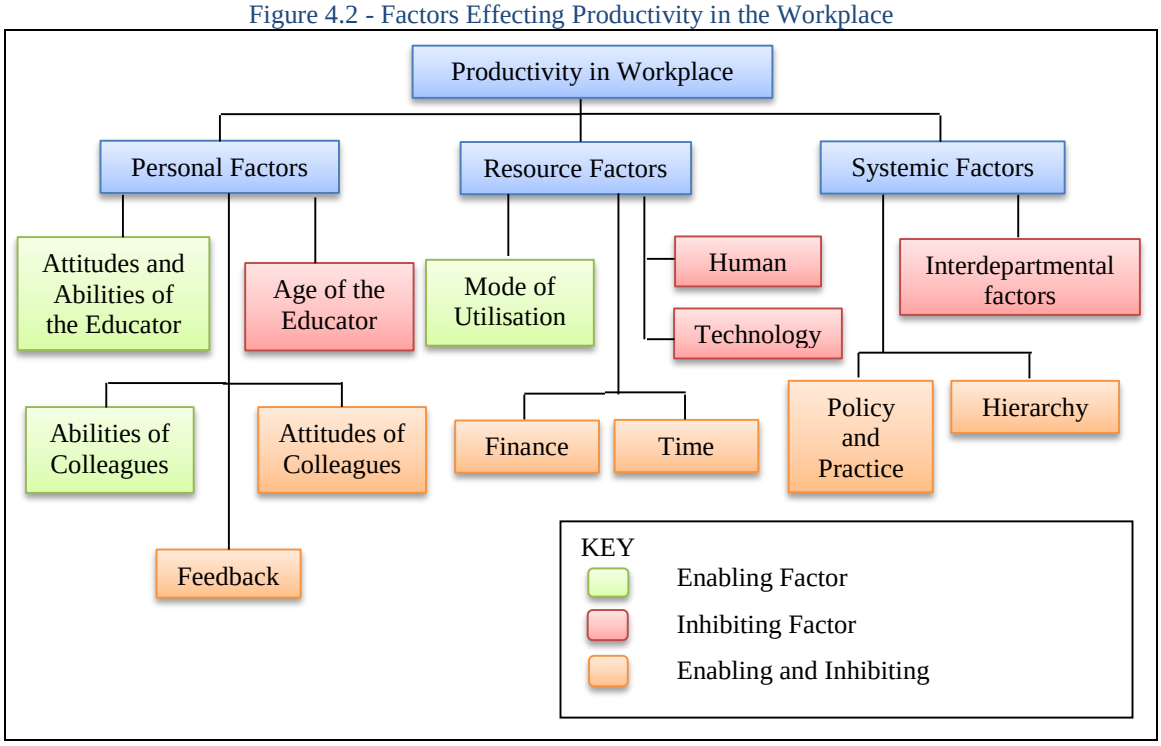
### 4.4.5 Productivity in the Workplace

Only a small percentage of what is learned is transferred to practice (Watkins and Lysø, 2011). However, the graduates reported leading various educational changes in the workplace with substantial performance attainments at individual, organisational and system level. They also received grants for educational projects and attained accreditation for courses. Such productivity in the workplace was also described by fellows from a Teaching Scholars Program at McGill University (Steinert and McLeod, 2006). However, their fellows had previous experience in medical education along with generous workplace conditions for productivity, which is not the same for participants in the current study.

The Figure 4.2 shows a number of personal, systemic and resource factors that enable or inhibit productivity in the workplace. A supportive attitude from colleagues and the leadership team benefits the educational change process (Kavanagh and Ashkanasy, 2006, Watkins and Lysø, 2011). Therefore, a concerns-based adoption model (stages of concern, levels of use and innovation configurations) is useful towards managing the faculty affective responses during the change process and its adoption (Hall and Hord, 2006). Structure and context also serves to support, maintain or impede educational change, yet this institutional support for medical educators has largely been ignored in

research (Goldszmidt et al., 2008). Besides, the driver for change is usually an unhappiness about the existing educational practices, a view which institutions are not keen on sharing (Blanton and Stylianou, 2009). It is important for institutions to embrace an underlying culture of the need for change.

Figure 4.2 - Factors Effecting Productivity in the Workplace




Interestingly, the inhibiting factors identified did not include graduates' inability to perform or carry out the change. This may be due to the high self-efficacy of the graduates developed through the qualification (Bandura, 1997), leading them to consider their colleagues, the system and other resource factors responsible for failure rather than blaming themselves. The graduates' organised reflection towards identifying the factors influencing their productivity in the workplace also echo this improved self-efficacy to lead organisational change. On the other hand, this may represent a behaviour to blame factors that resulted in graduates doing an increased amount of work to ensure a successful change, or a missed opportunity to learn new ways to execute the change effectively (Ford and Ford, 2010). The identification of challenges shows a need to train the educators in developing strategies to cope with challenges in their workplace.

The factors influencing productivity in the workplace appear to be intertwined. For instance, policies and practices in favour of an educational reform or accreditation

requirements will result in more resources being directed towards medical education (Hu et al., 2015). Moreover, expectations of clinical service delivery roles from educators influences academic output and career stability. The various challenges and facilitators also corresponds with the various components identified in the expanded faculty development model (Figure 1.2) (O'Sullivan and Irby, 2011). For example, tasks and activities relate to resource factors; relationships and networks with personal factors; mentoring and coaching with the support from leaders; and organisations and culture with the systemic factors. These factors influencing productivity also help in understanding the needs that are specific to medical educators. These needs include having organisational policies and agenda that value education in the same way as patient care; infrastructure and peers that supports the educational mission; leadership opportunities and funding that promote scholarly pursuits; and protected time and other resources to perform educational tasks. Although some of these needs are common to other medical faculty members (Collins, 2005), they are also important to the medical educators involved in change initiatives.

### 4.4.6 Incremental Iterative Process

Prolonged exposure to educational literature along with opportunities for application and reflection are necessary for changes in practices (Davis et al., 1999). As distance learners, the graduates were able to apply learning from the course to their day-to-day educational practices at the same time as they were doing the qualification. This incremental iterative learning process may be associated with factors such as mastery experience and better physical/emotional states influencing self-efficacy (Bandura, 1986). Therefore, it is important to keep the course up-to-date and relevant for its applicability to practice. Flexibility towards selection of modules and duration of the course may also help the graduates choose modules that align well with their workplace activities and learning needs. This incremental iterative process appears similar to apprenticeship-based learning and the longitudinal programmes common in the USA (Armstrong and Barsion, 2006, Lown et al., 2009, Searle et al., 2006b, Steinert et al., 2006), suggesting a relevance of implications from the current study. However, this incremental iterative process may not be the case for full-time face-to-face students who are not working, an area explored in the next study (Chapter 5).

### 4.4.7 Social Cognitive Identity Theory (SCIT)

Based on the findings of this study and using constructivist grounded theory approach, I have been able to develop a theory for understanding the process of identity development of healthcare educators. However, a grounded theory is criticised for work done in isolation and risking the development of non-cumulative theories (Watling and Lingard, 2012). Therefore, it is important to ground the emergent theory from the data in existing theories. This does not mean forcing grounded theory into pre-existing theoretical frameworks.

As explained in the literature review, my perception of identity involves both individual and social aspects (Smith and Sparkes, 2008). It involves cognitive development at an individual level and socialisation into the roles of the community through interactions at the collective level (Jarvis-Selinger et al., 2012, Monrouxe, 2010). Wenger (2010) explained that even though the communities of practice theory is part of a broader concept for thinking about learning in its social dimensions, it is compatible with theories addressing other dimensions of learning such as psychological and cognitive aspects. Therefore, my theory is built on Communities of Practice theory (Wenger, 2010) and Social Cognitive Theory (Bandura, 1986).

**Communities of Practice (CoP)** theory has been used to describe learning in continuous professional development and higher degree research studies (Higgs et al., 2008). The present findings suggested that these qualifications in medical education offer recognition as legitimate peripheral participants, along with access to the CoP in medical education. These participants then experience a transition from being newcomer to expert as they continue to apply their learning from the course (Certificate to Diploma to Masters) into their practice in an incremental fashion. A shift in power and responsibility is evident from the graduates' accounts (pronominal talk).

**Social Cognitive Theory (SCT)** considers the unique ways in which individuals acquire and maintain behaviour within the social context. It posits a reciprocal and dynamic interaction (triadic reciprocality) between personal factors, environmental factors (context) and an individual's behaviours. SCT acknowledges the social dimensions of learning and suggests that individuals have the ability to influence their own behaviour as well as their environment. However, the underpinning knowledge and skills are pre-requisites for success. SCT assumes that learning is not only a change in behaviour but it can also involve learning of knowledge, skills and values without any

impact on behaviour until motivated to do so. It emphasises the value of modelling i.e. the individual's learn by observing the behaviours of others in a social environment and not primarily through trial and error. These behaviours are reinforced based on observing positive or negative responses. However, the learners are likely to replicate behaviours of those role models they can identify with. Another component of SCT is the outcome expectations i.e. anticipated consequences of those behaviours as derived from previous learning experiences. Therefore, depending upon the expected outcomes of the behaviours observed, the learners may use this learning to engage in subsequent behaviours.

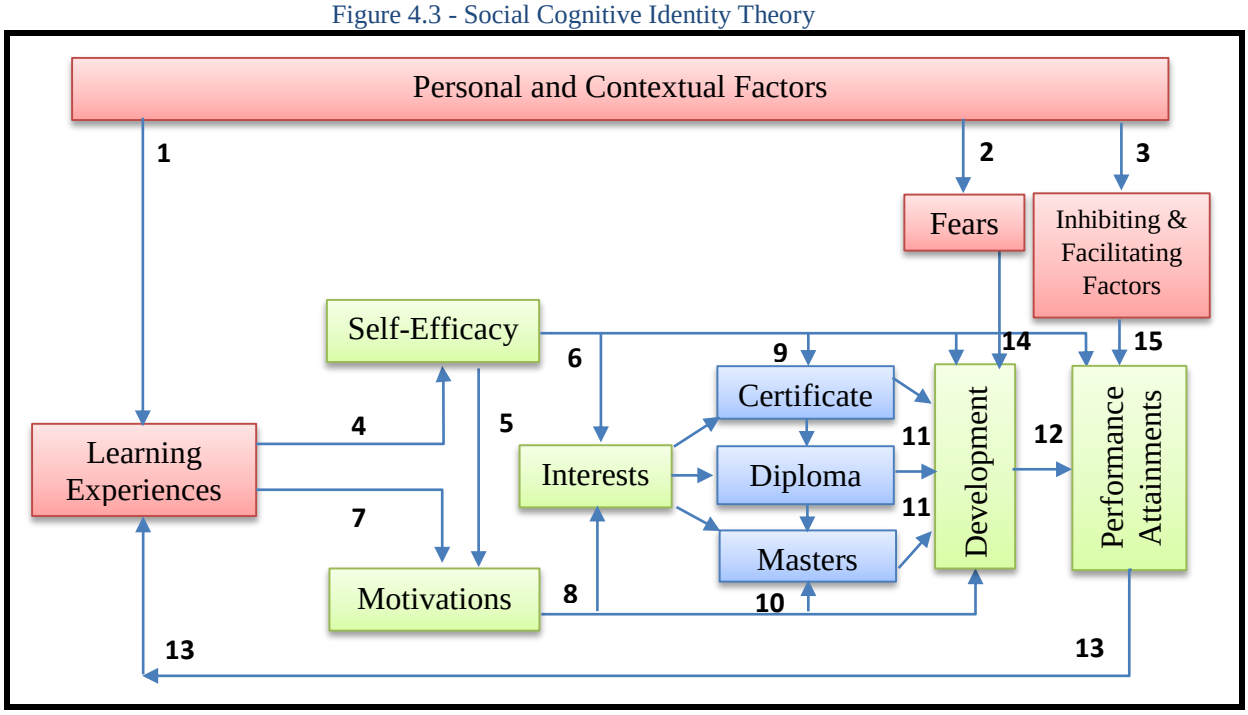
A key component of the SCT is self-efficacy and it plays an important role in mastering as well as exhibiting those behaviours. This self-efficacy is influenced by personal/environmental factors and developed by a) social modelling e.g. vicarious experiences provided through lectures, activities and written material in the course, b) verbal persuasion offered via encouragement through feedback, c) mastery experience i.e. performance attainments, and d) better physical and emotional states ensured through the flexibility of timelines in doing the course. SCT has been applied in promoting healthy behaviours. However, it does not explicate the varying levels of personal and environmental influences. Also, the triadic reciprocality model assumes an automatic change in behaviour, which may not be that simple. Moreover, it disregards the biological and hormonal predispositions that might influence behaviours.

By identifying the relationships among significant themes emerging from the data, I have developed an extension of SCT and CoP theory, which exclusively focuses on the identity development of healthcare educators. I have called this framework **Social Cognitive Identity Theory (SCIT)**. It explains how qualifications in medical education encourage change in practice and development of the educators in their various roles. It further explains how their various performance attainments in the workplace feed back to their learning experiences in an incremental iterative fashion. This process results in increasing the self-efficacy as well as participation in learning communities. Understanding the language of medical education gives the participants a legitimate access to a community of likeminded individuals, who share a passion for education. The findings showed that the graduates developed a sense of belonging and commitment towards a community of medical education, in which learning is collaboratively sought and constructed. This construction and co-construction of meaning during continuous interactions of the self with the educational community

results in professional identity development (Rees, 2009). As the graduates also developed as self-directed lifelong learners, the participation in the educational communities and development continued throughout the course and beyond, with increasing involvement in scholarly activities and the construction of educational identities (Wenger, 1998). These educational identities continue to evolve with increasing self-efficacy, interest and performance attainments in the workplace. However, there is a strong influence of personal and contextual factors in this process of professional identity development.

Figure 4.3 visually represents the conceptual relationships between the various themes emerging from the data. It evolved through multiple iterations and reflects the essence of my understanding of identity development in healthcare educators. A brief overview of the components of the Social Cognitive Identity Theory and the various relationships are discussed below.

Figure 4.3 - Social Cognitive Identity Theory




### *Personal and Contextual Factors*

The personal factors are associated with cognitive and affective states, which in turn may impact our behaviours and responses to contextual factors. Such influences have been acknowledged by Bandura (1986), emphasising that our behaviours are a by-product of a transaction between personal and environmental factors. Therefore, the

educators enrolling for a qualification in medical education bring a variety of learning experiences based on personal and contextual factors (1)[4]. For example, some of the participants had previous involvement in education along with high self-efficacy in educational tasks. Likewise, some had an intrinsic desire to enhance their competency in medical education, while others enrolled for extrinsic reasons. I also found that the graduates have anxieties with regards to their identity development (2). These fears were derived from their personal and contextual factors e.g. due to lack of protected time in their workplace, they were unable to find a balance in teaching and clinical roles. In addition, they reported various challenges and enablers towards implementing educational changes such as personal, systemic and resource factors (3). These personal and contextual factors (organisational) strongly influence the impact of these postgraduate qualifications on the individuals (Anspal et al., 2012). This model highlights a need to appreciate the power of workplace environment on the healthcare educators as recommended by O'Sullivan and Irby (2011). These contextual factors are important to the successful development of educational identities in the graduates.

### *Self-Efficacy*

Bandura (1997) described self-efficacy as an individual's belief in his/her ability to perform certain specific tasks under specific conditions. This self-efficacy is central to their actions and also includes the strength of belief to succeed. These actions include what they choose to do, how much effort they invest in activities, how long they persist in the face of adversity, and whether they approach the tasks anxiously or assuredly (Kaufman, 2003). It is different from self-esteem, which refers to personal feelings about oneself i.e. self-worth. For example, one can have a low self-efficacy in playing cricket but that may not affect one's overall self-esteem. The qualification resulted in improving the knowledge and skills of the graduates. Self-efficacy was an outcome of these qualifications in medical education and the graduates reported performing complex educational activities effectively. These beliefs may affect their motivations towards certain tasks (5). Also, we tend to develop interests in matters in which we have a high self-efficacy (6). However, I have kept self-efficacy before the qualifications in the theoretical framework to accommodate for participants with extensive experience in education and well developed self-efficacy, and who mentioned that the qualification

[4] The number represents the interactions in Figure 4.3

only gave them reassurances. This self-efficacy is dynamic and continuously derived from the learning experiences of the educators as a student or a professional (4) in the workplace (contextual factors).

### *Motivations*

The graduates enrolling in a postgraduate qualification in medical education had various intrinsic and extrinsic motivations. These motivations were influenced by varying learning experiences and beliefs derived from personal and contextual factors in the workplace (7). Blackburn et al., (1991) suggested that an individual's involvement in certain activities is influenced by their perception of organisational priorities, which in turn also affects their assessment of personal abilities and interests. A recommendation in professional reviews or a requirement for educational reforms as motivations suggested that a qualification in medical education was valued in those contexts. The influence of motivation along with the organisational climate on training outcomes have also been reported by Kirkpatrick and Kirkpatrick (2006). These motivations result in uptake of the course with or without an interest in medical education. Although 'interest' was a part of the motivations in the findings, I have kept it separate in the framework to represent participants enrolled purely on extrinsic motivations (10) and those who developed an interest over the period of the course (8).

### *Interests*

The participants in this study reported varying levels of self-efficacy regarding various tasks in education acquired through their previous exposure as a student as well as a professional. These beliefs may affect their motivation towards certain tasks and also result in developing interests (8). Although a strong self-efficacy alone is a predictor for career choice and performance (Lent et al., 2006), having an interest as well as extrinsic motivation would further mediate and strengthen the uptake of a course in medical education (9). Self-efficacy and interests are also positively correlated with meaningful cognitive engagement and subsequent performance (Walker et al., 2006).

*Development and Performance Attainments*

The graduates experienced transformational changes and development as teachers, researchers, leaders and learners (11). They also led the educational changes influencing their departments and the students (12). The educator's performance attainments in the workplace feed back into their learning experiences which results in developing interest and increasing self-efficacy (13), leading to further involvement in medical education and performance attainments. This iterative process continues with Certificate, Diploma and then Masters and moves on to graduates being lifelong learners with further involvement in a CoP. During this process of continuous interaction with the educational community, they learn the norms and the beliefs of the community and become an active participant of the educational community. The longer period of professional training provides opportunities for socialisation into the community and this in turn fosters professional identity (Blakey et al., 2008, Trede et al., 2011). However, knowledge and skills are prerequisite for professional identity development (Ackerman et al., 2009). Moreover, this process of identity development is affected by various fears (14) and other challenges in the workplace (15).

To conclude, I believe that SCIT reflects the essence of participants' experiences captured in the current study. It offers an original and significant insight into the impact of qualifications in medical education on the identity development of healthcare educators. The theory is understandable and likely applicable to a diverse range of professionals in various contexts. Also, the systematic data analysis and literature review support these analytic claims. The SCIT also overcomes the shortcomings of CoP theory (Fuller and Unwin, 2003) by reflecting on the role of formal education institutions in the learning process and health professionals working in complex healthcare environment.

### 4.4.8 Limitations and Future Research

The findings were based on graduates' self-reporting and not correlated with observed behaviours. However, the focus on identity justifies such an approach. Although the study included the graduates from one programme, they were dispersed across many different workplaces, contexts and geographical places worldwide. Yin (2013) argued that case study research closely examines the data (micro-level) within a specific context and provide detailed insights into the behaviours, when little information is available regarding a contemporary phenomenon. Initially, I did consider researching

graduates from other curricula across multiple sites to ensure robust findings. However, this required close collaboration among stake holders from various health professions education institutes and I was not able to secure these collaborations in the time frame afforded by a full-time PhD.

Many graduates took 2-9 years in completing the qualification. Therefore, some found it hard to differentiate between what was attributable to the qualification and what they learned from experience, mentors and other development activities. This can be related to memory (retrospective view) but it may also be due to the iterative incremental process reported above. It leaves me asking the question about how a curriculum might influence the development of professional identity, which will be explored in the next study. Also, it would be interesting to see if the full-time face-to-face students differ from distance learners in terms of the impact of the qualification.

In future, pronominal talk of health professionals with no qualifications in medical education should also be explored to determine if they see these graduates as leaders, followers or partners in educational decision making. It might also be of interest to analyse for collocates i.e. words occurring in close proximity with these pronouns to determine the prototypical pattern of interaction in diverse workplace contexts, for example, 'I say' or 'I will question' in excerpt 88 and 'they do not know' in excerpt 90. These interactions can impact productivity of the graduates in the workplace, therefore understanding these can be fundamental to the programmes in medical education.

### 4.5 Summary

This is the first qualitative study looking in-depth on the impact of postgraduate qualifications in medical education on the health professionals worldwide. It refines and extends upon the various insights from the first study such as motivations and identity development. Graduates feel an enhanced sense of self-efficacy and belonging to the educational community. They experience transformational changes in practices, and development as teachers, researchers, leaders and learners during the course. The qualification also brings opportunities to take on leadership positions and pursue higher career trajectories. It gives recognition and the graduates are listened to as educational leaders producing valued outputs for key stakeholders in their home institutions and more globally. The course also contribute towards professionalisation of the speciality. However, the impact of the qualification is influenced by the complex interplay of

personal and contextual factors. The tensions associated with being a medical educator have also been explored, and the process of identity development among healthcare educators: Social Cognitive Identity Theory has emerged. In order to overcome the limitations of previous studies and develop the emerging theory further, the final study (Chapter 5) follows a cohort of face-to-face students longitudinally through the course to their workplaces.

# Chapter 5: Study 3 - Establishing the Impact of Qualifications on the Identity Development of Educators

## 5.1 Introduction

The previous two studies identified the impact of postgraduate qualifications in medical education on educational identities, practices and careers. They highlighted the outcomes as well as the processes of transformative learning and identity development of healthcare educators. However, each of the studies is retrospective and can be influenced by graduates' recall of events, making it difficult to tease out the influence of qualification from other experiences of the graduates and other professional development activities. To overcome these limitations and better understand the process of identity formation whilst engaging with the medical education qualifications, a third study was carried out.

This qualitative study extends the range and scope of inquiry by the longitudinal follow-up of face-to-face students (2013/14) on a full-time postgraduate course in medical education at the Centre for Medical Education, University of Dundee. It offers a different perspective on the phenomenon, where the perceptions, journeys and lived experiences of these students are explored over the period of the course and beyond. Questions were asked about the key aspects of the course that the participants believed fostered and supported their identity development.

The chapter begins with a brief discussion on Qualitative Longitudinal Research (QLLR) followed by the data collection method and analysis. After that, I present the findings from the study and the chapter concludes with a discussion on the findings. The research questions for this study, established a priori, underpin the overarching research question. Holland et al., (2006) emphasised that the true value of qualitative research is in its ability to generate research questions during the course of the research. Therefore, supplementary research questions also emerged from the analysis of the data.

- What are the motivations towards enrolling in a qualification in medical education?
- How does a qualification impact on the graduates' career?
- How does a qualification influence the participants' perceptions of themselves as educator?
- What factors enhance or hinder productivity in a workplace?

- What aspects from the course foster behavioural changes?
- Do interpersonal expectations influence the impact of these qualifications and the identity development of healthcare educators?
- What are the concerns towards becoming a medical educator?

## 5.2 Methods

### 5.2.1 Qualitative Longitudinal Research

Qualitative longitudinal research (QLLR) was carried out as part of the Grounded Theory methodology. QLLR is useful for developing insights into the processes of identity construction, organisational change, maturation and career progression (Farrall, 2006, Holland et al., 2006). It is prospective and illuminates the changes that occur over a particular period of time as individuals navigate through a transition in their lives (Holland et al., 2006), and involves more than one episode of data collection over periodic intervals (Koro-Ljungberg and Bussing, 2013). Young and colleagues (1991) suggested that a QLLR should involve at least two, ideally three waves of data collection over at least a year. Farrall (2006) asserted that the researchers' preferences, subject matter and nature of studies guide any decisions regarding the length of intervals between interviews. QLLR offers a realistic understanding of causality and explains how social, cultural and contextual processes influence the individual outcomes (Holland et al., 2006). It focuses on the individual rather than the issue and offers new ways of theorising processes of change over time (Thomson, 2003)

The strength of QLLR is that during the follow-up interviews, participants are able to reflect on any changes experienced (or lack of them) since the last interview. Likewise, the researcher already has data relating to those being interviewed, and can ask questions about specific experiences in the follow-up interviews. A QLLR allows one to explore the contexts, mechanisms and outcomes at the individual level. It not only reports if a programmed intervention works or not, but also explains why, for whom and under what circumstances (Pawson and Tilley, 1997).

Longitudinal studies have some challenges in practice, for example, participant attrition and research personnel turnover. In order to overcome this, maintaining up-to-date contact information and nurturing continuous motivation of participants over longer

periods of time is necessary (Koro-Ljungberg and Bussing, 2013). The researcher needs to design multiple interview schedules in order to explore new areas. Some topics will inevitably be returned to in order to assess the development, so one needs to pay attention to question fatigue and develop new ways of asking about the same topic to avoid socially desirable answers. A QLLR is a relatively small scale project but resource intensive in terms of time, energy and funds (Farrall, 2006). Therefore, sometimes it becomes difficult to justify the investment against benefits.

### 5.2.2 Interview Schedule

The current study involved three in-depth interviews repeated at roughly fixed time intervals with the same participants to explore changes, which occurred over time, along with associated processes (Farrall, 2006, Holland et al., 2006). All interviews were led by myself. Three interview schedules were prepared, with slightly different sets of questions (Appendix 5.1). The questions looked at the participants' journey and transformation in educational beliefs through the course. The interviews were semi-structured using an interview guide. As before, interviews began by thanking the participants, explanation of the study and opportunities to ask questions.

The questions were guided by Kelchtermans' (1993) conceptualisation of professional self and the developing Social Cognitive Identity Theory. Apart from exploring the salient issues around the participants' perceptions of the impact of the course and causality, the first interview also asked about basic biography and motivations for enrolling. This first set of questions functioned as a starting point and provided a skeleton for further data collection. The later interviews allowed for a focus on the career and changes in practice. In contrast with study 2, the participants in the current study were also asked about any critical incidents, the 'aha' moments from the course, which resulted in changing their perspectives as an educator. This helped explore the transformational changes in practices as they occurred during the programme along with the various learning conditions that influenced them. Fears towards development as an educator and anticipated challenges or enablers towards productivity in the workplace were also explored. The questions had a consistent ordering of events: past, present and then future as recommended by Farrall (2006). Although some topics were revisited in each of the interviews, the questioning style was altered to avoid becoming too repetitive and prevent respondents from becoming conditioned to particular questions

(Farrall, 2006). To elicit better data in the second and third interviews, questions were structured to explore further any issues that the participants referred to in earlier interviews by reporting back what they had said previously. According to Farrall (2006), this shows that the researcher has taken the time to reflect on the previous interviews and participants would not simply agree with their previous remarks. At the end, participation was acknowledged and, for interviews 1 and 2, participants were reminded about future interviews. Any change in circumstances or contact details were also recorded during the interviews.

### 5.2.3 Piloting of the Schedule

The first interview schedule was piloted face-to-face with two PhD student colleagues (November 2013). The pilot interviews took 30–40 minutes and the participants felt that the questions covered all the key areas. No changes were suggested. The sound quality of recordings was checked for transcription purpose.

### 5.2.4 Recruitment and Ethical Considerations

Various measures were taken to encourage optimal participation and reduce attrition, including introductory sessions, sending personalised invitations, interviewer visibility, continuity of contact person, keeping track of scheduling history and personalised communication with the participants (Koro-Ljungberg and Bussing, 2013, Seed et al., 2009). The researcher started building rapport with the face-to-face students from day one by sharing his own identity as a previous international Masters' face-to-face student. Introductory reflections from these students were recorded as part of their induction module in the first week.

Ethical approval for the third study was obtained from the Research Ethics Committee, University of Dundee (Appendix 5.2). In December, the course's office sent an invitation email (Appendix 5.3), attaching the consent form (Appendix 5.4) and the participants' information sheet (Appendix 5.5) with details of the study, its goals, risks, and benefits. An introductory face-to-face session was also arranged to answer any questions about the study. All the face-to-face students were informed that the participation was entirely voluntary and there was no financial reward. However, it was highly likely that they would benefit from reflecting upon their educational experiences

and development as educators. They were also told that they could leave the study at any time without explanation and penalty. A reminder email was sent after two weeks to encourage participation. Due to the longitudinal nature, participants' circumstances may change over time in QLLR. Therefore, a rolling informed consent i.e. written consent followed by consent prior to each interview was obtained (Gray and Smith, 1999). The consent was negotiated and renegotiated throughout the research process and the participants' right to withdraw from the research was fully respected (Hall et al., 2012). This ensured that the participants were happy to participate throughout the study.

From a methodological perspective, QLLR is often accompanied by ethical dilemmas and confidentiality considerations due to the prolonged engagement with participants (Koro-Ljungberg and Bussing, 2013). As a part-time tutor, the researcher could be in a position of power in relation to the participants. To remove this risk, the researcher was not a part of the assessment team for that cohort of face-to-face students. Invitation and consent forms were handled by the course's office. Data and personal details were kept confidential and only anonymised transcripts were shown to the supervisors. The topic being researched here is one of very low risk in terms of causing psychological harm or distress to the participants.

### 5.2.5 Participants

The study participants were the face-to-face full-time students at the Centre for Medical Education (CME), University of Dundee during the session 2013/14. Thirteen of the fourteen face-to-face students were international students and from non-English speaking countries. The minimum IELTS to do this programme is 6.5, so all had sufficient command of English. Recruitment was delayed until December and interviews until January 2014 in order to help the students acclimatise to the programme and the surroundings.

### 5.2.6 Sampling Strategy and Sample Size

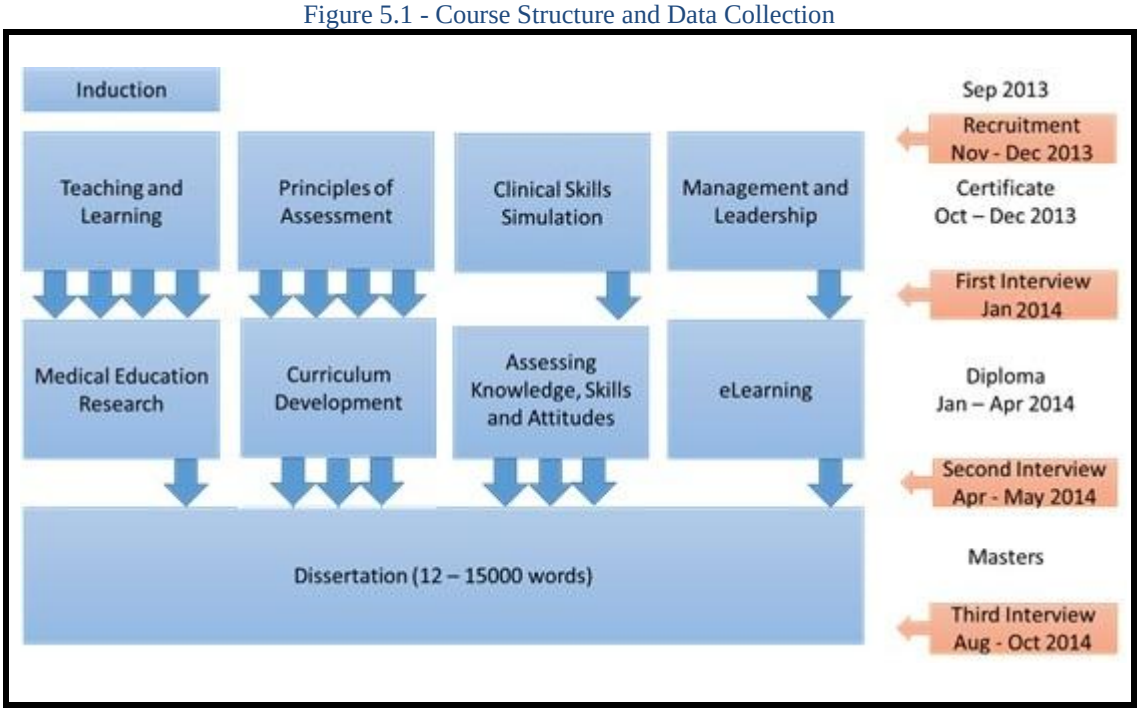
In QLLR, the sample and sampling can change in the process of the research (Holland et al., 2006). All the full-time face-to-face students (n=14) were invited to participate. The distance learners were not included as their timelines are flexible, and their progress through the course content could not be ensured or monitored during the period of this

research study. Nine students submitted their signed consent forms to the course's office. One participant dropped out after the first interview.

### 5.2.7 Data Management

The course structure for 2013/14 session was different from the previous years, as each module was taught in a one week block with an additional two weeks given over to peer-led sessions and the completion of assignments. This allows the face-to-face students a more focused route through the programme and gives distance learners an opportunity to attend one or more of the modules face-to-face. Figure 5.1 presents the course structure and data collection points during the 10 months longitudinal follow-up period.

Figure 5.1 - Course Structure and Data Collection




Each participant completed a single page information questionnaire (Appendix 5.6) at the first meeting. The interviews lasted between 30-50 minutes. Most of the interviews were face-to-face, with some of the final interviews carried out through Skype as some participants had gone back to their home countries. Each of the interviews were audio-recorded using a stereo recorder. Skype interviews were recorded using MP3 Skype recorder 4.2 and I Free Skype recorder. The recordings were stored in an encrypted external hard drive and on a password protected computer in the researcher's office.

Backups were created on a university server housed in another building. These recordings were transcribed verbatim by the researcher using the software product Transcriber. Each recording was listened to twice along with reading the transcription to ensure accuracy. The data transcription helped familiarise the researcher with participants' experiences, and also informed subsequent interview questions.

### 5.2.8 Data Analysis

The data was anonymised and imported into qualitative data analysis software ATLAS.ti 7. A constructivist grounded theory analysis was carried out, following the same data analysis approach explained in the previous chapter (Charmaz, 1983, 2006). Analysis began with open coding of the data to define concepts and categories. Most of the codes and categories identified were similar to those from study two. Learning conditions emerged as a new category with a different set of codes. The open coding process also led to the development of new codes in some of the categories such as motivations, impact on career and fears. Three transcripts from two participants were initially coded by the researcher and supervisors independently, to refine the codes and themes further. The initial coding was followed by focussed coding, which involved constant comparison of data with data, data with themes, themes with themes and themes with concepts, across all the participants, and in earlier and later interviews of the same individual for commonalities, differences, recurring patterns and associations. The researcher also looked backwards with regards to identifying the contexts and mechanisms (learning conditions) that made an outcome possible.

## 5.3 Findings

The analysis of the interviews revealed 11 themes (Table 5.1). Most of these themes corresponded with the findings of the previous studies on the graduates (Chapters 3 and 4). However, they presented an impact specific to the course and the face-to-face students in real time. The 'aha' moments gave an insight into a participant's reflective process leading towards behavioural change. These also helped in identifying the transformational changes and learning conditions that fostered them. Various concerns towards becoming a healthcare educator were also expressed. These findings were not reported in the previous studies. Moreover, the factors hindering or enabling

productivity in the workplace were only anticipated and not directly experienced by the participants. The pronominal talk also emerged as a process related theme.

Table 5.1 - Overarching Themes

| | |
|---|---|
| Motivations | Fear/Concerns |
| Impact on Career | Learning Conditions |
| Self-Efficacy | Inhibiting Factors/Challenges |
| Development and Changes in Practices | Enabling Factors/Facilitators |
| Participation in Learning Communities | Pronominal Talk |
| Performance Influencing Factors | |

### 5.3.1 Personal Factors

The participants (n=9) were all international students at varying stages in their professional careers (Table 5.2). Three of the participants were under 30 years of age. The professional background was predominantly medicine. Most of the participants were funded by their respective countries and they planned on returning to their home institutes. However, a few were self-funded and over the period of the course they actively started looking for job as well as PhD opportunities in medical education outwith the country of their origin.

Table 5.2 - Characteristics of Interview Participants

| Characteristics | Frequency | Characteristics | Frequency |
|---|---|---|---|
| **Gender** | | **Age** | |
| Male | 2 | Under 30 Yrs. | 3 |
| Female | 7 | 30–45 Yrs. | 6 |
| | | | |
| **Intended Qualification** | | **Profession** | |
| Certificate | 1* | Medicine | 8 |
| Diploma | 2 | Dentistry | 1 |
| Masters | 6 | | |
| | | | |
| **Nationality** | | **Intended Workplace** | |
| Australia | 1 | Australia | 1 |
| Saudi Arabia | 1 | Saudi Arabia | 1 |
| Egypt | 1 | Egypt | 1 |
| Thailand | 4 | Thailand | 4 |
| Indonesia | 1 | Indonesia | 1 |
| Pakistan | 1 | Pakistan | 1 |
| | | United Kingdom | 1 |
| | | United Arab Emirates | 1 |

(*currently enrolled for Diploma)

### 5.3.1 Motivations

Based on personal background and workplace factors, the participants described a mix of intrinsic and extrinsic motivations towards enrolling for a qualification in medical education in their first interviews (Table 5 - Time 3). Most of them already had teaching roles or were recently promoted into education-related positions. They had a desire for competency in medical education in order to make informed decisions regarding educational practice (Excerpt 1). The extrinsic driving force was usually educational reforms in their universities for those externally sponsored by their respective governments (Excerpt 2). The universities expected them to acquire the competencies necessary for completing these reforms. For those early in their career, a postgraduate qualification was a way to retain their position as educators in the university (Excerpt 3). They also thought that undertaking a postgraduate qualification would improve their career prospects (Excerpt 4). Others mentioned recommendations from their colleagues (Excerpt 5), which for some were linked with educational reforms and career prospects. For one early career participant, it appeared she had no clear motivation except following her role models from her previous workplace (Excerpt 6). She was unemployed and expected that pursuing medical education would result in immediate job opportunities. She reported her interest diminishing in the second and third interviews (Excerpt 7). This was influenced by personal factors (see section 5.3.6) and intersecting clinical-educator identities. Negative feedback in the form of an assignment resubmission also influenced her motivation to continue further in medical education (see section 5.3.8 - Excerpt 56). However, other participants' interest in medical education evolved throughout the course, as evidenced by their continuing interest in pursuing medical education as the Masters studies progressed, as demonstrated in the third interview (Excerpt 8). One of the participants, originally enrolling for the Certificate also decided to continue onto the Diploma (Excerpt 9).

Table 5.3 - Reasons for Enrolling on the Programme

| | |
|---|---|
| Personal Desire for competency (Interest) | **Excerpt 1: Female M#3 – Time 1**[5] 'I started like I jumped into the water without any background … in the theory or in the education … I studied medicine and not education … and I needed the qualification to make it in the scientific basis not only like this' |
| Requirement for Educational reforms | **Excerpt 2: Male D#6 - Time 1** 'We have to prepare for clinical curriculum in medical education for the upcoming admission for the medical student in the next three years so [name of the university] have funded me and my friend to go here for studying about the medical education in details' |

[5] The identifiers for the participants are based on a combination of gender, qualification (Cert, Dip or Mas), participant's sequential number and data collection point

| | |
|---|---|
| Retention in Med Ed Career | **Excerpt 3: Female M#2 - Time 1** 'I was employed … as a demonstrator … in the Medical Education department. That would mean that I would be obligated to pursue graduate studies in Medical education both Masters and PhD' |
| Professional Prospect | **Excerpt 4: Female C#1 - Time 1** 'I am sort of interested potentially in taking on a more … formal position at the university and certainly this will help me get that … I feel if jobs do come up I would at least have some idea how to approach that whereas before I would be kind of like I don't have the qualifications to go for that job' |
| Recommendation by Colleagues | **Excerpt 5: Female M#7 - Time 1** 'We affiliate with one private university and we don't have anyone who graduate in this field so my boss want me to study here to know what exact medical education … so we can compare to our institute so that's why I am here' |
| Following role models | **Excerpt 6: Female M#8 - Time 1** 'I got inspired by so many of my seniors … really keen to learn about medical education … the assistant professors, some associate, even professors are also doing this … that really motivated me to go and just explore more about it' |
| Diminishing Interest | **Excerpt 7: Female M#8 - Time 2** 'Now at the moment I think … maybe I have done a grave mistake because when I see my you know colleagues they are finishing their competencies and getting into clinical jobs … but let's see how things work out for me after finishing this masters.' |
| Evolving Interest | **Excerpt 8: Female M#2 - Time 3** 'I think having a masters has really encouraged me to learn more in medical education … it also made me recognise the need that I need to learn so much more … if I wanna be better'<br><br>**Excerpt 9: Female C#1 - Time 1** 'I originally only committed to the certificate … I have already decided that I will at least definitely do the Diploma … and then I am really interested by the Masters to be honest' |

### 5.3.2 Impact on Career

The participants reported that having a qualification in medical education would lead to new employment opportunities and promotions into senior positions (Table 5.4). One of the participants was in casual employment in the university, and then reported in her second (Excerpt 10) and third interviews (Excerpt 11) that she was being considered for permanent positions. For some, the qualification would result in promotion and an expected increase in educational responsibilities (Excerpt 12-13). The participants also asserted that this qualification would be useful in their clinical careers. Those early in their professional career paths become interested in studying for PhDs in medical education over the period of the course (Excerpt 14), though they did mention some personal and contextual barriers to achieving this, which are discussed in later sections (see section 5.3.6 and 5.3.7).

Table 5.4 - Impact on Career

| | |
|---|---|
| Career Opportunities | **Excerpt 10: Female C#1 - Time 2** 'For probably six years … I didn't really have a position at the university … so well I was quite surprised when … [the] head of the medical school … said you know so if the job comes up as a lead educator for one of the blocks you know would it be something you would be interested in? … [so] there is this perception among my colleagues that … you have been away doing this qualification and you are now in a position to take on more responsibilities'<br><br>**Excerpt 11: Female C#1 - Time 3** 'I actually just had a job interview a week ago … to be honest I was not even sure if I had a chance for the job … so I was quite pleased when I … was one of three people who were interviewed … I definitely drew on my experience from Dundee in it … 12 months ago if I have been asked similar questions in the interview I would not have known where to start' |
| Roles & Responsibilities | **Excerpt 12: Female M#2 - Time 1** 'After I graduated … I was employed by another university … as a demonstrator which is the most junior … post as an academic faculty'<br><br>**Excerpt 13: Female M#2 - Time 3** 'It's very specific in my college how you get promoted so once you earn your Master's degree … you are promoted to the next level … from a demonstrator to a lecturer … but although I am a demonstrator they do expect me to perform at a lecturer's level … you can do this and you can do that you can be part of this committee … and you can do this research' |
| Planning for a PhD | **Excerpt 14: Male M#4 - Time 3** 'In the AMEE conference I met one professor from [country] who has taken PhD in medical education and I think if things go well … I go there [for PhD] after I finish my thesis.' |

### 5.3.3 Self Efficacy

The qualification resulted in improving the self-efficacy of the participants (Table 5.5). Excerpt 15 reveals a participant reflection from her first interview that she had no theoretical basis for her teaching, she imitated her teachers or relied on her instincts. This ability to reflect on her teaching practices suggests a shift in her knowledge and understanding of education. In her second interview, she explicitly mentioned using educational theories to inform her teaching (Excerpt 16). The participants' confidence in performing educational tasks also increased through the period of the course. In the first interview, the same participant reported being told what to do (Excerpt 17). However, by the third interview, she felt 'more' confident in having a dialogue around medical education related issues in the workplace (Excerpt 18). Some participants also mentioned learning various transferrable skills during this course, which would be useful in their clinical careers (Excerpt 19). In Excerpt 20, one participant discussed that previously her writings were very descriptive, with little or no analysis of the literature. Later interviews revealed an improvement in this regard, upon learning various

academic skills such as literature searching, critiquing the literature and academic writing as she progressed through the course. Participants' overall competence in performing various roles and responsibilities in medical education was enhanced, as is also evident from Excerpt 21, where the participant in his third interview reported being able to defend his decisions as an educator 'now'.

Table 5.5. Impact on Self-Efficacy

| | |
|---|---|
| Knowledge/Understanding | **Excerpt 15: Female C#1 - Time 1** 'For 6 or 7 years I have been doing a lot of teaching and I had been very much doing what either made sense to me ((laughs)) … I mean my style of teaching was based on what I had seen as a student, what worked and what did not work, emulating the teacher I thought were good and avoiding the things I thought did not work'<br><br>**Excerpt 16: Female C#1 - Time 2** 'I think one of the things that the course is really help me to do is to get a really solid grounding of … the theories behind education … as to why some of those techniques might be used and to actually think more more theoretically I suppose if I am planning to do something' |
| Confidence | **Excerpt 17: Female C#1 - Time 1** 'I am very much told this is what you have to teach in PBL here is the tutor guide go'<br><br>**Excerpt 18: Female C#1 - Time 3** 'I have more confidence. I feel that I can actually go and sit down with the head of school … here are my ideas and I feel more confident that I can do that and that she will listen to me' |
| Skills<br>i. Transferrable Skills | **Excerpt 19: Female M#2 - Time 1** 'It will make me a better clinician I mean you are not [only] taking the skills … in an educational context [but] really transferring to my clinical work so you know things like reflection and feedback and these kind do work with the patients so it really has informed all areas of my faculty appointment' |
| ii. Academic Skills | **Excerpt 20: Female M#3 - Time 3** 'What I learned the most was critiquing, analysing of literature because in my country in the literature review section … you just list different studies without critiquing them at all.' |
| Competence | **Excerpt 21: Male M#4 - Time 3** 'What I know and what I have learned and what the theories behind … that's the important thing because before when … they said why we should do that … at that time I can't really answer … and now after I have qualification I think … I can answer that question really well now' |

### 5.3.4 Development and Changes in Practices

The analysis revealed transformational changes in practices and the development of participants as teachers, researchers, leaders and learners in medical education over the period of the course. The participants showed development as a teacher, leader and learner from their first interviews, which took place after they had completed their teaching/learning, assessment, clinical skills simulation and leadership modules.

However, a further development as a researcher began after the research module and advanced while they were working on their dissertations during the second and third interviews.

### *Development as a Teacher*

The findings showed that the participants' developed as teachers (Table 5.6). The qualification influenced them as facilitators, mentors, role models, assessors, planners, resource developers and feedback providers. They referred to their development in these different roles in their various interviews. As learning facilitators, they developed considerations for educational theory to guide their practices and become more student-centred. In Excerpt 22, a participant referred back to how he used to be the 'sage of the stage' before doing this course and now he would consider actively engaging students in the learning process. Participants observed and learned during the course, the importance of maintaining a supportive learning environment in which students felt safe, relaxed and willing to take risks. They also considered using simulation and e-learning to support their teaching and learning activities. A few participants mentioned the development of an ability to mentor their students. One also intended to provide educational support and career advice in the workplace during her second (Excerpt 23) and third interviews (Excerpt 24). The course made them aware of good practices in education, which they subsequently role modelled. In a third interview, a participant mentioned that she had recently questioned some unethical practices from her workplace, which were considered socially acceptable in that professional academic context (Excerpt 25). As assessors, they learnt about validity and reliability as well as standard setting (Excerpt 26). They could evaluate programmes and desired an improved quality (Excerpt 27). The first interviews suggested that some of the participants had an understanding of curriculum development. However, they then felt they developed as curriculum planners further. This is evident from Excerpt 28, where the participant developed a consideration for the diverse learning needs of the students in the second interview. They also learnt about the influence of formal, informal and hidden curricula on learners. Development of educational resources using simulation and e-learning were considered as well (Excerpt 29). The participants learnt about essential elements of feedback and used various models to inform their practices. They believed that it had improved their ability to provide feedback to learners. They also understood the importance of a dialogic feedback approach (Excerpt 30).

Table 5.6 - Development and Changes in Teaching Practices

| | |
|---|---|
| Facilitator/Lesson Planner | **Excerpt 22: Male M#4 - Time 3** 'I have the experience of teaching … and what really struck me is okay I am doing this wrong ((laugh)) before it's like a classic lecture that you stand in front of the class and you are the star of the session and you just talk and talk … you need to do activities so your students attention will not go anywhere I think that's the thing that I learned' |
| Mentor | **Excerpt 23: Female M#3 - Time 2** 'When I return home I want to establish a student support system where students can fill out these questionnaires about their learning styles, get advice on their learning, which I find very important as learner especially in medicine'<br><br>**Excerpt 24: Female M#3 - Time 3** 'I am more aware of the term students abuse … I am more aware of … how to equip students with skills to make them deal with … ethical dilemmas in profession … implementing students support because I think students need more … educational support in terms of career choices' |
| Role Model | **Excerpt 25: Female M#3 - Time 3** 'It was a conference in paediatric department … and a professor just showed a photograph of a patient … you could … recognize the face of the child … he didn't tell anything about asking this child for any consent or the parents plus he made fun of the child … and then I asked my friend this is inappropriate she said no why we all do this and we show pictures and photos of the patient and I asked do you take their consent to do this she said no never why should we and that was the point where she told me you have changed and I said this is his right to be respected as a patient and not to be laughed at in a conference this is unethical what the professor is doing but everyone is laughing and no one has any problem with that and again when she was writing her thesis and then she told me professors tell us we have to copy paste from the papers I said how can you copy paste its plagiarism she said no this is not plagiarism because how could I write it better than the author, the author wrote it's his work it's how could I rephrase it by rephrasing it would lose its value … and there is no software for plagiarisms to detect plagiarism so I guess again it was academic integrity and plagiarism that all' |
| Assessor | **Excerpt 26: Female C#1 - Time 1** 'The only time I have done exam marking I was just told … here is a pile of 400 papers try and mark them fairly and … I was not sure if I was doing the right thing by the students and I had another marker and our inter-rater reliability was probably pretty awful ((laugh)) … how do I know I am doing the same thing as the next person' |
| Evaluator | **Excerpt 27: Female M#7 - Time 3** 'I have learned many things from this course … I can use that to improve quality of our teaching and learning as well as assessment method in my institute … I realise what is the problem and how can I improve that' |
| Curriculum planner | **Excerpt 28: Male D#6 - Time 2** 'From my previous belief I think the curriculum planning is from the stakeholder is the teacher or the staff who want the competency who wants the required competency for the students but after I have learnt about the curriculum planning that you should have to do the needs assessment from many stake holders … so in the future I think I should select the representatives of medical students to be the stakeholder to make the curriculum' |
| Resource developer | **Excerpt 29: Female D#9 - Time 1** 'I plan to develop a simulation [exercise on how] to use an ultrasound … before performing on the patient' |
| Feedback provider | **Excerpt 30: Male D#6 - Time 3** 'After I have learnt it from Dundee … I think the most important one step in giving feedback is reflection … I want to push them about how to know what is good or not good … and I want to develop feedback and feedforward' |

### *Development as a Researcher*

During the course, the research module and other seminars/presentations introduced the participants to various research methodologies. Excerpts 24, 26 and 29 from the first interviews suggest that participants did not have any experience in educational research and the qualitative methods in particular. They had not appreciated research as a scholarly role of an educator before. However, by the third interview, participants reported that their interest in it evolved during the course (Excerpt 25), even though some of the participants only registered for the Certificate and Diploma and did not plan to do educational research. The participants also become familiar with the various paradigms of research and understood the significance of qualitative research (Excerpt 27). The course also changed their perspective, and research was seen as an important part of an educator's identity. The participants developed research proposals as part of the Diploma. For some, this was their first research experience. They reported variable progress in research, as some at the time of the interviews were waiting for ethical approvals, while others were writing their dissertations. Some participants started using other fora to keep up with the rapidly evolving medical education literature (Excerpt 28). They also considered translation of educational research into practice (Excerpt 30).

Table 5.7 - Development and Changes in Research Practices

| | |
|---|---|
| Views education research positively | **Excerpt 24: Female C#1 - Time 1** 'In the other area I really have not given any thought to was research … certainly the idea of qualitative research is completely new to me'<br><br>**Excerpt 25: Female C#1 - Time 3** 'I am more interested in research it's still not something that I see myself doing like a career in research but I see the value in it definitely informing my work as teaching practitioner' |
| Introduction to qualitative research | **Excerpt 26: Female M#2 - Time 1** 'I do not have experience in research so that's probably one area for improvement'<br><br>**Excerpt 27: Female M#2 - Time 3** 'Definitely encouraged my research activities right now I am still working on my thesis which I am really enjoying … there is a lot of qualitative approach that I was previously unaware of so that's one thing that I have come to learn … and I am really upset that I was not taught this in my undergraduate …it's such an important aspect of medicine' |
| Educational Scholarship | **Excerpt 28: Female M#5 - Time 2** 'Joining the webinars in MedEd world … and also to catch up about the new research or intervention … about medical education I just registered to the twitter about medical education and also I have some of the like for the seminar or the conference in medical education' |
| Translation of research to practice | **Excerpt 29: Female M#3 - Time 1** 'I did not have any appreciation for research role of the educator I thought educator just teaches<br><br>**Excerpt 30: Female M#3 - Time 2** 'Masters project is about documenting the house officers … learning experience and comparing it to the national competency framework … of what house officers should be able to do … so I want to … see whether there are any defects whether they need more support … what are their learning needs.' |

### *Development as a Leader*

The participants felt that they developed as leaders (Table 5.8). Excerpts 32 and 34 from the first interviews suggest that the participants had no acknowledgement for their roles as educational leaders previously, and they did not have any understanding of the educational change process, the challenges, threats and ways to overcome them. Excerpt 31 also reveals that the participant was earlier questioned over her legitimacy as an educator. However, the qualification gave her this legitimacy, and she was seen as a valuable resource by others in the workplace after the qualification. The course also resulted in certain peer expectations towards them, who consulted them on educational matters. These peer expectations facilitated their further development as medical educators. In Excerpt 32, the participant mentioned being content with her role as a follower in the workplace. However, in Excerpt 33 from her third interview, she mentioned leading faculty development initiatives and offering educational support to her colleagues. Many participants also considered leading various prospective educational changes in the workplace (Excerpt 35), and reiterated this commitment once back in the workplace. Participants also reported developing a range of managerial skills such as proactive problem solving and team building.

Table 5.8 - Development and Changes in Leadership Practices

| | |
|---|---|
| Recognition/Legitimacy (Interpersonal Expectations) | **Excerpt 31: Female M#3 - Time 3** 'I think they respect me more now … when we did staff development workshops before I wasn't authorised … they would ask me immediately Who are you? Why are you talking to us? What are your qualifications to stand there in front of professors … we taught you … but now … I can say I have learnt this … it gives me a sense of legitimacy ....because I do have some I mean degree' |
| Educational Support | **Excerpt 32: Female C#1 - Time 1** 'I was bit of quite content with my role as a follower rather than a leader'<br><br>**Excerpt 33: Female C#1 - Time 3** 'Just a month ago we had our annual training weekend … now that I was back from Dundee I was pretty much leading the weekend with the help of a senior tutor … they had a lot of confidence in me' |
| Change Agents | **Excerpt 34: Female M#3 - Time 1** 'Thinking about why our reforms is about to fail, it is about to fail … the people now do not believe in it anymore … but I did not really understand why'<br><br>**Excerpt 35: Female M#3 - Time 3** 'My whole country my faculty is going through the process of change and now I am more aware of how to deal with change and the change management' |

### *Development as a Learner*

As reflected from the interviews over the period of the course, the participants also developed as learners (Table 5.9). The course encouraged them to become critically reflective on their previous practices and experiences in education (Excerpt 36). This reflection on action gives significant insights into one's own knowledge, behaviours, beliefs and values, and is a pre-requisite for transformative learning. The second (Excerpt 37) and third (Excerpt 38) interview reveals that the participant developed an ability to analyse new ideas and self-assess their performance. This transformational change had notably informed her teaching practices in the workplace (Excerpt 38). Acquiring new knowledge and improving their competencies in medical education had become a voluntary and ongoing process to meet personal and professional learning needs. They took significant responsibility for their own learning and developed as self-directed lifelong learners. In Excerpt 39 from the first interview, the participant reported becoming a lifelong learner. By the third interview (Excerpt 40), she had also become a self-directed learner. The academic skills she learnt in the course encouraged her developmental process. Participants also developed an understanding of the learning process (meta-learning), which helped them regulate their learning approach according to the demands of the task (Excerpt 41). They believed that developing this understanding would also be useful for their own students to acquire.

Table 5.9 - Development and Changes in Learning Practices

| | |
|---|---|
| Reflection (Critical thinking) | **Excerpt 36: Female M#3 - Time 1** 'I think about evaluating things and critically reflecting on everything because some people take things for granted and take papers for granted … and I keep questioning everything … I hear it here like critically reflecting on things and questioning things is something very important very crucial' |
| Self-Assessment Skills | **Excerpt 37: Female C#1 - Time 2** 'I certainly am drawing probably more unconsciously on some of the things I have learned and then during the tutorials and afterwards I can probably sort of sit down and think about it more specifically about techniques … that I am using and yeah I think it's definitely true that my approach is different having done this study then if I hadn't done it'<br><br>**Excerpt 38: Female C#1 - Time 3** 'I am trying to be more reflective … on my practice and thinking oh what am I doing here and how can I change that or do I need to look something up [in the literature]' |
| Self-Directed Lifelong Learners | **Excerpt 39: Female M#2 - Time 1** 'A good educator is a good learner so I became aware of the fact that the learning process is really constant'<br><br>**Excerpt 40: Female M#2 - Time 3** 'I am certainly reading more literature in medical education I am really informed on what's where to read who to read what's, how to judge the literature so it has influenced me a lot in that arena.' |
| Meta-learning | **Excerpt 41: Female C#1 - Time 1** 'Having a better theoretical understanding of what we do … like PBL … allows people to construct their own knowledge to use the scaffolding … I think as a student it will be useful to know why they are using this form of assessment not that … |

| | |
|---|---|
| | why we making them do something in PBL and not just telling them the answers' |

### 5.3.5 Participation in Learning Communities

The course increased the participants' sense of belonging towards each other in the classroom and with the wider educational community of practice. Some participants started considering medical education as a viable career in their earlier interview (Excerpt 42). In the workplace, these participants experienced an epiphany about the reality that they need to keep their clinical roles for career progression (see section 5.11 and 5.12). The course also provided them with deeper understanding of medical education. They considered feeding back to programmes locally and enriching them with their experiences from the course (Excerpt 43). The participants learned the vocabulary of medical education, which differed from the one used in their clinical routine. Excerpt 44 from the first interview reveals that the participant was struggling to understand the language medical educators used. She did not even know if a medical education community existed prior to her enrolment. In her third interview, she was able to converse and considered herself becoming part of the similar community (Excerpt 45). With this increased understanding of educational jargon, participants were able to engage with the educational literature and developed further networks. Many planned on participating in future educational conferences, with some attending the AMEE 2014 conference.

Table 5.10 - Participation in Learning Communities

| | |
|---|---|
| Career change towards medical education | **Excerpt 42: Female M#2 - Time 1** 'I have become more passionate about education and it's something I want to make a career out of so … I really wanna take time to invest in it, it's worth it' |
| Formalisation of medical education | **Excerpt 43: Male M#4 - Time 3** 'I think I can get [across] the message that we need to consider educational research as important … bringing those educational research values back to the institution rather than just scientific research.' |
| Language (Vocabulary) and Networking | **Excerpt 44: Female C#1 - Time 1** 'Getting used to the vocabulary of medical education, so that's been a big aha moment … first of all going oh my gosh they are using all these terms I don't understand … what they are talking about … so they had to kind of explain all those terms … this is my first introduction to the community not really even realising previously that it existed'<br><br>**Excerpt 45: Female C#1 - Time 3** 'Feeling like oh I actually am part of this community of medical educators … I know what they are talking about and I have read that article and so it's almost that community of practice thing where I am actually a legitimate part of that community and I understand what they are talking about and if I go on to some of the sessions 12 months ago … I would not have understood a word' |

### 5.3.6 Performance Influencing Factors

Various personal and contextual factors impacted the motivation for enrolment and level of engagement in the course. They influenced individual development, performance attainments and learning experiences. These personal and contextual factors were associated with the challenges and enablers towards the implementation of an educational change. Here I provide a few excerpts of how these factors have affected the impact of the qualifications (Table 5.11).

#### *Motivation*

Some participants were interested in certain aspects of medical education more than others. For example, some were more involved in teaching and scholarship than research (Excerpt 46). They chose to enrol only as far as the Certificate or Diploma, and therefore lacked development in certain aspects such as research. This suggested that the impact of the qualification was influenced by participants' motivation. However, these motivations were also influenced over the period of the course as participants reported developing an interest in research. Some also considered studying further onto the Masters' depending upon the circumstance in their future workplace (Excerpt 49).

#### *Personal Factors*

Personal factors influenced participation in the course e.g. lack of experience that influenced participants in relation to taking responsibility around curriculum development (Excerpt 47). Previous involvement with medical education departments also influenced the impact of the course. Therefore, the participants were able to contextualise their learning to meet their needs.

#### *Contextual Factors*

Contextual factors can also significantly influence the impact of these qualifications. Participants might not pursue further studies in medical education, even when the qualification results in their development and increased interest. This is because of its perceived lack of value in their context (Excerpt 48). The workplace context also influenced their motivations and determined their career prospects after the qualification (Excerpt 49).

Table 5.11 - Performance Influencing Factors

| | |
|---|---|
| Influence of Motivation | **Excerpt 46: Female C#1 - Time 1** 'I want to keep being a practitioner and actually teaching with students. I also find the burden of just reading literature and sitting for long time reading and writing is really hard work for me I really thrive on the interaction so I don't necessarily see myself becoming a full time researcher' |
| Influence of Personal Factors | **Excerpt 47: Female M#8 - Time 2** 'In curriculum module I am really struggling through because … I am not a senior professional I do not have experience in this field [medical education] or even my relevant field I mean in dentistry … I am too young to carry out all these responsibilities but yeah I can assist' |
| Influence of Contextual Factors | **Excerpt 48: Female M#2 - Time 3** 'I don't see the medical community accepting someone as pure medical education expert … you really have to have clinical experience … so even if I go and get a PhD in medical education … everyone around me would think less of my opinion as a medical educator because I am not a clinician or I have chosen not to practice.'<br><br>**Excerpt 49: Female C#1 - Time 3** 'I don't have like a full time education post or anything I wasn't really doing any research or scholarship beforehand … I am interested in that now … may or may not do the masters … if I get a job with the uni[versity] … maybe they can fund me to do masters or give me some time to do the masters' |

### 5.3.7 Concerns Towards Becoming an Educator

The participants had various concerns towards becoming a healthcare educator. All these concerns were derived from contextual and personal factors, and recurred on all three interviews. This may be because the participants were all face-to-face and international students and their contextual factors did not change during the course and interview period. The participants with a clinical background felt that they would struggle to manage their clinical duties along with new educational responsibilities (Excerpt 50). Keeping a good balance between the two would be challenging. They mentioned that choosing medical education as a speciality is not respected in their own countries. Despite the associated career progress, their colleagues would question its need or importance (Excerpt 51). Their roles and contributions as medical educators were also ill-defined (Excerpt 52). They were concerned about the contextual nature of medical education and its transferability to their workplace (Excerpt 53). The participants also mentioned that educators did not earn as much as clinicians. They showed concern over being financially disadvantaged by a move to education (Excerpt 54). Early career participants also faced a selection dilemma (Excerpt 55). They saw themselves at a junction with clinical and educational identities (intersecting). One participant was concerned that the qualification might result in moving up the hierarchy, the resulting administrative position taking her away from her primary interest of

imparting education and involvement with the students (Excerpt 56). The participants were also concerned about their further development in medical education (Excerpt 57). They mentioned various reasons such as unavailability of PhD programmes, lack of mentors and inaccessibility of the literature in medical education locally. One participant also reported that her colleagues denounced educational reforms and stigmatised those working in the medical education department (Excerpt 58). Here the participant used the pronoun 'they' for her colleagues in basic sciences/clinical departments. The use of 'they' represents self-differentiation from other groups within the workplace. The same participant then used her colleagues' direct speech and therefore, her use of 'us' does not include the narrator in that group. On the other hand, the use of 'us' may be an attempt to protect her image i.e. self-repair after the proposed educational reforms did not go as planned.

Table 5.12 - Fears Towards Becoming a Medical Educator

| | |
|---|---|
| Finding the balance in educational and clinical roles | **Excerpt 50: Female M#7 - Time 3** 'I worry about time management … because my major role is a clinician even when I go back … but I think I have to do more in educational role so I really worry about how to organize time how to weigh between a clinician and educator' |
| Regard for clinician/ researcher more than educator | **Excerpt 51: Female C#1 - Time 3** 'Education perhaps less respected than the clinical disciplines … when I talk to people who are clinicians … they ask what are you doing and I say education and they are kind of like oh you know I am wondering if that is a real speciality … and sometimes you kind of get sick of explaining that to people it might be easier to just say oh I am a surgeon ((laugh))' |
| Educator career is least well defined | **Excerpt 51: Female M#2 - Time 3** 'These universities are very young … so they turn to me for really defining my own role so I would get a lot of … can you do this for us? Are you trained enough to tackle a curriculum change? So it really falls upon my shoulders to decide what it is that I can offer the university … the medical college has not really defined it I have to define it myself' |
| Contextual nature of medical education | **Excerpt 53: Female M#8 - Time 1** 'If you are a health practitioner … once patient is diagnosed with this disease then this is the definite treatment … but I think medical education … depends on where you are working how is the system [sic]. It varies from the country to country I mean in terms of ethnicity in terms of socio cultural background' |
| Financially disadvantaged | **Excerpt 54: Male M#4 - Time 2** 'Can I really afford a living based on that profession I think that's the only fear I face in becoming full time medical educator, as not every educator in our country can provide a decent living' |
| Cognitive dissonance (Intersecting Identities) | **Excerpt 55: Male M#4 - Time 3** 'If I become a full time educator what will happen with my clinical career that's one of my worry also. I do not really know after this it's like do I really want to sacrifice my clinical career now and become full time educator and I still can't answer that question really well now' |
| Loss of educational identity up the hierarchy? | **Excerpt 56: Female C#1 - Time 3** 'I have also wondered whether by getting a higher position it might actually take me out of touch with the tutors and the students because I think that's what happens most of the people who are up there they used to be tutors but they have now kind of forgotten ((laugh)) so I think … that's a challenge it's the same in medicine there is always this tension between medical administrators who are actually making plans or you know even the senior doctors who aren't really the ones seeing the patients anymore you know and keeping |

| | |
|---|---|
| | them in touch keeping the decision makers higher up the hierarchy in touch with what's actually happening on the ground' |
| Challenges towards their further development as an educator (PhD as a requirement for full time Med. Ed. Career) | **Excerpt 57: Female M#2 - Time 2** 'I say now that I wanna do a PhD but I might not get to … there aren't many graduate programmes in medical education around the world it's like 20 programmes in PhD so what if something does not come up then you would have to consider other venues that would take you away from education' |
| Stigmatised for being change agents | **Excerpt 58: Female M#3 - Time 3** 'People who didn't cheer in the curriculum reforms so they hate the name medical education … people who forced us to change our curriculum who forced us to integrate and teach less so they hate the medical education department' |

### 5.3.8 Learning Conditions that Foster Behaviour/Transformational Change

By interviewing the face-to-face students on the 'aha' moments during the course and specifically exploring associated aspects in the interview afterwards, I was able to get first hand details about the learning conditions, which may have impacted their professional development as an educator (Table 5.13). They reported learning via observations and other vicarious experiences offered through role modelling (hidden curriculum), lectures/seminars and written material/literature (Excerpt 59). The modules provided new information and they were expected to reflect on real life experiences in their own context for assignments. This process of learning and writing reflective pieces enabled transformation of beliefs and development. Access to resources, underpinning educational philosophies and relevance to practice were also considered as important factors.

Exchange of ideas during peer-peer and peer-tutor interactions helped the participants to learn and develop as educators (Excerpt 60). They learned with, from and about each other. The blended model of study also brought in new students from around the world, sparking cross-cultural communication, awareness and learning. Another condition that aided learning was collegiality i.e. the individuals meeting together for a common purpose in a safe environment, valuing and respecting each other's commitment and contributions (Excerpt 61). The tutors offered relevant information and took the learner's perspectives into account. Thus, quality of interactions and recognising the learner's self-worth were useful factors in the developmental process.

As the participants were adult learners, they valued autonomy and self-directed learning. They felt that the self-directed structure of the course (one week intensive teaching followed by two weeks of reading literature, informal discussions and writing

assignments) offered autonomy and encouraged reflection on their beliefs in education (Excerpt 62). They found such experiences helpful towards their development.

Although the participants found writing reflective pieces helpful for their transformative learning, they valued even more immediate opportunities for application of learning into their own context (Excerpt 63). The course did offer some opportunities to contextualise and hypothetically work through examples during practical group exercises. However, immediate and more practical opportunities were desired. Another learning process, which the participants found helpful was the scaffold provided by the faculty in order to incrementally improve their comprehension and abilities (Excerpt 64). Scaffolding is necessary to avoid frustration among learners in tasks that would not be possible to learn without assistance. The feedback on performance in medical education from influential educators also impacted the students' development as educators. For the face-to-face students, this was in the form of encouragement from the role models and performance attainments in the course work i.e. passing/failing an assignments (Excerpt 65).

Table 5.13 - Learning Conditions for Identity Development

| | |
|---|---|
| Vicarious Experience and Reflection | **Excerpt 59: Female M#3 - Time 2** 'I got to see role models in how to treat students and … how to be supportive, how to scaffold the learning … all the teaching staff were role models and each one of them has his own or her own personality which was also enriching' |
| Immersion (Inter-professional collaboration with peers and experts) | **Excerpt 60: Female C#1 - Time 2** 'Just being in the class with the other students … in a face to face sessions … and being part of those conversations with educators from and students from all over the world … sharing, hearing their opinions and sort of making my own contributions to discussions and things I suppose started to think of myself as an educator rather than just a tutor who doesn't have any kind of any formal training' |
| Collegiality (Meaningful and safe learning environment) | **Excerpt 61: Female M#3 - Time 3** 'Learning environment because the learning environment has to be safe and … your opinion is respected you know you are not being laughed at if you said anything silly … because from where I come from you have to say professor … if you forget the term professor and said doctor you may be shouted at or kicked out of the room or I don't know what, but here … you call the professor from their first name you do respect that as this didn't change anything about respecting … I guess this is something that I really appreciate … just saying (tutor first name) … took the whole relation with … the staff members to another level still respect but more safe you are more at ease' |
| Autonomy (Self-directed learning opportunities) | **Excerpt 62: Female M#2 - Time 2** 'I think the way the modules were structured had something to do with the fact that we take one intensive week of lectures and then we move on to two weeks of independent work that kind of really drove the point home when it comes to self-directed learning because if I do not take charge of that no one will, so that was one point that helped me understand that adult education is really different from what I was used to before. I had to set my own deadlines I had to abide by my own deadlines' |
| Opportunities for application | **Excerpt 63: Female M#7 - Time 2** 'For assessment module I think we have a lot of opportunities to practice our assessment for example |

| | |
|---|---|
| | OSCE, we have a rotation like OSCE station to critique, what is good thing in that station what is the bad thing and how we can improve and I think we have the opportunity to … create our own assessment form especially on attitude which is good and practical … it's better than if we sit in a room listening to a lecture … I think if we have opportunity to practice it is easier to implement that when we are back home' |
| Scaffolding | **Excerpt 64: Female M#3 - Time 3** 'I have developed one coding framework before and … I had a supervisor but they did not intervene with the coding framework at all but this time ((supervisor name)) and me read the data separately and each one of us came up with coding framework we discussed the code and then we revised the coding frameworks and revised it several times until we came with a final coding framework and I think that was much better because the first time I did it alone no one revised the coding frameworks and they just accepted the coding frameworks and they didn't read the data so having a supervisor who has the data who reads the data with me and step by step doing the framework with me and discussing the codes and data with me was really it was like a scaffolding process for me' |
| Feedback processes (Performance attainment) | **Excerpt 65: Female M#8 - Time 2** 'When I got the resubmission for that [assignment] I was really … disappointed and that made my … motivation level down I said I can't do that and I am going I am leaving this course because I can't do it' |

A key marker of success for these programmes is the transfer of learning to the workplace environment through implementation of educational initiatives and change leadership. Although, I could not explore that in a 10 month follow-up period. I asked the participants about various inhibitors and enablers they anticipate towards their future educational practice. Over the period of the course, the participants' ability to reflect on the various inhibiting and enabling factors towards the implementation of their practice improved. In the first interview, personal factors were discussed more often and systemic or resource factors were rarely referred, if at all.

### 5.3.9 Inhibiting Factors/Challenges

The participants anticipated various challenges towards productivity in their workplace. I have organised them into personal, systemic and resource factors.

#### *Inhibiting Personal Factors*

Among personal challenges (Table 5.14), the key one was an indifferent attitude of their colleagues towards educational change (Excerpt 66). Colleagues' lack of understanding towards educational processes was another challenge (Excerpt 67). Early career educators also felt that being a younger and junior member of staff, they might not be

taken seriously by their senior colleagues (Excerpt 68). They suspected that many seniors would continue to rely on their own personal assumptions instead of asking advice from the newly qualified medical educators.

Table 5.14 - Inhibiting Personal Factors

| | |
|---|---|
| Attitudes of Colleagues | **Excerpt 66: Female M#3 - Time 1** 'I saw my professors being criticised by the participants because the participants … have to attend these faculty developments sessions [mandatory] and they come with attitude you cannot teach me anything I already know everything' |
| Abilities of Colleagues | **Excerpt 67: Female M#7 - Time 3** 'It will be someone who don't understand why to improve or why to implement a new strategy for assessment and teaching because I think someone may think that the traditional way of teaching is still effective and I have to explain why we have to change why we have to improve that I think this is the challenge' |
| Age of the Educator | **Excerpt 68: Female M#2 - Time 3** 'People do judge you by age even though … they know that what I am saying is right but they just can't get over the fact that Oh My God she is a demonstrator she is not even a lecturer yet … because people they just look at you in a I am an associate professor why am I listening to you? Just because you have a master's degree in medical education it does not mean you know more about education I have been teaching for said and said years so it's really challenging for those folks to really come to listen to what I have to say … so my age is a big problem for me it does stand in my way at times' |

### *Inhibiting Systemic Factors*

Among systemic factors (Table 5.15), the participants believed that the policies and practices in the workplace would influence the implementation of educational changes (Excerpt 69). They also felt that the interdepartmental factors, such as lack of collaboration among departments, might pose a challenge. Challenges from various specialities and professionals with a deeply rooted culture of working in silos were also expected (Excerpt 70). Participants referred to the hierarchical relationships and lack of support from the leadership as an additional challenge (Excerpts 71).

Table 5.15 - Inhibiting System Factors

| | |
|---|---|
| Policy and Practice | **Excerpt 69: Male D#6 - Time 3** 'My work place is more medical service so most of my colleagues have more interest in medical service not in the medical education and the medical education is the additional work' |
| Interdepartmental Factors | **Excerpt 70: Female M#2 - Time 2** 'When you have departments like paediatrics department, the general surgery department they end up kind of becoming separate from one another and they start working on their own and developing their own agenda and servicing the students as if they were their own entity, they kind of forget that they are part of a medical college that works together especially now that the curriculum is integrated and these kinds of things so I think one of the more important things is how do you get people to work together and not separate' |
| Hierarchy | **Excerpt 71: Female C#1 - Time 3** 'It's probably really the hierarchy so … we get a lot of really useful ideas … but actually communicating those ideas and having them listen to by people more senior so that's really one of the biggest challenges' |

### *Inhibiting Resource Factors*

The participants referred to the investment required in terms of protected time from the faculty (Table 5.16: Excerpt 72) and financial constraints (Excerpt 73) as challenging.

Table 5.16 - Inhibiting Resource Factors

| | |
|---|---|
| Protected time | **Excerpt 72: Female M#3 - Time 2** 'Life is so busy and hectic … so all you think about is I need to finish my lecture by 2 and go home. You do not think about the learning environment you do not think about supporting the students, you do not think about how the students perceived this, whether they are happy or not' |
| Financial resources | **Excerpt 73: Male D#6 - Time 2** 'If I want to make e-learning in Thailand we have to have more budget and it is a challenge for my country and in my office … to have more budget for me to produce it' |

## 5.3.10 Enabling Factors/Facilitators

The participants reported various personal, systemic and resource factors as enablers towards productivity in the workplace. Most of these factors corresponded with the challenges mentioned above.

### *Enabling Personal Resources*

Among personal factors (Table 5.17), the participants believed that the attitudes and abilities they developed during the course would be the main facilitators. Their knowledge, interpersonal and leadership skills would enable them to liaise with and lobby various stakeholders to implement educational change (Excerpt 74-75). Change would be further facilitated by having colleagues who are keen on improvement and have an interest in medical education (Excerpt 76), and having colleagues with educational competencies (Excerpt 77).

Table 5.17 - Enabling Personal Factors

| | |
|---|---|
| Attitudes & Abilities of the Educator<br>i. Knowledge | **Excerpt 74: Female M#8 - Time 3** 'Familiarisation of the issue, the resource why you are going to introduce the resource … background knowledge' |
| ii. Interpersonal skills | **Excerpt 75: Female M#3 - Time 1** 'I want to very much go into each department and talk with the people there and may be tell them let's have a workshop let's have a discussion they should ask me whatever they like.' |
| Attitudes of Colleagues | **Excerpt 76: Female C#1 - Time 3** 'Tutor commitment is facilitating change … we have some very good tutors who … are getting themselves training in medical education … so what has been a facilitating factor is |

| | |
|---|---|
| | just the pro activeness of the tutors … who are passionate and willing to kind of invest in their jobs … improving it and making it better' |
| Abilities of Colleagues | **Excerpt 77: Male M#4 - Time 1** 'I think having a peer to discuss something with same qualification in medical education or mentoring from the experts' |

### *Enabling Systemic Factors*

The participants mentioned that the rapidly changing educational culture and growing expectations of regulatory bodies had influenced the policies and practices of their organisations, providing clear rationale for educational reforms. This dictated the direction of an organisation that can influence educational changes in many ways (Table 5.18: Excerpt 78). The participants also believed that having a key position in the organisation would facilitate the process of change (Excerpt 79). Support and mentorship from the leaders in their organisations were also seen as enablers (Excerpt 80).

Table 5.18 - Enabling Systemic Factors

| | |
|---|---|
| Policy and Practice | **Excerpt 78: Female M#2 - Time 3** 'Support of the medical college so the medical college itself is very supportive … they are really eager into getting … the best instruments the best continuous education all that good stuff so their support is really important and I do not think I would be able to do anything if they were not supportive' |
| Hierarchy<br>i. Position of Educator | **Excerpt 79: Male M#4 - Time 3** 'I think depends on my future job or my future position … before I was the assistant dean maybe I could implement huge amount of changes but now I am still not in any training institution yet and I do not really know what position I can get … into a new institution after this' |
| ii. Support from leadership | **Excerpt 80: Male D#6 – Time 3** 'My director I think can help me because my director also have a strong opinion about how to have a good medical education at my work place so I think my director have some powers to implement or to make my colleagues to collaborate in medical education in future' |

### *Enabling Resource Factors*

Having more resources towards the implementation of the educational change would facilitate change (Table 5.19). These include financial resources (Excerpt 81) as well as human resources (Excerpt 82). The participants mentioned their students' increased individual access to technology and the internet (3G/Wifi enabled mobile phones/tablets etc.), which was also seen as an enabler towards educational reforms in their institutions (Excerpt 83).

Table 5.19 - Enabling Resource Factors

| | |
|---|---|
| Financial resources | **Excerpt 81: Female C#1 - Time 2** 'A little bit of money in the budget would certainly facilitate it' |
| Human resources | **Excerpt 82: Female M#2 - Time 2** 'We are lucky back home because … we are recruiting so gaining manpower so we can do things we weren't able to beforehand because of shortage of staff … so I think those things will help initiate you know turn around.' |
| Technology | **Excerpt 83: Female M#5 - Time 2** 'All of my medical students have smart phones and tablet so I think … to install [an e-learning] application … should be quite feasible.' |

### 5.3.11 Pronominal Talk

As discussed in the previous chapter (see section 4.2.8), I have also examined the pronominal talk in the language of the face-to-face participants (Table 5.20). Some participants with previous involvement in medical education identified themselves as educators and viewed themselves as being different from those with no qualifications in medical education from their first interviews (Excerpt 84), whereas for most of the others, pronominal talk was observed in their second and third interviews (Excerpt 85). They used pronouns such as 'I', 'we', 'me' and 'us' to define an in-group with competencies in medical education. The participants also used 'you', 'they' and 'them' to define outgroups, usually clinicians with no qualifications in medical education. This differential use of pronouns in the talk indicated a perceived separation between these two groups.

Table 5.20 - Linguistic Features – Pronominal Talk

| | |
|---|---|
| **Pronominal talk**<br>e.g. I, We, Us You, They | **Excerpt 84: Female M#3 - Time 1** 'I very much developed as an educator … I wrote some tips on how to deal with these resistant people and how to convince them that how medical education is an important speciality … they feel it has nothing to do with medicine and we should not be teaching them how to teach because they have been teaching before we were born and they were successful and they have been writing exams successfully and graduating successful doctors so they do not want to be taught how to teach'<br><br>**Excerpt 85: Female M#2 – Time 2** 'I can't believe that I taught without having a qualification in education, … now I have a very clear picture of how to approach a student … while other people in the college still do not have basic concepts of teaching … so there is a big difference … I really like to believe that if they were taught a different way they will see the difference but they need to be taught first so I would approach medical students … in a way where it is very friendly … while others … they just don't know a better way.' |

## 5.4 Discussion

This prospective study focused on health professionals' individual experiences towards becoming an informed educator. Findings highlighted the immediate impact of qualification on the participants, whilst engaging with the medical education course. The impact in terms of development as teacher, researcher, leader and learner aligned with that from the previous studies. Learning conditions from the course that fostered behavioural changes also emerged. Moreover, the influence of interpersonal expectations on identity development of healthcare educators became apparent. Findings also revealed the emotional turmoil towards becoming informed educators, with identification of challenges and enablers anticipated by the participants towards their productivity in the workplace.

### 5.4.1 Impact of the Qualification

Most of the findings from this recent cohort of face-to-face participants complement the previous retrospective studies on the graduates (2008-2012). Qualifications honed their knowledge and skills, and also impacted their working lives. The participants also felt more competent and committed towards their various roles and responsibilities over the period of the course. Their increasing self-efficacy, transformational changes and development as teachers, leaders, researchers and learners coupled with an increasing sense of belongingness towards medical education reported during interviews one to three, provides evidence that the qualification in medical education results in the strengthening of identity as medical educator. The development of participants' ability to consider other factors beyond themselves and their colleagues as inhibitor or enablers over the period of the course also reflects that maturation process.

Whether participants were already interested in medical education or they enrolled due to other extrinsic factors, their interest in medical education increased during the period of the course. This suggests that the qualification encourages participants to continue to learn and develop as medical educators. However, it also appeared that some participants 'hop on the bandwagon' because they had seen others with qualifications in medical education occupying leadership positions. This highlights the importance of the current study to generate evidence and offer guidance to those early in their career. One participant's diminishing interest was influenced by her lack of performance attainments over the period of the course affecting her self-efficacy. This is also related to her

personal circumstances and other contextual factors as she was actively looking for employment opportunities elsewhere.

One third of the face-to-face participants (2013/14) were under 30 years of age. This early career enrolment coupled with extrinsic motivation suggests a positive trend towards professionalisation of medical education worldwide. However, it may also reflect the increasing competition in medicine and a need to have something on their CV to distinguish them from other healthcare professionals. The participants expected a promotion with increased educational responsibilities after the qualification. Such expectations reflects the recent impetus for hiring qualified medical educators to meet accreditation requirements (Tekian and Artino, 2013, Tekian and Harris, 2012). The qualifications help the participants in defining their roles as medical educators and encourage the development of a community of practice. The participants' increased involvement in educational scholarship along with an intention to bring reforms in the institution is suggestive of the qualification's role towards professionalisation in medical education.

### 5.4.2 Effective Learning Conditions

Seven learning conditions that encouraged personal and professional behaviour change were identified. These conditions comprised of vicarious experiences in the course, immersion in an educational environment, collegiality, autonomy, opportunities for application, scaffolding and provision of regular feedback on performance. They also stimulated engagement and participation in an educational community of practice. Identification of these aspects make the findings transferrable to other programmes with a similar context. Now I briefly discuss these learning conditions and their impact on learning.

#### *Vicarious Experiences and Reflection*

The participants believed that acquisition of knowledge and skills in education through vicarious experiences (e.g. role modelling and lectures) followed by reflection, were essential to their development. Role models in the profession and demonstration of what is professional by the faculty contribute towards identity formation (Baernstein et al., 2009, Finn et al., 2010, Goldie et al., 2007, Weaver et al., 2011). Knowledge and skills are also prerequisite to professional identity development (Ackerman et al., 2009). Moreover, a reflection on established worldviews in the light of new learning

experiences is key to transformation in beliefs and practices (Bramming, 2007, Thompson et al., 2011). Therefore, demonstration of what is important in a profession along with opportunities for reflection are essential to these programmes in medical education.

### *Immersion along with Peer-Peer and Peer-Expert Collaboration*

Participants treasured the opportunity to immerse themselves in a community of medical educators, which is vital to the process of socialisation (Jarvis-Selinger et al., 2012). Coming from a diverse range of cultural and professional backgrounds, they brought multiple perspectives to their discussions and group activities. They also learned the culture and norms of the educational community and became deeply involved. Such group discussions allow for critical assessment of beliefs and reflective judgment, which may result in transformational changes (Mezirow, 1997). The course also allowed for frequent peer-tutor interactions and mentor-mentee relationships to discuss personal, social, emotional or academic concerns. Such conditions encourage trust, communication, feedback and discussion about any matter that the learners are concerned about. The participants valued the opportunities to join educational seminars and workshops organised by CME, where guest speakers from around the world shared their research and scholarship activities. Goldszmidt et al., (2008) also found such interactions with experts and collaborative learning beneficial.

### *Collegiality in a Meaningful Learning Environment*

The participants valued collegiality among themselves and the faculty. This alliance involves respect and mutual understanding, thus offering a safe environment for expression and experimentation. Collegiality welcomes diversity by providing equal opportunities in a free-from-coercion environment. This learner-centred collaboration fosters critical and reflective thinking (Mezirow, 1997). These collegial networks improve the participants' individual as well as collective learning and they are a predictor of academic success (Wenger et al., 2002). In the classroom, the participants felt connected and developed collegial networks over the period of the course. With shared goals, they become engaged in shared learning activities to solve common problems, thus developing a sense of belonging and forming a Community of Practice (Blanton and Stylianou, 2009). In such communities, learning as a primary goal is

embedded in daily practice rather than an additional responsibility. Also, the responsibility for mentoring and support is distributed across the members of the community. O'Sullivan and Irby (2011) highlighted the importance of networks, relationships and support within learning and workplace environment in their expanded model for faculty development. However, collegiality may also reinforce norms of resistance and maintenance of the status quo. Therefore, a diverse range of educators (tutors and learners) at various levels of expertise/development may be a pre-requisite. A cross-disciplinary and diverse pool of health professionals promotes a focus on general pedagogical issues in comparison to specific disciplinary content or community (Blanton and Stylianou, 2009). It also encourages the recognition, understanding and acceptance of diverse perspectives (Monrouxe, 2010).

### *Autonomy and Self-Directed Learning Opportunities*

The participants felt that protected time for reading literature, discussions and writing assignments offered autonomy and self-directed learning opportunities. The tutors on the course considered learners' perspectives and provided them with relevant information and choices. In fostering self-direction, the emphasis is on creating an environment in which learners take control of their learning and become increasingly adept at learning from each other (Williams et al., 1999). A proactive learner tends to retain and make use of what they have learnt for longer periods (Williams et al., 1999). Autonomy in a safe learning environment encourages learners to become critically reflective about their assumptions, while being open to new perspectives - an ideal ground for transformative learning (Mezirow, 1997).

### *Opportunities for Application of Learning*

With knowledge acquisition through the course and continuous reflection upon it, the participants became eager to put it into practice. However, such opportunities were limited and somewhat artificial during face-to-face teaching. Opportunities for application of learning have also been advocated by adult learning theory (Knowles, 1990) and experiential learning cycle (Kolb, 1983). Health professionals are problem-centred and oriented towards gathering knowledge that is relevant to their future practice (Kaufman, 2003). Authentic learning experiences with an explicit relationship to future professional practice encourages motivation, engagement, collaboration and

reflection within students, all of which are prerequisites for identity development (Anspal et al., 2012, Sutherland and Markauskaite, 2012). The courses should offer the face-to-face participants more practical opportunities to teach small groups, large groups, design a curriculum and develop e-learning educational projects. It is the generation of meaning that allows learning to transfer between contexts (Bleakley et al., 2011), for example, from simulated events to real life situation. Hence, participants should be allowed to contextualise the work and enact changes on real life educational problems in their own context using theory. These projects and tasks will also facilitate the alignment of these programmes with participants' institutional needs (McLean et al., 2008).

### *Scaffolding*

The participants valued the scaffolding provided by the faculty and other senior colleagues over the period of the course in helping them develop as independent educators. This individualised support system towards helping the students achieve their learning goals is essential for learner's engagement (Vygotsky, 1980). The faculty scaffold the novices' learning through guidance, modelling, discussion and feedback. Peers in the classroom at various levels of development also provide scaffolding. However, it would be important to know the learners' zone of proximal development (ZPD) i.e. the difference between their current level of independent problem solving and the level that can be achieved under guidance (Vygotsky, 1980). As the ZPD is wider for those in a group, it may be wider for the face-to-face cohort as opposed to the non-cohorted distance learners who are often learning in isolation. The courses should offer mentorship and appropriate one-to-one supervision in the research projects.

### *Feedback and Performance Attainments*

Participants found positive feedback (persuasive communication) in terms of success in the course assignments or encouragement from a credible source helpful. They felt dejected after receiving resubmissions in their assignments. A positive feedback raises self-efficacy while failures lower it, particularly if it occurs early in the learning process (Bandura, 1986). MacDougall and Drummond (2005) also found that encouragement and motivation have an important role in medical teachers development. Boud and Molloy (2013) highlighted the importance of curriculum design in creating

opportunities for students to develop as judges of their own learning to encourage self-regulation. Bearman and colleagues (2014, pg.2) suggested careful design and planning of assessment to ensure that: 'key learning outcomes are addressed; engagement in the task prompts the kind of learning most desired; the task is timed to ensure that there is an opportunity for students to benefit from the comments they receive; and that there is time within the semester to put their learning into practice in subsequent activities', most of which were ensured in the course.

All these learning conditions are in line with the principles of adult learning theory, constructivism, self-directed learning and self-efficacy (Kaufman, 2003). These principles of adult learning and reflective practice have been used in other longitudinal programmes to support the development of educators (Armstrong and Barsion, 2006, Lown et al., 2009, Searle et al., 2006b). These learning conditions also relate to the key features of effective faculty development highlighted by Steinert et al., (2006) such as experiential learning, feedback, effective peer and colleague relationships, diversity of educational methods and adherence to principles of teaching and learning. Other studies have also reported that an instructional design promoting immersion and collegiality is effective (Boling et al., 2012, Song et al., 2004, Thomas, 2012). In addition, these conditions are ideal for transformational changes with personal and professional development (Mezirow, 1997). They correspond to the expansive–restrictive continuum of the learning environment presented by Fuller and Unwin (2003), where expansive conditions are more likely to create deep learning opportunities. This expansive-restrictive approach is related to the participation referred to in the communities of practice theory (Wenger, 1998). As there is an increasing number of institutions offering these postgraduate qualifications in medical education worldwide, the policy makers, administrators and schools should make informed decisions and consider these learning conditions to trigger transformational changes and development among learners. These conditions may provide educators with a rationale for selecting appropriate educational practices to enhance adult learning. These learning conditions may also serve as standards for assessing the effectiveness of these programmes in medical education and ensure their quality in a meaningful way.

### 5.4.3 Sense of Belonging

The learning conditions in the course enabled the novices to become critical members of the educational community and contribute to its advancement. The face-to-face participants reported developing a sense of collegiality towards other educators in the course as well as towards the larger community of medical educators. The qualification stimulated them to network with other educators both nationally and internationally at conferences, with whom they increasingly shared a common language, interests and goals. These interactions give them a sense of validation as medical educators and contributes towards their identity development further (Wenger et al., 2002). Self-verification theory (Swann, 2011) suggests that we have a tendency to be seen by others in the same way as we see ourselves i.e. we seek to reinforce the positive or negative views we have about ourselves through identity negotiation, thus preserving and shaping our self. We tend to seek people similar to us and make a deliberate decision about whom we should interact to confirm our sense of self (Monrouxe and Poole, 2013). This sense of connection with like-minded people from other institutions has also been reported by the faculty of Harvard Medical School enrolled in a Harvard Macy programme (Lown et al., 2009).

### 5.4.4 Interpersonal Expectations and Identity Development

Across various social situations, we quickly sense how others view us and act according to these expectations. With the involvement in scholarship, research or formal qualifications (or research and scholarship resulting from the qualification), the professionals gain their acceptance, influence and become recognised in the profession (Brownell and Tanner, 2012). The participants also reported gaining recognition and legitimacy as an educator. They were regarded as educational experts within their institutions. This resulted in certain judgements conferred upon them by their colleagues. These expectations are also associated with the various roles they assume (Jarvis-Selinger et al., 2012). According to Jenkins (2008) ‘how others see us’ is important for identity development. Monrouxe and Poole (2013) contended that our actions are consistent with others’ views and often we become the person others expect us to become. These colleagues’ expectations also encourage the participants to continue to learn and develop as an educator after the course and in their workplace. Likewise, a lack of expectation or doubt in performance may influence the process of identity development negatively. Apart from qualifications, the changing policies and

practices in the workplace also influence the expectations of leaders and colleagues of the participants.

The importance of peer expectations can be judged from the concerns reported by the participants such as a lack of regard for educators in the society and medical education being ill-defined as a career. In addition, the participants attributed successes to their ability and effort (internal factors), while failures to their colleagues' attitudes, organisational policies and resources (external factors), thus showing their susceptibility to the effect of others' expectations.

The extent to which these expectations influence performance or identity development may vary. The impact on individuals' may depend on their belief about the abilities, trustworthiness and supportive behaviours of the colleague having such expectations from them (Karakowsky et al., 2012). Also, these expectations may be more important earlier in the career, when external factors regulate identity. As one becomes an expert, identity is regulated internally (Goldie, 2012, Monrouxe, 2010) and may not require conformity to peer expectations.

### 5.4.5 Tensions as an Educator

The participants were concerned that educators' roles are not valued and recognised within medicine. The absence of well-defined job descriptions in their institutions was also reiterated. However, the extrinsic motivations of the participants towards enrolment suggest otherwise. For example, some enrolled because they perceived the qualification would bring positive career prospects, while others were recommended and sponsored by their home institutions. This suggests an increased differentiation of the roles of medical educators and a need for qualified educators. It also shows a trend towards recognition of medical education as a speciality in its own right. This shift in focus and investment towards development of medical education at the level of policy makers and leadership shows that there is a promising future for early career medical educators pursuing it full-time.

The participants reported concerns about their further development as medical educators in their home countries after the qualification. With medical education becoming a full time career, there will be a growing demand for doctoral programmes in medical education and robust research studies. However, these programmes are currently

concentrated in the North America, Europe, Africa, Australia and New Zealand (Tekian, 2014). Hence, there is a need for more doctoral programmes with equitable distribution around the world. An infrastructure with accessibility to medical education literature and a critical number of individuals having a Masters/PhDs in medical education will be a pre-requisite, otherwise, the quality of research in medical education will be suboptimal. Pugsley et al., (2008b) also reported concerns over the quality of the supervision in medical education research programmes. To overcome the shortage of PhD supervisors, Riesenberg et al., (2009) recommended hiring non-physician professionals with expertise in education as they can offer added value through their alternative perspectives on problems in medical education. Tekian (2014) also recommended considering other options leading to specialisation in medical education. He recommended faculty with doctoral training in other disciplines such as psychology, sociology, anthropology, education and statistics need to collaborate with those in medical education to foster disciplinary diversity and advancement in medical education research.

Having an active clinical practice was seen as important and fundamental in supporting medical education roles. The participants reported a selection dilemma - clinical identity intersecting with their newly developed educational identities. This arises from a comparison of their internal identities (self-schema) with their possible selves i.e. becoming an educator (Monrouxe and Poole, 2013). In case of conflict, this negotiation may result in rejection of the professional roles (new or old identities) or other acts of resistance such as inappropriate behaviours (Helmich et al., 2010, Helmich and Dornan, 2012). The Early Careers Working Group at the Academy of Medical Educators also reported this career identity crises (Sabel and Archer, 2014). Such situation probably arises because medical education is a new speciality and still in its nascent stage. However, it may resolve with the increasing professionalisation of the speciality.

Other concerns included resentment that a qualification might result in moving the participants up the hierarchy towards administrative positions and away from imparting education and involvement with the students. This was reported by a female participant and may be associated with gender-based affinity for direct contact with the students and nurturing them as compared to a position of authority (Sabbe and Aelterman, 2007). A similar resentment was also reported by medical students, who dropped out of medical school and preferred a career such as nurses because they desired a closer contact with the patients (Helmich et al., 2010). It is therefore important to introduce a

variety of academic workload models for medical educators in practice. The participants also reported being stigmatised for acting as change agents. Therefore, medical education courses should prepare participants to communicate and collaborate with colleagues more effectively in order to eliminate any misconceptions about the role of medical educators in the workplace, and to handle negativity in a constructive way.

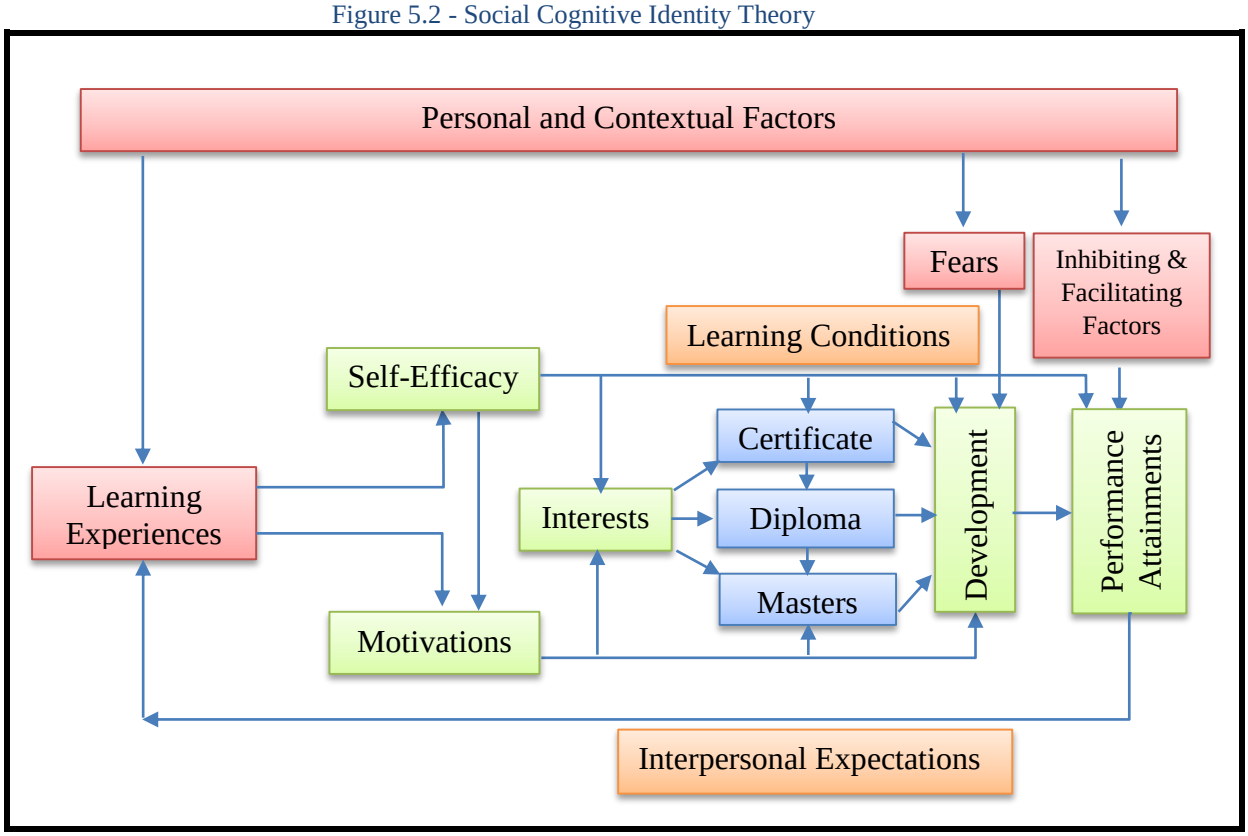
### 5.4.6 Establishing and Extending Social Cognitive Identity Theory

Findings of this study enable refinement and extension of the SCIT presented in Chapter 4. The identity builds and rebuilds as self-efficacy solidifies (Monrouxe and Poole, 2013). Bandura (1997) argued that four major sources of self-efficacy are vicarious experiences, performance attainments, social persuasion and physiological & emotional states. The experiences of the face-to-face students were somewhat different from the distance learners as they could directly observe good practices in education. However, they did not have choice in modules selection and were not directly implementing their learning from the course immediately into practice. The performance attainments for face-to face students came from engagement with feedback on assignments and development during the course. These attainments impacted their learning experiences in the course and informed their self-efficacy. The participants received social persuasion in the form of encouragement from the supervisor on their progress and research output. The face-to-face students go through the course according to fixed schedules, whereas, the distance students regulate their own pace and are not bound by arbitrary due dates for submitting assignments. This is likely a specific feature of the Dundee programme. Bligh (2000) pointed out that introducing new information without time for consolidation or reflection can result in memory process impairment. Long and Lock (2014) also mentioned about psychological limitations on the rate at which information can be processed. Hence, the physiological and emotional states influences self-efficacy in the face-to-face students a lot more than those undertaking the course as a distance learner.

Following study 3, the various themes of the SCIT framework such as self-efficacy, development and changes in practices identified in the previous chapter were established. The influence of personal and contextual factors on performance attainments and various other associations were also confirmed. The changes over the period of the course also reflect the incremental process of learning and dynamic nature

of identity development. Moreover, I was able to refine the SCIT further with the addition of the seven learning conditions identified that foster development and changes in practices. These are important for changes to take place and in the process of identity development (Figure 5.2). This addition gives recognition to the importance of networks, relationships and support in the classroom/workplace environment for successful identity development. These learning conditions encourage a sense of belonging among the learners and within their faculty. This sense of belonging then informs their educational identity and they continue to contribute actively in the wider community of practice, thus resulting in further development after the course. Another interesting phenomenon that results in strengthening of educational identities is interpersonal expectations. These include expectations of the teacher in the classroom and colleagues in the workplace. Therefore, interpersonal expectation have been added to the SCIT framework as well (Figure 5.2).

Figure 5.2 - Social Cognitive Identity Theory




### 5.4.7 Limitations and Future Research

The insights from the face-to-face students helped inform the theory and validated its applicability in both distance learning and face-to-face, and classroom and workplace contexts. However, this study has certain limitations. A 10-month follow-up period in

the current study may not be enough time to identify all typologies of change and processes. Moreover, participants could not provide concrete examples of educational changes as they take time to be implemented. Therefore, QLLR should be undertaken over the period of the course into their workplace for longer periods (Holland et al., 2006). First interviews were carried out after 4 months and by then study fellows had already taken four modules. Interviewing them before coming to the course would have resulted in further clarifying the changes. Also, I did not specifically ask the participants about their development as teacher, researcher, leader or learner but on how the course has influenced their beliefs as an educator. Therefore, a comparison across each of the themes on three interview points was hard to elicit. The intensive nature of the face-to-face course with one module at a time limited the QLLR's ability to ascertain the changes between the interviews. Moreover, each of the interviews was held after four months based on availability of individual participants. Therefore, the 'aha' moments or transformational changes were mostly related to the specific modules studied before the particular interview i.e. dictated by the structure of the course. Future studies should involve following the participants from the course into their workplace for longer periods. A QLLR using solicited audio diaries (Monrouxe, 2009b) to get 'in the moment' reflection may be useful. This will enable data collection for longer periods and allow focus on the various themes identified in the current study to explicate these transformational changes over the period. Despite a longer period of contact and the researcher coming off the face-to-face assessment team, the participants knew the researcher as a tutor and this may have limited their willingness to disclose information about the course. However, the richness of the data suggests that the participants responded freely.

## 5.5 Summary

This QLLR helps establish and extend the provisional model of SCIT from the previous studies. It highlights the role of learning conditions from the course and interpersonal expectations in the classroom/workplace towards identity development of healthcare educators. It also overcomes the limitations of the previous two studies by exploring the immediate impact on the participants, whilst engaging with the medical education course. The findings also complement those from the previous studies. The qualification enhances self-efficacy and the participants develop as teachers, researchers, leaders and learners. However, the participants also have concerns towards becoming a medical

educator. The next chapter concludes the research thesis. It provides a brief summary of the research findings, along with their implications.

# Chapter 6: Discussion and Conclusion

## 6.1 Introduction

The final chapter synthesises the findings of three studies presented in the thesis. It summarises the key research findings in relation to the overarching research question. Next I discuss the strengths and limitations of my research. The chapter concludes with the educational implications and future research recommendations.

## 6.2 Summary of Key Findings

This thesis presents the first three studies on the long-term effects of a degree-awarding programme in medical education on healthcare professionals worldwide. It looks in-depth at the transformational changes and development of professional identities among medical educators. It also explores the motivations towards enrolment and the medical educators' perspectives of the qualification's impact on their educational practices and career trajectories. Different methods are mixed to inform the development of each, and explore areas of overlap and uniqueness, and increase the range and scope of inquiry. Therefore, the impact of these postgraduate qualifications in medical education at individual and institutional level is methodologically established in the current thesis. The findings also inform the content and process of these programmes in medical education. They illuminate a sophisticated understanding into the identity development process of these healthcare educators from a postgraduate course in medical education, utilising a constructivist grounded theory. Table 6.1 provides a summary of practice points emerging from each study.

Table 6.1 - Practice Points

| **Practice Points** | |
|---|---|
| Chapter 3: Study one | A degree-awarding programme in medical education significantly improves self-efficacy in educational practices<br><br>These qualifications provide a sense of legitimacy with an increased sense of engagement in the scholarly activities<br><br>Masters' graduates reported more confidence in their abilities and had more educational research publications/presentations than those graduating at Certificate level<br><br>These qualifications help educators fulfil their learning needs and subsequent accreditation requirements in the rapidly evolving medical education landscape |

| | |
|---|---|
| Chapter 4: Study two | Participants have various intrinsic and extrinsic motivations influencing their engagement in a postgraduate qualification in medical education.<br><br>Healthcare educators develop as teachers, researchers, leaders and learners during the course<br><br>The qualification results in career advancement with greater educational responsibilities<br><br>Recognition of these programmes as a necessary starting point towards a full-time career in medical education<br><br>Impact of the qualification is influenced by the complex interplay of personal and contextual factors<br><br>Learning in an incremental iterative manner enables productivity in the workplace<br><br>Networking and belongingness towards the educational community is an enabling factor towards identity development<br><br>The courses further contribute towards professionalisation of the speciality |
| Chapter 5: Study three | Participants' interest in medical education and self-efficacy evolves throughout the course based on performance attainments<br><br>In addition to the formal curriculum, the learning conditions such as vicarious experiences, immersion, collegiality, autonomy and scaffolding enhances the behaviour change, and develop competent healthcare educators<br><br>Participants develop a sense of belonging towards other educators in the course as well as towards the larger community of medical educators<br><br>Identity development as an educator has associated fears and tensions<br><br>Peer recognition and the expectations influence identity development in the course and beyond |

In the survey, I found that qualifications in medical education enhance theoretical foundations in educational practices resulting in increased self-efficacy and engagement in scholarly activities. This first study gives an insight into identity development of the graduates and impact in terms of career, which is explored in the subsequent qualitative studies comprehensively. The second study reveals that the educators experience transformational changes after undertaking a medical education qualification. The qualifications encourage specialisation and development of health professionals as teachers, researchers, leaders and self-reflective lifelong learners. They bring new opportunities and the educators often get a promotion to senior positions. They compete for various educational roles, pursue higher career trajectories and progress further in their career. The qualifications give recognition and the participants are listened to as educational leaders producing valued outputs for key stakeholders in their home

institutions and more globally. However, there are various challenges and facilitators towards productivity in the workplace - an incremental iterative mode of learning is useful. A model on the identity formation of healthcare educators: Social Cognitive Identity Theory (SCIT) also emerged. The third study involves a longitudinal follow up of face-to-face students to specify the impact of these qualifications on the development of educational identities and confirm the relationships identified in SCIT. It also reflected the transformational changes in the participants as teachers, researchers, leaders and learners over time. The third study reveals that the participants' interest in medical education evolves throughout the course and they continue to learn and develop as medical educators in practice. However, a strong influence of personal and contextual factors on motivations, development and performance attainments was also established. Participants take back many different new skills and ideas to their roles. In the third study, one third of the face-to-face participants (2013/14) are under 30 years of age unlike respondents (2/224) in the previous studies. This early career enrolment coupled with extrinsic motivations suggests a positive trend towards professionalisation of medical education worldwide. However, it may also reflect the increasing competition in medicine and a need to become prominent among health professionals. Participants in the longitudinal third study consider their colleagues' lack of understanding in education as a challenge, which is cited as an enabler in the second study. Interpersonal expectations are also found to have a significant role in the development of the participants as educators in practice. Moreover, the third study identifies that vicarious experiences, collegiality, immersion, opportunities for application and feedback encourages reflection on previous educational assumptions, thus fostering transformational changes in the participants.

The three studies helped understand the experiences of both the face-to-face students and distance learners enrolling for these postgraduate qualifications in medical education. Unlike many others postgraduates courses where face-to-face on-campus study is more common, distance learning is the dominant mode in these programmes in medical education. The advent of the internet and technology has made possible the delivery of courses via asynchronous lectures, discussion boards and content management systems online. Distance learning communication between tutors and students transpire by means of email, discussion boards, telephone and skype. Currently, the distance learning programme in Dundee is non-cohort based so the learners can study and take assessment at their convenience. However, this is likely to

change with a move towards a cohort-based programme. Since many participants are working professionals, they are motivated by the feasibility/practicality of completing the qualification. Therefore, it would be interesting so see how moving from non-cohort to a cohort-based programme impacts the learners. Many face-to-face students also continue their course after an assigned brief teaching period of one year as distance learners. However, there are differences in terms of experience between a face-to-face and distance learner.

The face-to-face mode allows direct contact and classroom meetings among peers and with the tutors, thus facilitating conversation and debate. They have opportunities to be with like-minded individuals, removed from the other demands of professional life. They can discuss issues of common interest, and reflect on their various cross-cultural experiences. They can directly observe role models and best practices in education. Their performance attainments come from feedback on their assignments and development during the course, as they are not directly implementing their learning into practice immediately. On the other hand, distance learners have choice in module selection to match their interests. They have longer timelines for reflection and consolidation of new information. They can put into practice what they learn and reflect on that experience during the course. Their performance attainments not only come from the course but also their productivity in the workplace and its impact on their students. However, the distance learners work in isolation and lack a feeling of community and support. They require access to a computer, internet, email and software programmes. Also an online programme has limited capacity to engage learners, who are expected to be self-motivated active learners with strong organisational skills.

The learners as well as the regulatory bodies in many countries have concerns pertaining to the quality of teaching and learning in distance learning as compared to that experienced by F2F (Ferguson and Tryjankowski, 2009, Shachar and Neumann, 2003). The findings suggest that both face-to-face and distance-learning programmes benefit the learners. The similar development reported by participants in the second and third studies suggest distance learning as a respectable and feasible option for education. Moreover, the distance learners have more and immediate opportunities for application of learning to practice than the face-to-face students. The findings may encourage the educational institutions to invest in technology and transform some existing resource-intensive face-to-face courses to online distance learning. This will not only save cost but also provide for a wider range of students, regardless of age or geographic location.

The findings should provide positive reassurance to the learners, who can now choose distance learning without fear that it may hinder their performance outcomes. The possibility of blended programmes providing the learners with the best of both worlds should be explored. For other implications see section 6.4.2.

In conclusion, the increasing self-efficacy, transformational changes coupled with increasing involvement and sense of belongingness towards medical education, all provide evidence that the qualification in medical education results in the strengthening of identities as a medical educator. Being and becoming an educator also results in various concerns. However, healthcare educators choose and continue to invest in education based on their interest and passion. This relates with altruistic service that is common to people classifying themselves as members of a profession (Newlyn, 2015). However, acceptance of this position as an educator by the society is critical to their retention for the duration of their careers.

The Social Cognitive Identity Theory (SCIT) offers original and significant insight into the impact of qualifications in medical education on the identity development of healthcare educators. The theory explains how the professional culture, norms and values are subconsciously and implicitly learnt along with the knowledge and skills, thus continuously shaping an identity. It highlights the role of formal education institution in the learning process, which was not included in Lave and Wenger's account of learning (Fuller and Unwin, 2003). Through the period of the qualification, the leaners experience a sense of belonging and become active participants in these Communities of Practice, which is a contemporary and little-researched area. The participants seek to align their actions and thinking with their new community and become attuned to the ways of being in the practice. This identity then influences the decisions and external actions. This SCIT highlights a need to appreciate the power of workplace environment on the successful development of educational identities. The theory has an explanatory power and it considers the impact on pedagogies, dispositions and discourses in a wide range of workplace contexts. The theory adds to our understanding of how healthcare educators learn, how best to teach, and how to foster personal and professional development. The various components identified in SCIT can be used to inform instruments for evaluating course outcomes, improve programmes and demonstrate their importance. These instruments can be validated in various contexts to provide a common evaluation process. It is applicable to both the face-to-face and distance learning, and classroom and workplace contexts. It also identifies

relevant relationships and key influences on a process. Although the theory has some predictive ability, it cannot determine the magnitude of these relationships and influences. The SCIT may be an oversimplified interpretation of the complex process of identity development, which may occur in different stages or increments and quicker or slower for individuals. This theory excludes the tensions between multiple identities of the individual. Also, it considers a formal process of learning and networking in an educational community essential towards identity development as an educator, which may not be the case for many educators due to competing personal and professional demands.

## 6.3 Strengths and Limitations

In chapter two, I explained my study design and also highlighted the philosophical underpinnings of the pragmatism paradigm. I believe that the epistemological and theoretical alignment within my research design, methodology and methods throughout this thesis makes the study rigorous and the findings robust. The mixed methods approach and sampling of a range of participants also allows for transferability of the findings to other settings. I have discussed the strengths and limitations of the studies and methods in the previous chapters. Table 6.2 provides a summary of strengths and limitations of each study.

Table 6.2 - Strengths and Limitations

| Research Study | Strengths | Limitations |
|---|---|---|
| Study one | Efficient means to gather information from a large population dispersed over too broad a geographic range<br><br>Helped recruit and screen potential sample for the following study<br><br>Good mix of responses from a diverse range of participants<br><br>Quantitative measures of the impact along with qualitative findings supporting them<br><br>Easy to make generalisations | Need careful planning to get valid and reliable results<br><br>The population was not representative<br><br>Participants age group < 30 years were under represented<br><br>Survey can only provide an estimate for the true population<br><br>The impact is self-reported<br><br>Prone to biases of respondents poor assessment of behaviours |
| Study two | Purposive sampling of participants with known attributes<br><br>Individual interviews allow for sharing of sensitive information and prevent any single perspective from dominating | Labour intensive<br><br>Participants reflection on cognitive processes<br><br>Grounded theory has been criticised over their claims to develop theories with explanatory or predictive power |

| | | |
|---|---|---|
| | Interview schedule was based on Kelchtermans' conceptualisation of professional self<br><br>Explains in-depth the identity development and its processes from a postgraduate qualification in medical education<br><br>Offered opportunity to reflect on one's development as educator | Cohort of graduates from a single university<br><br>Prone to bias of participants poor recall of events or providing socially acceptable responses, which are not correlated with observed behaviours |
| Study three | Data collection while doing the course – reflections in the moment<br><br>Data can be compared across multiple interviews longitudinally<br><br>Allowed for comparison between distance and face-to-face learners<br><br>Confirmed the findings from previous studies and also improved their transferability | Cohort of students from a single university<br><br>Small number of participants and one participant dropped out<br><br>All of the participants were international students<br><br>Limited disclosure due to familiarity with the researcher<br><br>Need to be undertaken for longer periods of time to identify all typologies of change and processes<br><br>First interview was carried out after a period of four months into the course<br><br>Intensive nature of the course with one module at a time limited the QLLR's ability to ascertain the changes between the interviews<br><br>The structure of the course dictated the 'aha' moments or transformational changes, which were mostly related to the specific module studied before the particular interview |

A survey is an efficient means to gather information from a large number of people dispersed over a broad geographic range. The Data Protection Act and the lack of availability of current email addresses for the graduates posed a challenge. Therefore, I could not ensure representativeness in the study sample. Also, the impact is self-reported in all the three studies and prone to bias of participants' poor recall of events or giving socially acceptable answers. However, a comparative/relative rating (before and after) in the survey may have balanced the effects of individuals' over and under-rating. Also, concrete examples of educational changes in the interviews suggest that the changes are real. The studies included the graduates from one programme. However, they were dispersed across many different workplaces around the world. Constructivist Grounded Theory has been criticised over the claims to develop theories. Therefore, I

have grounded the emergent theory from the data in existing theories. The limitations of the first two studies were addressed in the third study. The third study involved following face-to-face students during the course. However, a 10-month period was not enough to identify all the typologies of change and processes. First interviews were carried out after a lapse of 4 months and by then study fellows had already taken four modules. However, 13/14 study fellows were international students and I wanted to give them some time to acclimatise to the programme and the surroundings. A QLLR is a relatively small scale project but resource intensive in terms of time, energy and funds. The structure of the course also limited the QLLR's ability to ascertain the changes between the interviews.

### 6.4 Personal Reflection

The research studies were carried out on the students and graduates of the Centre for Medical Education, University of Dundee. I am currently enrolled for a PhD and also working as a part-time tutor. I predominantly had a 'partial insider' researcher status sharing the characteristic with the participants being studied (Burns et al., 2012, Sherif, 2001). This role gave me some benefits such as ease of access and rapport building. Being a health professional with postgraduate qualification in Medical Education from Dundee was advantageous in terms of having an awareness of the context and work practices. Being a Masters' graduate, I had an insight into the educational culture and terminology used. I could also understand the various aspects of the course the participants referred to. However, the insider status might have resulted in participants' assumption about researcher's familiarity with the context and they might have failed to share their experiences fully (Burns et al., 2012, Dwyer and Buckle, 2009). Therefore, I asked exploratory questions to clarify any such assumptions during the interviews. It also influenced my sampling strategy and no participants personally known to the researcher were included in this study.

As I had some preconceptions about the impact of the qualifications, I adopted a constructivist grounded theory instead of taking a more classical approach. The insider role enhanced my understanding of the population but it also required analytic distance as achieved through maintaining a reflective diary. I also employed an iterative process to refine my analysis and identification of themes, so as to minimise the impact of pre-existing viewpoints. To reduce potential perceptions of coercion, I stopped being part of the assessment team for participants. However, lack of knowledge about the structure of

the NHS and the health systems of other countries as an international student also posed some difficulties.

Moving to another country and leaving my family behind was an extremely difficult period for me, yet significant in shaping my views. Over the period of my Masters and PhD study at the Centre for Medical Education, University of Dundee. I saw myself developing as an independent researcher, educational leader and reflective practitioner. It was a steep learning curve, as I had only done a descriptive research in the past. I was a positivist researcher but now I am more interested in the pragmatism as well as interpretivism paradigms. I have spent more time doing medical education than dentistry and I can feel a shift in my identity. I feel a sense of belongingness towards an educational community. During my PhD, I also applied for recognition as Fellow of the Higher Education Academy and Member of the Academy of Medical Educators, UK. My future role in Pakistan also involves working fulltime in medical education. Through the qualification, I will be able to join a Medical University as Assistant Professor, this will give me position power, and the qualifications have already given me legitimacy and required competencies as an educational leader. I will be running courses in health professions education, organising conferences and acting as a change agent for the traditional ineffective practices in the university and the affiliated institutes. The past five years, I have spent here at CME has shaped and influenced my perspectives on leadership. I engaged in self-reflection and developed some understanding and sense of myself. I can now articulate and put into action a vision for a future that I believe will inspires others to join in. I had worked through the emotional transition as I faced challenges in my research project, thus developing resilience. I now have an understanding of the challenges and enablers towards implementation of educational changes in the workplace, which will be useful. I will assume a bigger role towards the promotion of medical education as a postgraduate speciality for the medical graduates in my context. I feel ‘pulled’ to conduct research and contribute towards scholarly teaching both nationally and internationally. I have taken pride in presenting my research to others during conferences and seminars. I have developed academic writing skill and also have a publication from the current thesis. This research will inform the policy and practice in medical education and also justify the investment in terms of faculty time and other resources requested from the universities. As a learner, I can now reflect on my experience, develop strategies, identify my learning needs and meet them as a self-directed lifelong learner. I am able to identify the gaps in my own

knowledge and ways to close those gaps. My range of work experiences gives me a broad understanding of various health professionals and contexts worldwide. I met a couple of the research participants at different conferences, which helped me network with medical educators worldwide. This will be useful in future collaborations and furthering the professionalisation of medical education. In conclusion, I can say that I am completely engaged and excited about pursuing medical education as a fulltime career and I look forward to learn more about it.

## 6.5 Implications

Although the conclusions are drawn from studies representing one programme in medical education, it is likely that these findings are transferable. The thesis concludes with implications for different stakeholders: learners, course organisers, evaluators and leaders. As the majority of the respondents were distance learners (86.2%) who took the course while working, these implications may also have relevance to longitudinal fellowships.

### 6.5.1 Implications for Learners

An exemplar framework that supports the development of medical educators is the GMC 'approval of trainers' process (GMC, 2012), which makes it mandatory for certain named positions involved in educating the medical students to evidence minimum competencies in education by July 31$^{st}$, 2016 (GMC, 2012). This makes the study very timely in reporting the usefulness of postgraduate qualifications in medical education on development as an educator. Awareness of these findings will help the health professionals considering it to meet their educational needs or department heads counselling them or agencies sponsoring them. The Certificate graduates reported significant improvement in their teaching self-efficacy, therefore it is suited to any whose work contains some teaching. Continuing to Diploma and Masters' qualification results in further gains in terms of career progression and research publications in medical education. Therefore, a Masters is appropriate for those pursuing a full-time educational career. Early career full-time medical educators from our participants pursuing a PhD suggest that a long-term career in medical education would also need a PhD/MD. These Certificate, Diploma and Masters are relevant at all stages of a career and as such should be offered to early career educators. The graduates uphold high

technical and ethical standards, thus raising the quality of services above those who have no qualifications in medical education. The importance of the educator's role as a learner has been highlighted as well. This should encourage the recognition of learning as a scholarly activity along with teaching, leadership and research. Educators seeking employment or being offered educational roles should review the workplace environment in terms of its policies and practices for their development and productivity.

### 6.5.2 Implications for the Programmes in Medical Education

The findings have practical implications for both medical education and the medical profession. They confirm the significant and positive impact of postgraduate qualifications on healthcare professionals' educational identity formation. Understanding the various motivations towards enrolment would help course organisers better understand and influence their target audience. The findings also contribute towards a rich understanding of processes that can enhance the effectiveness of faculty development interventions.

Course organisers and tutors should encourage a safe learning environment with social modelling, autonomy, immersion and opportunities for application to ensure a successful development of an educational identity. The course should actively nurture a culture of belonging and encourage reflection on previous teaching practices with opportunities for discussing teaching issues among colleagues with appropriate scaffolding and feedback on performance. These learning conditions may benefit curriculum planners of medical education programmes with a rationale for selecting appropriate educational practices to foster professional identity. The common elements in the design of various programmes also provide opportunities to share ideas and resources between existing and new programmes in medical education.

The course resulted in professional inclusiveness among educators, which contributes towards professional identity. However, the curriculum planners must ensure that educators also develop inclusive social attitudes for productivity in the workplace. Moreover, these courses should prepare participants to communicate and collaborate with colleagues effectively in order to eliminate any misconceptions about the role of medical educators in the workplace.

The impact of these qualification on distance learners corresponds with the impact on face-to-face students in terms of their development. However, this thesis also highlights the difference in terms of experiences among face-to-face and distance learners. The distance learners have longer timelines for reflection and consolidation of new information. They have a choice in selection of modules to match their interests, along with opportunities to put into action what they have learnt and in turn reflect on that experience. For distance learners, the online environment should provide more opportunities for peer-peer and peer-tutor interaction (Boling et al., 2012, Song et al., 2004, Thomas, 2012). Although their performance attainments not only come from the course but also their productivity in the workplace and its impact on their students, negative feedback on course work may impact the distance learners working in isolation more than the face-to-face students. A cohort-based programme will provide more networking opportunities to the distance learners, and also streamline administrative and academic support. On the other hand, the face-to-face students have the opportunity to be with like-minded individuals, removed from the other demands of professional life. They can directly observe good practices in education and discuss issues of common interest, and reflect on their various experiences. Their performance attainments come from engagement with feedback on assignments and development during the course. Hence, the programmes with a face-to-face mode of study should provide a range of learning experiences and allow participants time to try out their new skills. They should be given opportunities to design educational projects, enact them in practice and reflect on them. These programmes should also consider various options for smooth transition towards a PhD, and distance/blended PhD programmes should be developed for participants worldwide. A collaboration with other disciplines and institutions will enhance disciplinary diversity and advance medical education.

The challenges and enablers identified can help develop a tool to assess the feasibility of educational changes in the organisation. The course should encourage learners to reflect on their institutional strengths, challenges, threats and opportunities (Dyson, 2004) for successful implementation of educational changes in the workplace.

Findings revealed an influence of interpersonal expectations on identity development. A diverse range of learners enrol on these postgraduate courses. This diversity among learners includes cognitive, socio-cultural, discipline, gender, age, beliefs and disabilities, and can be a potential source of conflict or an opportunity for growth. Differential expectations of the teacher can impact the learning and performance of this

diverse range of learners regardless of ability. It is therefore important to discourage expectations grounded in stereotypes by sharing positive impressions of students and avoiding negative assumptions. The academics should be trained to manage diversity in the classroom/online by providing a conducive learning environment and exploit its potential for creativity and effectiveness in the group. The institutions should consider competencies in this regard for hiring the faculty. Faculty including professionals from overseas will also help improve the curriculum's international responsiveness (Ferdinand, 2014). By changing our expectations of others we can change their behaviour for good (Blanck, 1993). Therefore, behavioural interventions such as training in the workplace to undo negative feelings and expectations will also influence the impact of these qualifications and performance of the graduates. Likewise, graduates of these qualifications should be trained to encourage and expect improvement from their colleagues in the workplace.

### 6.5.3 Implications for the Universities and Other Healthcare Organisations

The factors that might limit educators' productivity in a workplace such as attitudes of the individuals, hierarchy and resources are deeply embedded in organisational policies. These policies and practices should be reviewed to recognise and reward the scholarship of teaching in the same way as research in clinical care and basic science has traditionally been rewarded in academia (Hueppchen et al., 2011). Medical educators should be given adequate opportunities, including protected time and funding in order to improve their teaching, introduce innovations and interact with an educational community in the workplace. These activities will encourage the development of educational identities in the workplace. Also, health professionals usually represent and belong to clinical disciplines from which they primarily derive their knowledge. However, when they begin to take on an educational role, they should be judged against the stated criteria for an educator in planning, policy, delivery or research rather than their own profession.

### 6.5.4 Implications for the Professionalisation

Understanding the nature of postgraduate qualifications in medical education and their impact has a number of far-reaching implications towards the professionalisation of health professions education. These postgraduate programmes are not only a product of

professionalisation but also contribute towards it. Findings are another step forward towards justifying the investment in terms of time and resources for medical education. The learning conditions identified in this thesis may serve as benchmarks along with other core criteria for assessing the quality of education and developing an international accreditation system for these courses and other professional development initiatives in medical education. This will also help establish equivalency for academic credits, thus enabling their transfer between institutions and countries.

The thesis also highlights the concerns of medical educators towards educational scholarship and support required for enculturation from academic centres worldwide. This suggests a need to recognise medical education as a specialty with specific job descriptions for educators. Separate career routes and variety of academic workload models for medical educators are recommended. Protected time or separate career paths with well-defined job roles as full-time medical educators to devote in educational scholarship and research will further the professionalisation of medical education and benefit the educators, and in turn students and patients in long term (McLean et al., 2008, Newlyn, 2015). It would also encourage enrolments from health professionals early in their career. This professionalisation will have many consequences and medical educators will get a particular status in society. This will also increase job satisfaction, productivity and sustainability of a career in medical education. A specialised Masters' programme or postgraduate programmes with optional specialist modules can be offered. Sub-speciality courses in assessment, curriculum development and research methodology are also recommended in collaboration with other disciplines such as statistics, education, psychology and social sciences to develop experts with advanced knowledge and skills in core areas of medical education. Implementation of a Teaching Excellence Framework for allocation of funding to UK universities may support a dynamic and internationally competitive UK teaching sector and also encourage the professionalisation of medical education (Tatlow and Phoenix, 2015).

## 6.6 Future Research

The possibility of an extended longitudinal research from the course into practice should be explored, as this type of research will provide further insights into how identities are developed and negotiated over time. This will also allow for in-depth exploration of how educational concepts learned at the university are transferred to practice and the conditions that afford or constrain such transfer. It also seems

worthwhile to analyse the course curricula of postgraduate qualifications in medical education to identify explicit and implicit messages about professional identity and social exclusivity. Despite some initial efforts, I could not manage to survey or recruit participants from other institutions awarding qualifications in medical education over a long period of time. Future studies should investigate the transferability of the SCIT framework to other programmes. Efforts should be made to forge links with international centres at an institutional level and conduct studies from multiple universities with different modes of delivery, course content and stakeholder groups. This may involve interviewing the programme directors to identify the purpose and learning outcomes of their course. Tutors' perspective of learning conditions that may influence identity development should be explored as well. As graduates did not mention their inability as a challenge, development of resilience among the participants of these courses should also be studied. A longitudinal study to explore the various paradigms of experiences and required support mechanisms for the educators will be useful. Also, it will be interesting to see if educating undergraduate students about learning processes helps improve their learning and performance. Also, study fellows should be interviewed first before coming on the course and specifically asked about their development as teacher, researcher, leader or learner to explicate the changes further. A QLLR using solicited audio diaries to get 'in the moment' reflections for longer periods may be valuable.

# References

Abednia, A. 2012. Teachers' Professional Identity: Contributions of a Critical Efl Teacher Education Course in Iran. *Teaching and Teacher Education,* 28 (5): 706-717.

Abrams, D. & Hogg, M. A. 2012. *Social Identifications: A Social Psychology of Intergroup Relations and Group Processes,* London, Routledge.

Academy of Medical Educators. 2012. *Professional Standards* [Online]. London: Retrieved 10 April, 2013, from http://www.medicaleducators.org/index.cfm/linkservid/180C46A6-B0E9-B09B-02599E43F9C2FDA9/showMeta/0/

Academy of Medical Royal Colleges Foundation Programme Committee. 2012. *The Uk Foundation Programme Curriculum* [Online]. Retrieved January 20, 2015, from http://www.foundationprogramme.nhs.uk/download.asp?file=FP_Curriculum_2012_WEB_FINAL.PDF

Ackerman, A., Graham, M., Schmidt, H., Stern, D. T. & Miller, S. Z. 2009. Critical Events in the Lives of Interns. *Journal of General Internal Medicine,* 24 (1): 27-32.

Adams, K., Hean, S., Sturgis, P. & Clark, J. M. 2006. Investigating the Factors Influencing Professional Identity of First-Year Health and Social Care Students. *Learning in Health and Social Care,* 5 (2): 55-68.

Ajjawi, R. & Higgs, J. 2008. Learning to Reason: A Journey of Professional Socialisation. *Advances in health sciences education,* 13 (2): 133-150.

Ajzen, I. 1991. The Theory of Planned Behavior. *Organizational behavior and human decision processes,* 50 (2): 179-211.

Al-Eraky, M. M. & McLean, M. 2012. The Compass Model to Plan Faculty Development Programs. *Medical Education Development,* 2:e4: 13-16.

Alliger, G. M. & Janak, E. A. 1989. Kirkpatrick's Levels of Training Criteria: Thirty Years Later. *Personnel psychology,* 42 (2): 331-342.

Anspach, R. R. 1990. The Language of Case Presentation. *In:* Conrad, P. & Kern, R. (eds.) *The Sociology of Health and Illness: Critical Perspectives.* 386-404. New York: St Martin's Press.

Anspal, T., Eisenschmidt, E. & Löfström, E. 2012. Finding Myself as a Teacher: Exploring the Shaping of Teacher Identities through Student Teachers' Narratives. *Teachers and Teaching,* 18 (2): 197-216.

Archer, J., McManus, C., Woolf, K., Monrouxe, L., Illing, J., Bullock, A. & Roberts, T. 2015. Editorials: Without Proper Research Funding, How Can Medical Education Be Evidence Based? *British Medical Journal,* 350:h3445: 1-2.

Armstrong, E. G. & Barsion, S. J. 2006. Using an Outcomes-Logic-Model Approach to Evaluate a Faculty Development Program for Medical Educators. *Academic Medicine,* 81 (5): 483-488.

Armstrong, E. G., Doyle, J. & Bennett, N. L. 2003. Transformative Professional Development of Physicians as Educators: Assessment of a Model. *Academic Medicine,* 78 (7): 702-708.

Ashmore, R. D., Deaux, K. & McLaughlin-Volpe, T. 2004. An Organizing Framework for Collective Identity: Articulation and Significance of Multidimensionality. *Psychological Bulletin,* 130 (1): 80-114.

Atkinson, P. 1981. *The Clinical Experience: The Construction and Reconstruction of Medical Reality,* Hampshire, Gower.

Baernstein, A., Oelschlager, A. M. E. A., Chang, T. A. & Wenrich, M. D. 2009. Learning Professionalism: Perspectives of Preclinical Medical Students. *Academic Medicine,* 84 (5): 574-581.

Ballantyne, J., Kerchner, J. L. & Aróstegui, J. L. 2012. Developing Music Teacher Identities: An International Multi-Site Study. *International Journal of Music Education,* 30 (3): 211-226.

Bamberg, M. 2006. Stories: Big or Small: Why Do We Care? *Narrative inquiry,* 16 (1): 139-147.

Bandura, A. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory / Albert Bandura,* Englewood Cliffs, N.J, Prentice-Hall.

Bandura, A. 1991. Social Cognitive Theory of Moral Thought and Action. *In:* Kurtines, W. M., Gewirtz, J. & Lamb, J. L. (eds.) *Handbook of Moral Behavior and Development.* 45-104. London: Psychology Press.

Bandura, A. 1997. *Self-Efficacy: The Exercise of Control,* New York, Freeman.

Barab, S. A., MaKinster, J. G. & Scheckler, R. 2003. Designing System Dualities: Characterizing a Web-Supported Professional Development Community. *The Information Society,* 19 (3): 237-256.

Barriball, K. L. & While, A. 1994. Collecting Data Using a Semi-Structured Interview: A Discussion Paper. *Journal of advanced nursing,* 19 (2): 328-335.

Barzansky, B. & Kenagy, G. 2010. The Full-Time Clinical Faculty: What Goes around, Comes Around. *Academic Medicine,* 85 (2): 260-265.

Bates, R. 2004. A Critical Analysis of Evaluation Practice: The Kirkpatrick Model and the Principle of Beneficence. *Evaluation and Program Planning,* 27 (3): 341-347.

Bearman, M., Dawson, P., Boud, D., Hall, M., Bennett, S., Molloy, E. & Joughin, G. 2014. *Assessment Design Decisions Framework* [Online]. Australian Government Office for Learning and Teaching Retrieved July 15, 2015, from http://www.assessmentdecisions.org/wp-content/uploads/2014/09/Appendix-A-the-Assessment-Design-Decisions-Framework.pdf

Becker, H. S., Geer, B., Hughes, E. C. & Strauss, A. L. 1961. *Boys in White: Student Culture in Medical School,* London, University of Chicago Press.

Beijaard, D., Meijer, P. C. & Verloop, N. 2004. Reconsidering Research on Teachers' Professional Identity. *Teaching and Teacher Education,* 20 (2): 107-128.

Blackburn, R. T., Bieber, J. P., Lawrence, J. H. & Trautvetter, L. 1991. Faculty at Work: Focus on Research, Scholarship, and Service. *Research in Higher Education,* 32 (4): 385-413.

Blakey, H., Blanshard, E., Cole, H., Leslie, F. & Sen, R. 2008. Are Medical Students Socially Exclusive? A Comparison with Economics Students. *Medical Education,* 42 (11): 1088-1091.

Blanck, P. D. 1993. *Interpersonal Expectations: Theory, Research and Applications,* Cambridge, Cambridge University Press.

Bland, C. J. & Schmitz, C. C. 1986. Characteristics of the Successful Researcher and Implications for Faculty Development. *Academic Medicine,* 61 (1): 22-31.

Bland, C. J., Seaquist, E., Pacala, J. T., Center, B. & Finstad, D. 2002. One School's Strategy to Assess and Improve the Vitality of Its Faculty. *Academic Medicine,* 77 (5): 368-376.

Blanton, M. L. & Stylianou, D. A. 2009. Interpreting a Community of Practice Perspective in Discipline-Specific Professional Development in Higher Education. *Innovative Higher Education,* 34 (2): 79-92.

Bleakley, A. 2005. Stories as Data, Data as Stories: Making Sense of Narrative Inquiry in Clinical Education. *Medical Education,* 39 (5): 534-540.

Bleakley, A., Bligh, J. & Browne, J. 2011. *Medical Education for the Future: Identity, Power and Location,* Dordrecht Heidelberg London New York, Springer.

Bligh, D. A. 2000. *What's the Use of Lectures,* San Francisco, Jossey-Bass.

Bligh, J. 1998. Where Medical Education Matters. *Medical Education,* 32 (6): 573-573.

Bligh, J. & Brice, J. 2009. Further Insights into the Roles of the Medical Educator: The Importance of Scholarly Management. *Academic Medicine,* 84 (8): 1161-1165.

Boling, E., Hough, M., Krinsky, H., Saleem, H. & Stevens, M. 2012. Cutting the Distance in Distance Education: Perspectives on What Promotes Positive, Online Learning Experiences. *The Internet and Higher Education,* 15 (2): 118-126.

Boud, D., Keogh, R. & Walker, D. 2013. *Reflection: Turning Experience into Learning,* Oxford, Routledge.

Boud, D. & Molloy, E. 2013. Rethinking Models of Feedback for Learning: The Challenge of Design. *Assessment & Evaluation in Higher Education,* 38 (6): 698-712.

Boyer, E. L. 1990. *Scholarship Reconsidered: Priorities of the Professoriate,* New York, The Carnegie Foundation for the Advancement of Teaching

Bramming, P. 2007. An Argument for Strong Learning in Higher Education. *Quality in Higher Education,* 13 (1): 45-56.

Branch Jr, W. T., Frankel, R., Gracey, C. F., Haidet, P. M., Weissmann, P. F., Cantey, P., Mitchell, G. A. & Inui, T. S. 2009. A Good Clinician and a Caring Person: Longitudinal Faculty Development and the Enhancement of the Human Dimensions of Care. *Academic Medicine,* 84 (1): 117-125.

Brownell, S. E. & Tanner, K. D. 2012. Barriers to Faculty Pedagogical Change: Lack of Training, Time, Incentives, and… Tensions with Professional Identity? *CBE-Life Sciences Education,* 11 (4): 339-346.

Bryant, A. 2002. Re-Grounding Grounded Theory. *The Journal of Information Technology Theory and Application,* 4 (1): 25-42.

Bryman, A. 2006. Integrating Quantitative and Qualitative Research: How Is It Done? *Qualitative Research,* 6 (1): 97-113.

Burke, P. J. 1991. Identity Processes and Social Stress. *American Sociological Review,* 56 (6): 836-849.

Burns, E., Fenwick, J., Schmied, V. & Sheehan, A. 2012. Reflexivity in Midwifery Research: The Insider/Outsider Debate. *Midwifery,* 28 (1): 52-60.

Canrinus, E. T., Helms-Lorenz, M., Beijaard, D., Buitink, J. & Hofman, A. 2012. Self-Efficacy, Job Satisfaction, Motivation and Commitment: Exploring the Relationships between Indicators of Teachers' Professional Identity. *European Journal of Psychology of Education,* 27 (1): 115-132.

Cantor, J. C., Cohen, A. B., Barker, D. C., Shuster, A. L. & Reynolds, R. C. 1991. Medical Educators' Views on Medical Education Reform. *The Journal of the American Medical Association,* 265 (8): 1002-1006.

Cavenagh, P., Dewberry, C. & Jones, P. 2000. Becoming Professional: When and How Does It Start? A Comparative Study of First-Year Medical and Law Students in the Uk. *Medical Education,* 34 (11): 897-902.

Chandratilake, M., McAleer, S. & Gibson, J. 2012. Cultural Similarities and Differences in Medical Professionalism: A Multi-Region Study. *Medical Education,* 46 (3): 257-266.

Chapman, A. & Pyvis, D. 2006. Quality, Identity and Practice in Offshore University Programmes: Issues in the Internationalization of Australian Higher Education. *Teaching in Higher Education,* 11 (2): 233-245.

Charmaz, K. 1983. Grounded Theory Method: An Explication and Interpretation. *In:* Emerson, R. M. (ed.) *Contemporary Field Research: A Collection of Readings.* 109-126. Boston: Little, Brown.

Charmaz, K. 2003. Grounded Theory. *In:* Smith, J. A. (ed.) *Qualitative Psychology: A Practical Guide to Research Methods.* 81-110. London: Sage Publications.

Charmaz, K. 2006. *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis,* London, Sage Publications.

Check, J. & Schutt, R. K. 2012. Survey Research. *Research Methods in Education (Part 2. Research Design and Data Collection).* 159-185. London: Sage Publications.

Cherry, R. 1986. *English Words: From Latin and Greek Elements,* Tucson, University of Arizona Press.

Clandinin, D. J. & Connelly, F. M. 1996. Teachers' Professional Knowledge Landscapes: Teacher Stories. Stories of Teachers. School Stories. Stories of Schools. *Educational Researcher,* 25 (3): 24-30.

Clouder, L. 2003. Becoming Professional: Exploring the Complexities of Professional Socialization in Health and Social Care. *Learning in Health and Social Care,* 2 (4): 213-222.

Cohen, R., Murnaghan, L., Collins, J. & Pratt, D. 2005. An Update on Master's Degrees in Medical Education. *Medical Teacher,* 27 (8): 686-692.

Collins, J. 2005. The Needs of an Educator. *Journal of the American College of Radiology,* 2 (11): 914-918.

Connelly, F. M. & Clandinin, D. J. 1999. *Shaping a Professional Identity: Stories of Educational Practice,* Columbia University, Teachers College Press.

Connolly, M. 2010. *Helping Future Faculty "Come out" as Teachers - Essays on Teaching Excellence* [Online]. Madison: University of Wisconsin Retrieved November 14, 2014, from http://podnetwork.org/content/uploads/V22_N6_Connolly.pdf

Corbin, J. & Strauss, A. 2008. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory,* London, Sage Publications.

Costello, C. Y. 2006. *Professional Identity Crisis: Race, Class, Gender, and Success at Professional Schools*, Tennessee, Vanderbilt University Press.

Cote, L. & Turgeon, J. 2005. Appraising Qualitative Research Articles in Medicine and Medical Education. *Medical teacher,* 27 (1): 71-75.

Cox, A. 2005. What Are Communities of Practice? A Comparative Review of Four Seminal Works. *Journal of information science,* 31 (6): 527-540.

Cox, M., Irby, D. M., Cooke, M., Irby, D. M., Sullivan, W. & Ludmerer, K. M. 2006. American Medical Education 100 Years after the Flexner Report. *New England journal of medicine,* 355 (13): 1339-1344.

Cramer, J. 2010. 'Do We Really Want to Be Like Them?': Indexing Europeanness through Pronominal Use. *Discourse & Society,* 21 (6): 619-637.

Crawford, D. L. 2004. *The Role of Aging in Adult Learning: Implications for Instructors in Higher Education* [Online]. Retrieved November 15, 2014, from http://education.jhu.edu/PD/newhorizons/lifelonglearning/higher-education/implications/

Creswell, J. W. 1998. Five Qualitative Traditions of Inquiry. *In:* Cresswell, J. W. (ed.) *Qualitative Inquiry and Research Design: Choosing among Five Traditions.* 47-72. London: Sage Publications.

Creswell, J. W. 2008. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches,* London, Sage Publications.

Crossley, J. & Vivekananda-Schmidt, P. 2009. The Development and Evaluation of a Professional Self Identity Questionnaire to Measure Evolving Professional Self-Identity in Health and Social Care Students. *Medical Teacher,* 31 (12): e603-e607.

Crotty, M. 1998. *The Foundations of Social Research: Meaning and Perspective in the Research Process,* London, Sage Publications.

Cusimano, M. D. & David, M. A. 1998. A Compendium of Higher Education Opportunities in Health Professions Education. *Academic Medicine,* 73 (12): 1255-1259.

Dath, D. & Iobst, W. 2010. The Importance of Faculty Development in the Transition to Competency-Based Medical Education. *Medical Teacher,* 32 (8): 683-686.

Davidson, J. M., Lambert, T. W. & Goldacre, M. J. 1998. Career Pathways and Destinations 18 Years on among Doctors Who Qualified in the United Kingdom in 1977: Postal Questionnaire Survey. *British Medical Journal,* 317 (7170): 1425-1428.

Davis, D., O'Brien, M. A. T., Freemantle, N., Wolf, F. M., Mazmanian, P. & Taylor-Vaisey, A. 1999. Impact of Formal Continuing Medical Education: Do Conferences, Workshops, Rounds, and Other Traditional Continuing Education Activities Change Physician Behavior or Health Care Outcomes? *The Journal of American Medical Association,* 282 (9): 867-874.

Davis, D. A., Mazmanian, P. E., Fordis, M., Van Harrison, R., Thorpe, K. E. & Perrier, L. 2006. Accuracy of Physician Self-Assessment Compared with Observed Measures of Competence. *The Journal of the American Medical Association,* 296 (9): 1094-1102.

Davis, M. H., Karunathilake, I. & Harden, R. M. 2005. Amee Education Guide No. 28: The Development and Role of Departments of Medical Education. *Medical Teacher,* 27 (8): 665-675.

De Weerdt, S., Bouwen, R., Corthouts, F. & Martens, H. 2006. Identity Transformation as an Intercontextual Process. *Industry and Higher Education,* 20 (5): 317-326.

Dearing Report. 1997. *Higher Education in the Learning Society* [Online]. London: Her Majesty's Stationery Office Retrieved June 12, 2014, from http://www.educationengland.org.uk/documents/dearing1997/dearing1997.html

Denscombe, M. 2010. *The Good Research Guide: For Small-Scale Social Research Projects,* Maidenhead, Open University Press.

Dewey, J. 1933. How We Think: A Restatement of the Relation of Reflective Thinking to the Educational Process. *Lexington, MA: Heath*.

Dey, I. 1999. *Grounding Grounded Theory: Guidelines for Qualitative Inquiry,* San Diego, Academic Press.

Dicicco-Bloom, B. & Crabtree, B. F. 2006. The Qualitative Research Interview. *Medical Education,* 40 (4): 314-321.

Dunne, C. 2011. The Place of the Literature Review in Grounded Theory Research. *International Journal of Social Research Methodology,* 14 (2): 111-124.

Duvivier, R., Van Dalen, J., Van Der Vleuten, C. & Scherpbier, A. 2009. Teacher Perceptions of Desired Qualities, Competencies and Strategies for Clinical Skills Teachers. *Medical Teacher,* 31 (7): 634-641.

Dwyer, S. C. & Buckle, J. L. 2009. The Space Between: On Being an Insider-Outsider in Qualitative Research. *International Journal of Qualitative Methods,* 8 (1): 54-63.

Dyson, R. G. 2004. Strategic Development and Swot Analysis at the University of Warwick. *European Journal of Operational Research,* 152 (3): 631-640.

Dysvik, A. & Kuvaas, B. 2013. Intrinsic and Extrinsic Motivation as Predictors of Work Effort: The Moderating Role of Achievement Goals. *British Journal of Social Psychology,* 52 (3): 412-430.

Edwards, K. 2002. "Short Stops": Peer Support of Scholarly Activity. *Academic Medicine,* 77 (9): 939.

Eitel, F., Kanz, K.-G. & Tesche, A. 2000. Training and Certification of Teachers and Trainers: The Professionalization of Medical Education. *Medical Teacher,* 22 (5): 517-526.

Elton, L. 1998. Staff Development and the Quality of Teaching. *In:* Jolly, B. & Rees, L. H. (eds.) *Medical Education in the Millennium.* 199-204. Oxford: Oxford University Press.

Emener, W. G. & Cottone, R. R. 1989. Professionalization, Deprofessionalization, and Reprofessionalization of Rehabilitation Counseling According to Criteria of Professions. *Journal of Counseling & Development,* 67 (10): 576-581.

Epstein, R. M. 1999. Mindful Practice. *The Journal of American Medical Association,* 282 (9): 833-839.

Eraut, M. 2002. Conceptual Analysis and Research Questions: Do the Concepts of" Learning Community" and" Community of Practice" Provide Added Value? *The Annual meeting of the American Educational Research Association.* New Orleans, LA.

Ewick, P. & Silbey, S. 2003. Narrating Social Structure: Stories of Resistance to Legal Authority1. *American Journal of Sociology,* 108 (6): 1328-1372.

Eyre, H. A., Mitchell, R. D., Milford, W., Vaswani, N. & Moylan, S. 2014. Portfolio Careers for Medical Graduates: Implications for Postgraduate Training and Workforce Planning. *Australian Health Review,* 38 (3): 246-251.

Farrall, S. 2006. What Is Qualitative Longitudinal Research. *Papers in Social Research Methods Qualitative Series No 11*: 1-25.

Faux, D. 2000. Information Overload. *Medical Teacher,* 22 (1): 5-6.

Ferdinand, D. 2014. Generation I: International and Invisible in a Workforce Education and Development Programme's Curriculum Content. *The Caribbean Teaching Scholar,* 4 (1): 51–66.

Ferguson, J. & Tryjankowski, A. M. 2009. Online Versus Face-to-Face Learning: Looking at Modes of Instruction in Master's-Level Courses. *Journal of Further and Higher Education,* 33 (3): 219-228.

Field, A. 2009. *Discovering Statistics Using Spss,* London, Sage Publications.

Fincher, R.-M. E. & Work, J. A. 2006. Perspectives on the Scholarship of Teaching. *Medical Education,* 40 (4): 293-295.

Finn, G., Garner, J. & Sawdon, M. 2010. 'You're Judged All the Time!'Students' Views on Professionalism: A Multicentre Study. *Medical Education,* 44 (8): 814-825.

Flanagan, J. C. 1954. The Critical Incident Technique. *Psychological Bulletin,* 51 (4): 327-358.

Flexner, A. 1910. *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching (Bulletin No. 4)* [Online]. Retrieved February 2, 2014, from http://archive.carnegiefoundation.org/pdfs/elibrary/Carnegie_Flexner_Report.pdf

Ford, J. D. & Ford, L. W. 2010. Stop Blaming Resistance to Change and Start Using It. *Organizational Dynamics,* 39 (1): 24-36.

Forsetlund, L., Bjørndal, A., Rashidian, A., Jamtvedt, G., O'Brien, M. A., Wolf, F., Davis, D., Odgaard-Jensen, J. & Oxman, A. D. 2009. Continuing Education Meetings and Workshops: Effects on Professional Practice and Health Care Outcomes. *Cochrane Database Systematic Review,* 2 (2): 1-97.

Foundation for Advancement of International Medical Education and Research. 2013. *Master's Programs in Health Professions Education* [Online]. Foundation for Advancement of International Medical Education and Research Retrieved May 20, 2013, from http://www.faimer.org/resources/mastersmeded.html

Foundation for Advancement of International Medical Education and Research. 2015a. *Master's Programs in Health Professions Education* [Online]. Retrieved August 8, 2015, from http://www.faimer.org/resources/mastersmeded.html

Foundation for Advancement of International Medical Education and Research. 2015b. *Ph.D. Programs in Health Professions Education* [Online]. Retrieved August 3, 2015, from http://www.faimer.org/resources/phd-programs.html

Fox, R. C. 1957. Training for Uncertainty. *In:* Merton, R. K., Reader, G. G. & Kendall, P. L. (eds.) *The Student-Physician: Introductory Studies in the Sociology of Medical Education,*. 207-241. Cambridge: Harvard University Press.

Francis, J. B. 1975. How Do We Get There from Here?: Program Design for Faculty Development. *The Journal of Higher Education*: 719-732.

Frank, J. R. & Danoff, D. 2007. The Canmeds Initiative: Implementing an Outcomes-Based Framework of Physician Competencies. *Medical Teacher,* 29 (7): 642-647.

Frohna, A. Z., Hamstra, S. J., Mullan, P. B. & Gruppen, L. D. 2006. Teaching Medical Education Principles and Methods to Faculty Using an Active Learning Approach: The University of Michigan Medical Education Scholars Program. *Academic Medicine,* 81 (11): 975-978.

Froiland, J. M. & Oros, E. 2014. Intrinsic Motivation, Perceived Competence and Classroom Engagement as Longitudinal Predictors of Adolescent Reading Achievement. *Educational Psychology,* 34 (2): 119-132.

Fuller, A. & Unwin, L. 2003. Learning as Apprentices in the Contemporary Uk Workplace: Creating and Managing Expansive and Restrictive Participation. *Journal of Education and work,* 16 (4): 407-426.

Gadit, A. A. 2010. Professional Competence Assessment: Is It a Wakeup Call for Pakistan? *Journal of Pakistan Medical Association,* 60 (11): 965-966.

Garcia-Barbero, M. 1995. Medical Education in the Light of the World Health Organization Health for All Strategy and the European Union. *Medical Education,* 29 (1): 3-12.

Gaziel, H. H. 1995. Sabbatical Leave, Job Burnout and Turnover Intentions among Teachers. *International Journal of Lifelong Education,* 14 (4): 331-338.

Genn, J. & Harden, R. 1985. Editorial–2: Academic Staff Development. *Medical Teacher,* 7 (3-4): 251-255.

Geraci, S. A., Kovach, R. A., Babbott, S. F., Hollander, H., Buranosky, R., Devine, D. R. & Berkowitz, L. 2010. Alliance for Academic Internal Medicine Report on Master Teachers and Clinician Educators Part 2: Faculty Development and Training. *The American Journal of Medicine,* 123 (9): 869-872.e6.

Gibbs, G. & Coffey, M. 2004. The Impact of Training of University Teachers on Their Teaching Skills, Their Approach to Teaching and the Approach to Learning of Their Students. *Active Learning in Higher Education,* 5 (1): 87-100.

Glaser, B. & Strauss, A. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Inquiry,* New York, Aldin.

Glaser, B. G. 1998. *Doing Grounded Theory: Issues and Discussions,* Mill Valley, Sociology Press.

Glaser, B. G. & Strauss, A. L. 1965. *Awareness of Dying,* Chicago, Aldine.

Glasow, P. A. 2005. *Fundamentals of Survey Research Methodology* [Online]. Retrieved May 21, 2013, from http://www.uky.edu/~kdbrad2/EPE619/Handouts/SurveyResearchReading.pdf

GMC. 2005. *The New Doctor - Guidance on Prho Training* [Online]. General Medical Council Retrieved May 5, 2013, from http://www.gmc-uk.org/The_New_Doctor_2005.pdf_25397189.pdf

GMC. 2006. *General Medical Council - Good Medical Practice* [Online]. Retrieved November 20, 2012, from http://www.gmc-uk.org

GMC. 2009. *Tomorrow's Doctors - Outcomes and Standards for Undergraduate Medical Education* [Online]. General Medical Council Retrieved May 5, 2013, from http://www.gmc-uk.org/Tomorrow_s_Doctors_1214.pdf_48905759.pdf

GMC. 2012. *Recognition and Approval of Trainers* [Online]. Retrieved March 10, 2013, from http://www.gmc-uk.org/education/10264.asp#1

Goffman, E. 1990. *The Presentation of Self in Everyday Life,* London, Penguin Books.

Goldie, J. 2012. The Formation of Professional Identity in Medical Students: Considerations for Educators. *Medical Teacher,* 34 (9): e641-e648.

Goldie, J., Dowie, A., Cotton, P. & Morrison, J. 2007. Teaching Professionalism in the Early Years of a Medical Curriculum: A Qualitative Study. *Medical Education,* 41 (6): 610-617.

Goldszmidt, M. A., Zibrowski, E. M. & Weston, W. W. 2008. Education Scholarship: It's Not Just a Question of Degree. *Medical Teacher,* 30 (1): 34-39.

Gray, D. E. 2011. Journeys Towards the Professionalisation of Coaching: Dilemmas, Dialogues and Decisions Along the Global Pathway. *Coaching: An International Journal of Theory, Research and Practice,* 4 (1): 4-19.

Gray, M. & Smith, L. N. 1999. The Professional Socialization of Diploma of Higher Education in Nursing Students (Project 2000): A Longitudinal Qualitative Study. *Journal of Advanced Nursing,* 29 (3): 639-647.

Grealish, L. & Trevitt, C. 2005. Developing a Professional Identity: Student Nurses in the Workplace. *Contemporary Nurse,* 19 (1-2): 137-150.

Greene, J. C., Caracelli, V. J. & Graham, W. F. 1989. Toward a Conceptual Framework for Mixed-Method Evaluation Designs. *Educational Evaluation and Policy Analysis,* 11 (3): 255-274.

Gruppen, L. D., Frohna, A. Z., Anderson, R. M. & Lowe, K. D. 2003. Faculty Development for Educational Leadership and Scholarship. *Academic Medicine,* 78 (2): 137-141.

Gruppen, L. D., Simpson, D., Searle, N. S., Robins, L., Irby, D. M. & Mullan, P. B. 2006. Educational Fellowship Programs: Common Themes and Overarching Issues. *Academic Medicine,* 81 (11): 990-994.

Guilbert, J. J. 1985. Teacher Training Workshops in Education: Summary of 15 Years' Personal Experience†. *Medical Education,* 19 (5): 332-343.

Haig, A. & Dozier, M. 2003a. Beme Guide No 3: Systematic Searching for Evidence in Medical Education-Part 1: Sources of Information. *Medical Teacher,* 25 (4): 352-363.

Haig, A. & Dozier, M. 2003b. Beme Guide No. 3: Systematic Searching for Evidence in Medical Education-Part 2: Constructing Searches. *Medical Teacher,* 25 (5): 463-484.

Hall, G. E. & Hord, S. M. 2006. *Implementing Change: Patterns, Principles, and Potholes,* Boston, Allyn & Bacon.

Hall, K., Conway, P. F., Murphy, R., Long, F., Kitching, K. & O'Sullivan, D. 2012. Authoring Oneself and Being Authored as a Competent Teacher. *Irish Educational Studies,* 31 (2): 103-117.

Hall, S. 1994. *Cultural Identity and Diaspora: Identity: Community, Culture, Difference,* London, Lawrence and Wishart.

Hammick, M., Freeth, D., Koppel, I., Reeves, S. & Barr, H. 2007. A Best Evidence Systematic Review of Interprofessional Education: Beme Guide No. 9. *Medical Teacher,* 29 (8): 735-751.

Harden, R. 2000. Evolution or Revolution and the Future of Medical Education: Replacing the Oak Tree. *Medical Teacher,* 22 (5): 435-442.

Harden, R. M. & Crosby, J. R. 2000. Amee Education Guide No 20: The Good Teacher Is More Than a Lecturer-the Twelve Roles of the Teacher. *Medical Teacher,* 22 (4): 334-347.

Harden, R. M., Crosby, J. R., Davis, M. H. & Friedman, M. 1999. Amee Guide No. 14: Outcome-Based Education: Part 5-from Competency to Meta-Competency: A Model for the Specification of Learning Outcomes. *Medical Teacher,* 21 (6): 546-552.

Haslam, S. A., Powell, C. & Turner, J. 2000. Social Identity, Self-Categorization, and Work Motivation: Rethinking the Contribution of the Group to Positive and Sustainable Organisational Outcomes. *Applied Psychology,* 49 (3): 319-339.

Hatem, C. J., Lown, B. A. & Newman, L. R. 2009. Strategies for Creating a Faculty Fellowship in Medical Education: Report of a 10-Year Experience. *Academic Medicine,* 84 (8): 1098-1103.

Heath, C., Luff, P. & Sanchez Svensson, M. 2006. Video and Qualitative Research: Analysing Medical Practice and Interaction. *Medical Education,* 41 (1): 109-116.

Heflin, M. T., Pinheiro, S., Kaminetzky, C. p. & Mcneill, D. 2009. 'So You Want to Be a Clinician-Educator…': Designing a Clinician-Educator Curriculum for Internal Medicine Residents. *Medical Teacher,* 31 (6): e233-e240.

Helmich, E., Bolhuis, S., Dornan, T., Laan, R. & Koopmans, R. 2012. Entering Medical Practice for the Very First Time: Emotional Talk, Meaning and Identity Development. *Medical Education,* 46 (11): 1074-1086.

Helmich, E., Derksen, E., Prevoo, M., Laan, R., Bolhuis, S. & Koopmans, R. 2010. Medical Students' Professional Identity Development in an Early Nursing Attachment. *Medical Education,* 44 (7): 674-682.

Helmich, E. & Dornan, T. 2012. Do You Really Want to Be a Doctor? The Highs and Lows of Identity Development. *Medical Education,* 46 (2): 132-134.

Herrmann, M., Lichte, T., Von Unger, H., Gulich, M., Waechtler, H., Donner-Banzhoff, N. & Wilm, S. 2007. Faculty Development in General Practice in Germany: Experiences, Evaluations, Perspectives. *Medical Teacher,* 29 (2-3): 219-224.

Hesketh, E. A., Bagnall, G., Buckley, E. G., Friedman, M., Goodall, E., Harden, R. M., Laidlaw, J. M., Leighton-Beck, L., McKinlay, P., Newton, R. & Oughton, R. 2001. A Framework for Developing Excellence as a Clinical Educator. *Medical Education,* 35 (6): 555-564.

Higgs, J., Aijawi, R. & Smith, M. 2008. Working and Learning in Communities of Practice. *In:* Higgs, J., Smith, M., Webb, G., Skinner, M. & Croker, A. (eds.) *Contexts of Physiotherapy Practice.* 117-127. Sydney: Churchill Livingstone.

Holland, J., Thomson, R. & Henderson, S. 2006. *Families & Social Capital Esrc Research Group Working Paper No. 21 - Qualitative Longitudinal Research: A Discussion Paper,* London, London South Bank University.

Hu, W. C., Thistlethwaite, J. E., Weller, J., Gallego, G., Monteith, J. & McColl, G. J. 2015. 'It Was Serendipity': A Qualitative Study of Academic Careers in Medical Education. *Medical Education,* 49 (11): 1124-1136.

Hueppchen, N., Dalrymple, J. L., Hammoud, M. M., Abbott, J. F., Casey, P. M., Chuang, A. W., Cullimore, A., Davis, K. R., Dugoff, L. & Espey, E. L. 2011. To the Point: Medical Education Reviews—Ongoing Call for Faculty Development. *American Journal of Obstetrics and Gynecology,* 205 (3): 171-176.

Hunter, A. B., Laursen, S. L. & Seymour, E. 2007. Becoming a Scientist: The Role of Undergraduate Research in Students' Cognitive, Personal, and Professional Development. *Science Education,* 91 (1): 36-74.

Irby, D. M. 1994. What Clinical Teachers in Medicine Need to Know. *Academic Medicine,* 69 (5): 333-342.

Irby, D. M. 1996. Models of Faculty Development for Problem-Based Learning. *Advances in Health Sciences Education,* 1 (1): 69-81.

James, W. 1907. *Pragmatism,* New York, Dover.

Jarvis-Selinger, S., Pratt, D. D. & Regehr, G. 2012. Competency Is Not Enough: Integrating Identity Formation into the Medical Education Discourse. *Academic Medicine,* 87 (9): 1185-1190.

Jason, H. & Westberg, J. 1982. *Teachers and Teaching in Us Medical Schools,* Norwalk, CT, Appleton-Century-Crofts

Jenkins, R. 2008. *Social Identity,* London, Routledge.

Johnson, R. B. & Onwuegbuzie, A. J. 2004. Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher,* 33 (7): 14-26.

Jolly, B. & Rees, L. H. 1998. *Medical Education in the Millennium,* Oxford, Oxford University Press.

Karakowsky, L., DeGama, N. & McBey, K. 2012. Facilitating the Pygmalion Effect: The Overlooked Role of Subordinate Perceptions of the Leader. *Journal of Occupational and Organizational Psychology,* 85 (4): 579-599.

Kaufman, D. M. 2003. Abc of Learning and Teaching in Medicine: Applying Educational Theory in Practice. *British Medical Journal,* 326 (7382): 213-216.

Kavanagh, M. H. & Ashkanasy, N. M. 2006. The Impact of Leadership and Change Management Strategy on Organizational Culture and Individual Acceptance of Change During a Merger. *British Journal of Management,* 17 (S1): S81-S103.

Kelchtermans, G. 1993. Getting the Story, Understanding the Lives: From Career Stories to Teachers' Professional Development. *Teaching and Teacher Education,* 9 (5): 443-456.

Kennedy, C., Kools, S. & Krueger, R. 2001. Methodological Considerations in Children's Focus Groups. *Nursing Research,* 50 (3): 184-187.

Khan, N., Khan, M. S., Dasgupta, P. & Ahmed, K. 2013. The Surgeon as Educator: Fundamentals of Faculty Training in Surgical Specialties. *BJU International,* 111 (1): 171-178.

Kirkpatrick, D. L. 1998. *Evaluating Training Programs: The Four Levels* San Francisco, Berrett-Koehler.

Kirkpatrick, D. L. & Kirkpatrick, J. D. 2006. *Evaluating Training Programs: The Four Levels,* San Francisco, Berrett-Koehler.

Kitto, S. C., Chesters, J. & Grbich, C. 2008. Quality in Qualitative Research - Criteria for Authors and Assessors in the Submission and Assessment of Qualitative Research Articles for the Medical Journal of Australia. *The Medical Journal of Australia,* 188 (4): 243-246.

Klingner, J. K. 2004. The Science of Professional Development. *Journal of Learning Disabilities,* 37 (3): 248-255.

Knight, A. M., Carrese, J. A. & Wright, S. M. 2007. Qualitative Assessment of the Long-Term Impact of a Faculty Development Programme in Teaching Skills. *Medical Education,* 41 (6): 592-600.

Knowles, M. S. 1990. *The Adult Learner: A Neglected Species,* Houston, Gulf Publishing Company.

Kolb, D. A. 1983. *Experiential Learning: Experience as the Source of Learning and Development,* London, Prentice Hall.

Konkin, J. & Suddards, C. 2012. Creating Stories to Live By: Caring and Professional Identity Formation in a Longitudinal Integrated Clerkship. *Advances in Health Sciences Education,* 17 (4): 585-596.

Koro-Ljungberg, M. & Bussing, R. 2013. Methodological Modifications in a Longitudinal Qualitative Research Design. *Field Methods,* 25 (4): 423-440.

Kuper, A., Lingard, L. & Levinson, W. 2008a. Critically Appraising Qualitative Research. *British Medical Journal,* 337 (3): a1035-a1035.

Kuper, A., Lingard, L. & Levinson, W. 2008b. Critically Appraising Qualitative Research. *British Medical Journal,* 337: 687-692.

Lam, T. P. & Bess Lam, Y. Y. 2009. Medical Education Reform: The Asian Experience. *Academic Medicine,* 84 (9): 1313-1317.

Larman, C. & Basili, V. R. 2003. Iterative and Incremental Development: A Brief History. *Computer,* 36 (6): 47-56.

Lave, J. & Wenger, E. 1991. *Situated Learning: Legitimate Peripheral Participation,* Cambridge, Cambridge University Press.

Lawler, S. 2008. *Identity: Sociological Perspectives,* Cambridge, Polity.

Lederman, L. C. 1990. Assessing Educational Effectiveness: The Focus Group Interview as a Technique for Data Collection 1. *Communication Education,* 39 (2): 117-127.

Lee, W., Lee, M.-J. & Bong, M. 2014. Testing Interest and Self-Efficacy as Predictors of Academic Self-Regulation and Achievement. *Contemporary Educational Psychology,* 39 (2): 86-99.

Leslie, K., Baker, L., Egan-Lee, E., Esdaile, M. & Reeves, S. 2013. Advancing Faculty Development in Medical Education: A Systematic Review. *Academic Medicine,* 88 (7): 1038-1045.

Levett-Jones, T. & Lathlean, J. 2008. Belongingness: A Prerequisite for Nursing Students' Clinical Learning. *Nurse Education in Practice,* 8 (2): 103-111.

Levett-Jones, T., Lathlean, J., Maguire, J. & McMillan, M. 2007. Belongingness: A Critique of the Concept and Implications for Nursing Education. *Nurse Education Today,* 27 (3): 210-218.

Levine, C. G. & Cote, J. E. 2002. *Identity, Formation, Agency, and Culture: A Social Psychological Synthesis,* Mahwah, Lawrence Erlbaum.

Lewis, K. G. 1996. Faculty Development in the United States: A Brief History. *The International Journal for Academic Development,* 1 (2): 26-33.

Liaison Committee on Medical Education. 2014. *Functions and Structure of a Medical School - Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree* [Online]. Retrieved June 12, 2014, from http://www.lcme.org/publications.htm

Light, D. 1979. Uncertainty and Control in Professional Training. *Journal of Health and Social Behavior,* 20 (12): 310-322.

Lincoln, Y. S. & Guba, E. G. 1985. *Naturalistic Inquiry,* London, Sage Publications.

Long, A. & Lock, B. 2014. Lectures and Large Groups. *In:* Swanwick, T. (ed.) *Understanding Medical Education: Evidence, Theory and Practice.* 137-148. Chichester: Wiley-Blackwell.

Lown, B. A., Newman, L. R. & Hatem, C. J. 2009. The Personal and Professional Impact of a Fellowship in Medical Education. *Academic Medicine,* 84 (8): 1089-1097.

Lowry, S. 1993. Teaching the Teachers. *British Medical Journal,* 306 (6870): 127-130.

MacDougall, J. & Drummond, M. J. 2005. The Development of Medical Teachers: An Enquiry into the Learning Histories of 10 Experienced Medical Teachers. *Medical Education,* 39 (12): 1213-1220.

MacLeod, A. 2011. Caring, Competence and Professional Identities in Medical Education. *Advances in Health Sciences Education,* 16 (3): 375-394.

Mann, K. V. 2006. Learning and Teaching in Professional Character Development. *Advances in Bioethics,* 10: 145-183.

Mann, K. V. 2011. Theoretical Perspectives in Medical Education: Past Experience and Future Possibilities. *Medical Education,* 45 (1): 60-68.

Marks, M. B. 1999. Academic Careers in Medical Education: Perceptions of the Effects of a Faculty Development Program. *Academic Medicine,* 74 (10): S72-4.

Martenson, D. & Nystrup, J. 1984. Evaluation and Consequences of Teaching Competence: Scandinavian Developments. *Medical Education,* 18 (6): 394-400.

Martin, B. R. 2011. The Research Excellence Framework and the 'Impact Agenda': Are We Creating a Frankenstein Monster? *Research Evaluation,* 20 (3): 247-254.

Mason, M. 2010. Sample Size and Saturation in Phd Studies Using Qualitative Interviews. Forum: Qualitative Social Research.

Maudsley, G. 2011. Mixing It but Not Mixed-Up: Mixed Methods Research in Medical Education - Critical Narrative Review. *Medical Teacher,* 33 (2): e92-e104.

McCann, L., Child, S. & Naden, G. 2009. Doctors as Teachers: What Do They Think? *The New Zealand Medical Journal (Online),* 122 (1292): 16-22.

McCormick, C. B. & Pressley, M. 1997. *Educational Psychology: Learning, Instruction, Assessment,* London, Longman Publishing.

McLachlan, J. 2005. A Qualification in Medical Education--a Luxury or a Necessity? *Journal of the Royal Naval Medical Service,* 92 (2): 84-87.

McLean, M. 2001. Qualities Attributed to an Ideal Educator by Medical Students: Should Faculty Take Cognizance? *Medical Teacher,* 23 (4): 367-370.

McLean, M., Cilliers, F. & Van Wyk, J. M. 2008. Faculty Development: Yesterday, Today and Tomorrow. *Medical Teacher,* 30 (6): 555-584.

Merriam, S. B. 2009. Types of Qualitative Research. *In:* Merriam, S. B. (ed.) *Qualitative Research a Guide to Design and Implementation.* Third ed., 21-38. San Francisco Jossey-Bass.

Merton, R. K., Reader, G. & Kendall, P. L. 1957. *The Student Physician: Introductory Studies in the Sociology of Medical Education*, Cambridge, Harvard University Press.

Mezirow, J. 1990. How Critical Reflection Triggers Transformative Learning. *In:* Mezirow J. and Associates (ed.) *Fostering Critical Reflections in Adulthood: A Guide to Transformative and Emancipatory Learning.* 1st Edition ed. San Francisco: Jossey-Bass.

Mezirow, J. 1997. Transformative Learning: Theory to Practice. *New Directions for Adult and Continuing Education,* 1997 (74): 5-12.

Mezirow, J. 2000. *Learning as Transformation: Critical Perspectives on a Theory in Progress*, San Francisco, Jossey-Bass.

Miller, G. E. 1985. On Teaching Teachers. *Medical Education,* 19 (5): 331-331.

Monrouxe, L. & Poole, G. 2013. An Onion? Conceptualising and Researching Identity. *Medical Education,* 47 (4): 425-429.

Monrouxe, L. V. 2009a. Negotiating Professional Identities: Dominant and Contesting Narratives in Medical Students' Longitudinal Audio Diaries. *Current Narratives,* 1: 41-59.

Monrouxe, L. V. 2009b. Solicited Audio Diaries in Longitudinal Narrative Research: A View from Inside. *Qualitative Research,* 9 (1): 81-103.

Monrouxe, L. V. 2010. Identity, Identification and Medical Education: Why Should We Care? *Medical Education,* 44 (1): 40-49.

Monrouxe, L. V. 2015. When I Say… Intersectionality in Medical Education Research. *Medical Education,* 49 (1): 21-22.

Monrouxe, L. V. & Rees, C. E. 2015. Theoretical Perspectives on Identity: Researching Identities in Healthcare Education. *In:* Cleland, J. & Durning, S. J. (eds.) *Researching Medical Education.* 129-140. Oxford: Wiley-Blackwell.

Moore, M. & Hofman, J. E. 1988. Professional Identity in Institutions of Higher Learning in Israel. *Higher Education,* 17 (1): 69-79.

Morgan, D. L. 2007. Paradigms Lost and Pragmatism Regained Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research,* 1 (1): 48-76.

Morgan, D. L. 2013. *Integrating Qualitative and Quantitative Methods: A Pragmatic Approach,* London, Sage Publications.

Morse, J. M. 1995. The Significance of Saturation. *Qualitative Health Research,* 5 (2): 147-149.

Morzinski, J. A. & Schubot, D. B. 2000. Evaluating Faculty Development Outcomes by Using Curriculum Vitae Analysis. *Family Medicine,* 32 (3): 185-189.

Morzinski, J. A. & Simpson, D. E. 2003. Outcomes of a Comprehensive Faculty Development Program for Local, Full-Time Faculty. *Family Medicine,* 35 (6): 434-9.

Morzinski, J. A., Simpson, D. E., Bower, D. J. & Diehr, S. 1994. Faculty Development through Formal Mentoring. *Academic Medicine,* 69 (4): 267-9.

Moses, A. S., Skinner, D. H., Hicks, E. & O'Sullivan, P. S. 2009. Developing an Educator Network: The Effect of a Teaching Scholars Program in the Health Professions on Networking and Productivity. *Teaching and Learning in Medicine,* 21 (3): 175-179.

Mühlhäusler, P. & Harré, R. 1990. *Pronouns and People: The Linguistic Construction of Social and Personal Identity,* Oxford, Basil Blackwell.

Muller, J. H. & Irby, D. M. 2006. Developing Educational Leaders: The Teaching Scholars Program at the University of California, San Francisco, School of Medicine. *Academic Medicine,* 81 (11): 959-964.

Mumford, L. 1950. The Pragmatic Acquiescence. *In:* Kennedy, G. (ed.) *Pragmatism and American culture.* Lexington: DC Heath and Co.

Nelson, M. S., Clayton, B. L. & Moreno, R. 1990. How Medical School Faculty Regard Educational Research and Make Pedagogical Decisions. *Academic Medicine,* 65 (2): 122-126.

Newlyn, D. 2015. Are Professors Professionals? A Fresh Look at This Question. *Universal Journal of Educational Research,* 3 (2): 113-119.

Newmann, F. M. & Wehlage, G. G. 1993. Five Standards of Authentic Instruction. *Educational leadership,* 50: 8-8.

Ng, S., Lingard, L. & Kennedy, T. J. 2014. Qualitative Research Methods in Medical Education. *In:* Swanwick, T. (ed.) *Understanding Medical Education: Evidence, Theory and Practice.* 371-384. Chichester: Wiley-Blackwell.

Nias, J. 1989. Teaching and the Self. *In:* Holly, M. L. & McLoughlin, C. S. (eds.) *Perspective on Teacher Professional Development.* 151–171. London Falmer Press.

Niemi, P. 2003. Medical Students' Professional Identity: Self-Reflection During the Preclinical Years. *Medical Education,* 31 (6): 408-415.

Norman, G. & Eva, K. W. 2014. Quantitative Research Methods in Medical Education. *In:* Swanwick, T. (ed.) *Understanding Medical Education: Evidence, Theory and Practice.* 349-370. Chichester: Wiley-Blackwell.

Northouse, P. G. 2013. *Leadership: Theory and Practice,* London, Sage Publications.

Notzer, N. & Abramovitz, R. 2008. Can Brief Workshops Improve Clinical Instruction? *Medical Education,* 42 (2): 152-156.

Nulty, D. D. 2008. The Adequacy of Response Rates to Online and Paper Surveys: What Can Be Done? *Assessment & Evaluation in Higher Education,* 33 (3): 301-314.

O'Reilly, M. & Parker, N. 2012. 'Unsatisfactory Saturation': A Critical Exploration of the Notion of Saturated Sample Sizes in Qualitative Research. *Qualitative Research*: 1-8.

O'Sullivan, P. S. & Irby, D. M. 2011. Reframing Research on Faculty Development. *Academic Medicine,* 86 (4): 421-428.

Paterson, M., Higgs, J., Wilcox, S. & Villeneuve, M. 2002. Clinical Reasoning and Self-Directed Learning: Key Dimensions in Professional Education and Professional Socialisation. *Focus on Health Professional Education Journal,* 4 (2): 5-21.

Patton, M. Q. 1988. Paradigms and Pragmatism. *In:* Fetterman, D. (ed.) *Qualitative Approaches to Evaluation in Education: The Silent Scientific Revolution.* 116-137. Thousand Oaks: Sage Publications.

Pawson, R. & Tilley, N. 1997. *Realistic Evaluation,* London, Sage Publications.

Peirce, C. S. 1878. How to Make Our Ideas Clear. *Popular Science Monthly,* 12: 286-302.

Petersen, S. 1999. Time for Evidence Based Medical Education: Tomorrow's Doctors Need Informed Educators Not Amateur Tutors. *British Medical Journal,* 318 (7193): 1223-1224.

Pink, S. 2006. *Doing Visual Ethnography,* London, Sage Publications.

Pinsonneault, A. & Kraemer, K. L. 1993. Survey Research Methodology in Management Information Systems: An Assessment. *Journal of Management Information Systems*: 75-105.

Plack, M. M., Goldman, E. F., Wesner, M., Manikoth, N. & Haywood, Y. 2015. How Learning Transfers: A Study of How Graduates of a Faculty Education Fellowship Influenced the Behaviors and Practices of Their Peers and Organizations. *Academic Medicine,* 90 (3): 372-378.

Postgraduate Medical Education and Training Board. 2008. *Generic Standards for Training* [Online]. Retrieved March 11, 2013, from www.restdent.org.uk/srrdgmeetings/generic_standards_for_training2007.pdf

Pugsley, L. 2012. Walk This Way, Talk This Way: Qualitative Research on Professional Education. *In:* Delamont, S. & Jones, A. (eds.) *Handbook of Qualitative Research in Education.* 157-168. Cheltenham, UK: Edward Elgar.

Pugsley, L., Brigley, S., Allery, L. & Macdonald, J. 2008a. Counting Quality Because Quality Counts: Differing Standards in Master's in Medical Education Programmes. *Medical Teacher,* 30 (1): 80-85.

Pugsley, L., Brigley, S., Allery, L. & MacDonald, J. 2008b. Making a Difference: Researching Master's and Doctoral Research Programmes in Medical Education. *Medical Education,* 42 (2): 157-163.

Purcell, N. & Lloyd-Jones, G. 2003. Standards for Medical Educators. *Medical Education,* 37 (2): 149-154.

Rees, C. E. 2009. Identities as Performances: Encouraging Visual Methodologies in Medical Education Research. *Medical Education,* 44 (1): 5-7.

Rees, C. E. & Monrouxe, L. V. 2008. 'Is It Alright If I-Um-We Unbutton Your Pyjama Top Now?'Pronominal Use in Bedside Teaching Encounters. *Communication & Medicine,* 5 (2): 171-182.

Rees, C. E. & Monrouxe, L. V. 2010. Theory in Medical Education Research: How Do We Get There? *Medical Education,* 44 (4): 334-339.

Reeves, S., Albert, M., Kuper, A. & Hodges, B. D. 2008. Why Use Theories in Qualitative Research? *British Medical Journal,* 337 (7670): 631-634.

Reid, A., Dahlgren, L. O., Petocz, P. & Dahlgren, M. A. 2008. Identity and Engagement for Professional Formation. *Studies in Higher Education,* 33 (6): 729-742.

Research Excellence Framework. 2014. *Key Facts* [Online]. Retrieved June 25, 2015, from http://www.ref.ac.uk/media/ref/content/pub/REF%20Brief%20Guide%202014.pdf

Riesenberg, L. A., Little, B. W. & Wright, V. 2009. Nonphysician Medical Educators: A Literature Review and Job Description Resource. *Academic Medicine,* 84 (8): 1078-1088.

Riessman, C. K. 2008. *Narrative Methods for the Human Sciences,* London, Sage Publications.

Ringsted, C., Hodges, B. & Scherpbier, A. 2011. 'The Research Compass': An Introduction to Research in Medical Education: Amee Guide No. 56. *Medical Teacher,* 33 (9): 695-709.

Robertson, K. 2005. Reflection in Professional Practice and Education. *Australian Family Physician,* 34 (9): 781-783.

Robins, L., Ambrozy, D. & Pinsky, L. E. 2006. Promoting Academic Excellence through Leadership Development at the University of Washington: The Teaching Scholars Program. *Academic Medicine,* 81 (11): 979-983.

Rose, G. 2011. *Visual Methodologies: An Introduction to Researching with Visual Materials,* London, Sage Publications.

Rossman, G. B. & Wilson, B. L. 1985. Numbers and Words Combining Quantitative and Qualitative Methods in a Single Large-Scale Evaluation Study. *Evaluation Review,* 9 (5): 627-643.

Rotem, A., Zinovieff, M. A. & Goubarev, A. 2010. A Framework for Evaluating the Impact of the United Nations Fellowship Programmes. *Human Resources for Health,* 8 (1): 1-8.

Ryynänen, K. 2001. Constructing Physician's Professional Identity: Explorations of Students' Critical Experiences in Medical Education. Oulu: Oulu University Press.

Sabbe, E. & Aelterman, A. 2007. Gender in Teaching: A Literature Review. *Teachers and Teaching: Theory and Practice,* 13 (5): 521-538.

Sabel, E. & Archer, J. 2014. "Medical Education Is the Ugly Duckling of the Medical World" and Other Challenges to Medical Educators' Identity Construction: A Qualitative Study. *Academic Medicine,* 89 (11): 1474-1480.

Salant, P. & Dillman, D. A. 1994. *How to Conduct Your Own Survey,* Oxford, John Wiley & Sons.

Sambunjak, D., Straus, S. E. & Marušić, A. 2006. Mentoring in Academic Medicine: A Systematic Review. *Journal of American Medical Association,* 296 (9): 1103-1115.

Schifferdecker, K. E. & Reed, V. A. 2009. Using Mixed Methods Research in Medical Education: Basic Guidelines for Researchers. *Medical Education,* 43 (7): 637-644.

Schindler, N., Winchester, D. P. & Sherman, H. 2002. Recognizing Clinical Faculty's Contributions in Education. *Academic Medicine,* 77 (9): 940-941.

Schofield, S., Nathwani, D., Anderson, F., Monie, R., Watson, M. & Davis, M. 2009. Consultants in Scotland: Survey of Educational Qualifications, Experience and Needs of Scottish Consultants. *Scottish Medical Journal,* 54 (3): 25-29.

Schouten, B. C. & Meeuwesen, L. 2006. Cultural Differences in Medical Communication: A Review of the Literature. *Patient Education and Counseling,* 64 (1): 21-34.

Schwartz, H. & Jacobs, J. 1979. *Qualitative Sociology,* New York, Simon and Schuster.

Searle, N. S., Hatem, C. J., Perkowski, L. & Wilkerson, L. 2006a. Why Invest in an Educational Fellowship Program? *Academic Medicine,* 81 (11): 936-940.

Searle, N. S., Thompson, B. M. & Perkowski, L. C. 2006b. Making It Work: The Evolution of a Medical Educational Fellowship Program. *Academic Medicine,* 81 (11): 984-989.

Seed, M., Juarez, M. & Alnatour, R. 2009. Improving Recruitment and Retention Rates in Preventive Longitudinal Research with Adolescent Mothers. *Journal of Child and Adolescent Psychiatric Nursing,* 22 (3): 150-153.

Shachar, M. & Neumann, Y. 2003. Differences between Traditional and Distance Education Academic Performances: A Meta-Analytic Approach. *The International Review of Research in Open and Distributed Learning,* 4 (2).

Shaughnessey, J. J., Zechmeister, E. B. & Zechmeister, J. S. 2011. *Research Methods in Psychology,* New York, McGraw Hill.

Sheets, K. J. & Schwenk, T. L. 1990. Faculty Development for Family Medicine Educators: An Agenda for Future Activities. *Teaching and Learning in Medicine: An International Journal,* 2 (3): 141-148.

Sherif, B. 2001. The Ambiguity of Boundaries in the Fieldwork Experience: Establishing Rapport and Negotiating Insider/Outsider Status. *Qualitative Inquiry,* 7 (4): 436-447.

Shotter, J. & Gergen, K. J. 1994. Social Construction: Knowledge, Self, Others, and Continuing the Conversation. *Communication Yearbook,* 17: 3-33.

Simpson, D., Fincher, R. M. E., Hafler, J. P., Irby, D. M., Richards, B. F., Rosenfeld, G. C. & Viggiano, T. R. 2007. Advancing Educators and Education by Defining the Components and Evidence Associated with Educational Scholarship. *Medical Education,* 41 (10): 1002-1009.

Simpson, D. E., Mclaughlin, C. & Schiedermayer, D. 2000. Writing "Blitzes" for Medical Educators. *Academic Medicine,* 75 (5): 555.

Sinclair, S. 1997. *Making Doctors: An Institutional Apprenticeship,* Oxford, Berg Publishers.

Singh, S., Pai, D. R., Sinha, N. K., Kaur, A., Soe, H. H. & Barua, A. 2013. Qualities of an Effective Teacher: What Do Medical Teachers Think? *BMC Medical Education,* 13 (1): 128.

Siry, C. & Lara, J. 2012. "I Didn't Know Water Could Be So Messy": Coteaching in Elementary Teacher Education and the Production of Identity for a New Teacher of Science. *Cultural Studies of Science Education,* 7 (1): 1-30.

Skeat, j. 2010. Using Grounded Theory in Health Research. *In:* Liamputtong, P. (ed.) *Research Methods in Health: Foundations for Evidence-Based Practice.* 106-122. Oxford: Oxford University Press.

Skelton, A. 2012. Teacher Identities in a Research-Led Institution: In the Ascendancy or on the Retreat? *British Educational Research Journal,* 38 (1): 23-39.

Skelton, J. R., Wearn, A. M. & Hobbs, F. R. 2002. 'I'and 'We': A Concordancing Analysis of How Doctors and Patients Use First Person Pronouns in Primary Care Consultations. *Family Practice,* 19 (5): 484-488.

Smith, B. & Sparkes, A. C. 2008. Contrasting Perspectives on Narrating Selves and Identities: An Invitation to Dialogue. *Qualitative Research,* 8 (1): 5-35.

Song, L., Singleton, E. S., Hill, J. R. & Koh, M. H. 2004. Improving Online Learning: Student Perceptions of Useful and Challenging Characteristics. *The Internet and Higher Education,* 7 (1): 59-70.

Spencer, J. 2003. Learning and Teaching in the Clinical Environment. *British Medical Journal,* 326 (7389): 591-594.

Spisak, B. R., Grabo, A. E., Arvey, R. D. & van Vugt, M. 2014. The Age of Exploration and Exploitation: Younger-Looking Leaders Endorsed for Change and Older-Looking Leaders Endorsed for Stability. *The Leadership Quarterly,* 25 (5): 805-816.

Starks, H. & Trinidad, S. B. 2007. Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory. *Qualitative Health Research,* 17 (10): 1372-1380.

Steinert, Y. 2005. Staff Development for Clinical Teachers. *The Clinical Teacher,* 2 (2): 104-110.

Steinert, Y. 2010a. Becoming a Better Teacher: From Intuition to Intent. *In:* Ende J (ed.) *Theory and Practice of Teaching Medicine.* 73-94. Philadelphia: American College of Physicians.

Steinert, Y. 2010b. Faculty Development: From Workshops to Communities of Practice. *Medical Teacher,* 32 (5): 425-428.

Steinert, Y. 2011. Commentary: Faculty Development: The Road Less Traveled. *Academic Medicine,* 86 (4): 409-411.

Steinert, Y. 2012. Perspectives on Faculty Development: Aiming for 6/6 by 2020. *Perspectives on Medical Education,* 1 (1): 31-42.

Steinert, Y., Boudreau, J. D., Boillat, M., Slapcoff, B., Dawson, D., Briggs, A. & Macdonald, M. E. 2010. The Osler Fellowship: An Apprenticeship for Medical Educators. *Academic Medicine,* 85 (7): 1242-1249.

Steinert, Y., Mann, K., Centeno, A., Dolmans, D., Spencer, J., Gelula, M. & Prideaux, D. 2006. A Systematic Review of Faculty Development Initiatives Designed to Improve Teaching Effectiveness in Medical Education: Beme Guide No. 8. *Medical Teacher,* 28 (6): 497-526.

Steinert, Y. & McLeod, P. J. 2006. From Novice to Informed Educator: The Teaching Scholars Program for Educators in the Health Sciences. *Academic Medicine,* 81 (11): 969-974.

Steinert, Y., McLeod, P. J., Liben, S., Snell, L., Steinert, Y., McLeod, P. J., Liben, S. & Snell, L. 2008. Writing for Publication in Medical Education: The Benefits of a Faculty Development Workshop and Peer Writing Group. *Medical Teacher,* 30 (8): e280-e285.

Steinert, Y., Naismith, L. & Mann, K. 2012. Faculty Development Initiatives Designed to Promote Leadership in Medical Education. A Beme Systematic Review: Beme Guide No. 19. *Medical Teacher,* 34 (6): 483-503.

Steinert, Y., Nasmith, L., McLeod, P. J. & Conochie, L. 2003. A Teaching Scholars Program to Develop Leaders in Medical Education. *Academic Medicine,* 78 (2): 142-149.

Storberg-Walker, J. 2008. Wenger's Communities of Practice Revisited: A (Failed?) Exercise in Applied Communities of Practice Theory-Building Research. *Advances in Developing Human Resources,* 10 (4): 555-577.

Stritter, F. T. 1983. Faculty Evaluation and Development. *In:* McGuire, C. H., Foley, R. P., Gorr, A. & Richards, R. W. (eds.) *Handbook of Health Professions Education.* 294-318. San Francisco: Jossey-Bass.

Stryker, S. 2001. Traditional Symbolic Interactionism, Role Theory and Structural Symbolic Interactionism - the Road to Identity Theory. *In:* Turner, J. H. (ed.) *Handbook of Sociological Theory.* 211-231. New York: Springer Science.

Sutherland, L. & Markauskaite, L. 2012. Examining the Role of Authenticity in Supporting the Development of Professional Identity: An Example from Teacher Education. *Higher Education,* 64 (6): 747-766.

Swann, W. B. 1987. Identity Negotiation: Where Two Roads Meet. *Journal of Personality and Social Psychology,* 53 (6): 1038-1051.

Swann, W. B. 2011. Self-Verification Theory. *In:* Van-Lange, P. A. M., Kruglanski, A. W. & Higgins, E. T. (eds.) *Handbook of Theories of Social Psychology.* 23-42. London: Sage Publications.

Swanwick, T. 2008. See One, Do One, Then What? Faculty Development in Postgraduate Medical Education. *Postgraduate Medical Journal,* 84 (993): 339-343.

Sykes, G. & Bird, T. 1992. Teacher Education and the Case Idea. *Review of Research in Education,* 18: 457-521.

Tajfel, H. & Turner, J. C. 1979. An Integrative Theory of Intergroup Conflict. *The Social Psychology of Intergroup Relations,* 33: 33-47.

Tashakkori, A. & Teddlie, C. 1998. *Mixed Methodology: Combining Qualitative and Quantitative Approaches,* London, Sage Publications.

Tashakkori, A. & Teddlie, C. 2002. *Handbook of Mixed Methods in Social & Behavioral Research,* London, Sage Publications.

Tatlow, P. & Phoenix, D. 2015. *The Possibilities and Pitfalls of a Teaching Excellence Framework* [Online]. Retrieved January 6, 2015, from

http://dera.ioe.ac.uk/24653/1/The_possibilities_and_pitfalls_of_a_Teaching_Excellence_Framework.pdf

Teddlie, C. & Tashakkori, A. 2010. Overview of Contemporary Issues in Mixed Methods Research. *In:* Tashakkori, A. & Teddlie, C. (eds.) *Sage Handbook of Mixed Methods in Social and Behavioral Research.* 2nd ed., 1-44. London: Sage Publications.

Tekian, A. 2014. Doctoral Programs in Health Professions Education. *Medical Teacher,* 36 (1): 73-81.

Tekian, A. & Artino, A. R., Jr. 2013. Am Last Page: Master's Degree in Health Professions Education Programs. *Academic Medicine,* 88 (9): 1399.

Tekian, A. & Harris, I. 2012. Preparing Health Professions Education Leaders Worldwide: A Description of Masters-Level Programs. *Medical Teacher,* 34 (1): 52-58.

Thomas, L. 2012. *Building Student Engagement and Belonging in Higher Education at a Time of Change: Final Report from the What Works? Student Retention & Success Programme* [Online]. Higher Education Academy Retrieved August 15, 2015, from https://www.heacademy.ac.uk/sites/default/files/what_works_final_report.pdf

Thompson, B. M., Searle, N. S., Gruppen, L. D., Hatem, C. J. & Nelson, E. A. 2011. A National Survey of Medical Education Fellowships. *Medical Education Online,* 16: 1-3.

Thomson, R. 2003. When Will I See You Again? Strategies for Interviewing over Time. *Paper for presentation at 'Reflexive methodologies: interviewing revisited', Helsinki Collegium for Advanced Studies.*

Thurgur, L., Bandiera, G., Lee, S. & Tiberius, R. 2005. What Do Emergency Medicine Learners Want from Their Teachers? A Multicenter Focus Group Analysis. *Academic Emergency Medicine,* 12 (9): 856-861.

Trede, F., Macklin, R. & Bridges, D. 2011. Professional Identity Development: A Review of the Higher Education Literature. *Studies in Higher Education,* 37 (3): 365-384.

Tsouroufli, M., Rees, C. E., Monrouxe, L. V. & Sundaram, V. 2011. Gender, Identities and Intersectionality in Medical Education Research. *Medical Education,* 45 (3): 213-216.

Turner, J. C. 1999. Some Current Issues in Research on Social Identity and Self-Categorization Theories. *Social Identity: Context, Commitment, Content*: 6-34.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D. & Wetherell, M. S. 1987. *Rediscovering the Social Group: A Self-Categorization Theory,* Oxford, Basil Blackwell.

Turner, T. L., Ward, M. A., Palazzi, D. L. & Lorin, M. I. 2011. Value Placed on Formal Training in Education by Pediatric Department Chairs and Residency Program Directors. *Journal of Graduate Medical Education,* 3 (4): 558-561.

UK Professional Standards Framework. 2011. *The Uk Professional Standards Framework for Teaching and Supporting Learning in Higher Education* [Online]. Retrieved June 20, 2015, from https://www.heacademy.ac.uk/sites/default/files/downloads/ukpsf_2011_english.pdf

UKCRC-MMC. 2005. *Medically and Dentally Qualified Academic Staff: Recommendations for Training the Researchers and Educators of the Future* [Online]. London: Retrieved May 20, 2014, from http://www.ukcrc.org/wp-content/uploads/2014/03/Medically_and_Dentally-qualified_Academic_Staff_Report.pdf

Ullian, J. A. & Stritter, F. T. 1997. Types of Faculty Development Programs. *Family Medicine Journal,* 29 (4): 237-241.

University of Bristol. 2013. *Bristol Online Surveys* [Online]. Retrieved June 10, 2013, from http://www.survey.bris.ac.uk/

Vaismoradi, M., Turunen, H. & Bondas, T. 2013. Content Analysis and Thematic Analysis: Implications for Conducting a Qualitative Descriptive Study. *Nursing & Health Sciences,* 15 (3): 398-405.

Van der Vleuten, C. P. M., Dolmans, D. & Scherpbier, A. 2000. The Need for Evidence in Education. *Medical Teacher,* 22 (3): 246-250.

Varghese, M., Morgan, B., Johnston, B. & Johnson, K. A. 2005. Theorizing Language Teacher Identity: Three Perspectives and Beyond. *Journal of Language, Identity and Education,* 4 (1): 21-44.

Vygotsky, L. S. 1980. *Mind in Society: The Development of Higher Psychological Processes,* Cambridge, Harvard University Press.

Walker, C. O., Greene, B. A. & Mansell, R. A. 2006. Identification with Academics, Intrinsic/Extrinsic Motivation, and Self-Efficacy as Predictors of Cognitive Engagement. *Learning and Individual Differences,* 16 (1): 1-12.

Walkington, J. 2005. Becoming a Teacher: Encouraging Development of Teacher Identity through Reflective Practice. *Asia-Pacific Journal of Teacher Education,* 33 (1): 53-64.

Wallace, A. G. 1997. Educating Tomorrow's Doctors: The Thing That Really Matters Is That We Care. *Academic Medicine,* 72 (4): 253-258.

Watkins, K. E. & Lysø, I. H. 2011. Evaluating Executive Leadership Programs a Theory of Change Approach. *Advances in Developing Human Resources,* 13 (2): 208-239.

Watling, C. J. & Lingard, L. 2012. Grounded Theory in Medical Education Research: Amee Guide No. 70. *Medical Teacher,* 34 (10): 850-861.

Watson, D. 1992. The Changing Shape of Professional Education. *In:* Bines, H. & Watson, D. (eds.) *Developing Professional Education.* 1-10. Buckingham: Society for Research into Higher Education and Open University Press.

Watts, R. J. 1987. Development of Professional Identity in Black Clinical Psychology Students. *Professional Psychology: Research and Practice,* 18 (1): 28-35.

Weaver, R., Peters, K., Koch, J. & Wilson, I. 2011. 'Part of the Team': Professional Identity and Social Exclusivity in Medical Students. *Medical Education,* 45 (12): 1220-1229.

Webb, G. 2012. *Understanding Staff Development,* London, Routledge.

Wenger, E. 1998. *Communities of Practice: Learning, Meaning, and Identity,* Cambridge, Cambridge University Press.

Wenger, E. 2010. Communities of Practice and Social Learning Systems: The Career of a Concept. *In:* Blackmore, C. (ed.) *Social Learning Systems and Communities of Practice.* 179-198. London: Springer.

Wenger, E., McDermott, R. A. & Snyder, W. 2002. *Cultivating Communities of Practice: A Guide to Managing Knowledge*, Boston, Harvard Business School Press.

Weurlander, M. & Stenfors-Hayes, T. 2008. Developing Medical Teachers' Thinking and Practice: Impact of a Staff Development Course. *Higher Education Research & Development,* 27 (2): 143-153.

Whitcomb, M. E. 2002. Research in Medical Education: What Do We Know About the Link between What Doctors Are Taught and What They Do? *Academic Medicine,* 77 (11): 1067-1068.

Wilkerson, L., Uijtdehaage, S. & Relan, A. 2006. Increasing the Pool of Educational Leaders for Ucla. *Academic Medicine,* 81 (11): 954-958.

Williams, G. C., Saizow, R. B. & Ryan, R. M. 1999. The Importance of Self-Determination Theory for Medical Education. *Academic Medicine,* 74 (9): 992-995.

Yamnill, S. & McLean, G. N. 2001. Theories Supporting Transfer of Training. *Human Resource Development Quarterly,* 12 (2): 195-208.

Yin, R. K. 2013. *Case Study Research: Design and Methods*, London, Sage Publications.

Young, C. H., Savola, K. L. & Phelps, E. 1991. *Inventory of Longitudinal Studies in the Social Sciences*, London, Sage Publications.

Zibrowski, E. M., Weston, W. W. & Goldszmidt, M. A. 2008. 'I Don't Have Time': Issues of Fragmentation, Prioritisation and Motivation for Education Scholarship among Medical Faculty. *Medical Education,* 42 (9): 872-878.

Zúñiga, R. E. 2004. *Increasing Response Rates for Online Surveys—a Report from the Flashlight Program's Beta Project* [Online]. Retrieved July 10, 2014, from http://www.tltgroup.org/resources/F-LIGHT/2004/03-04.html#BeTA

Zwanikken, P. A., Dieleman, M., Samaranayake, D., Akwataghibe, N. & Scherpbier, A. 2013. A Systematic Review of Outcome and Impact of Master's in Health and Health Care. *BMC Medical Education,* 13 (1): 18.

# Appendices

## Appendix 3.1 - Survey Questionnaire (Study 1)

**Page 1**

BOS Home | About BOS | Contact Us

Alumni Survey - Centre for Medical Education, University of Dundee-TEST

UNIVERSITY OF DUNDEE

Page 1 of 4

### Impact of Postgraduate Qualifications in Medical Education on Graduates' Professional Identity Formation and Career Pathways

**Welcome to the Centre for Medical Education Alumni Survey**

Thank you for taking the time to share your experiences. The information you provide will help inform policy relating to postgraduate qualifications in medical education.

Please answer all the questions that apply to you, the questionnaire should take around 10 minutes to complete. Please note that it is not possible to return to a page once it has been completed, so please do not use the 'back' button on your browser. When you arrive at the final 'thank you' page, you will know that your responses have been recorded.

**Data Protection**
The information you share will be kept confidential and your name will not be identifiable in any future reports and publications resulting from this work. For further information please read the Participants Information Sheet (http://goo.gl/ytYnP).

**By clicking 'Continue' you agree that you have read the 'Participants Information Sheet' and you 'Agree' to participate in the study.**

Continue >

Top | Copyright | Contact Us

Alumni Survey - Centre for Medical Education, University of Dundee-TEST



## Impact of Postgraduate Qualifications in Medical Education on Graduates' Professional Identity Formation and Career Pathways

**In this section, you will be asked some questions relating to demographics**

**1.** Age *(Optional)*

- ○ < 30 Yrs.
- ○ 30 - 45 Yrs.
- ○ > 45 Yrs.

**2.** Gender *(Optional)*

- ○ Male
- ○ Female

**3.** Nationality *(Optional)*

Select an answer

If you selected Other, please specify:

**4.** Profession *(Optional)*

Select an answer

If you selected Other, please specify:

**5.** Which country do you currently work in? *(Optional)*

Select an answer

If you selected Other, please specify:

## In this section, you will be asked about your qualifications and roles in education

**6.** Please select all the qualification in Medical Education, you took at the Centre for Medical Education, Dundee

| | Year of Graduation | | | | | | Education Delivery Mode |
|---|---|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 | N/A | |
| **a.** Certificate | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Select an answer |
| **b.** Diploma | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Select an answer |
| **c.** Masters | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Select an answer |

**7.** Please list here any other qualifications you have, relevant to your educational roles

| | Qualification | Institution | Year |
|---|---|---|---|
| **a.** . | | | Select an answer |
| **b.** . | | | Select an answer |
| **c.** . | | | Select an answer |

**8.** Please list your current educational roles and responsibilities *(Optional)*

## In this section you will be asked about the course

**9.** Please tell us why you did this course in medical education *(Optional)*

**10.** Did the course meet your expectations? *(Optional)*

- ○ Yes
- ○ No

Please explain how? *(Optional)*

**11.** Please rate (1-5) your preparedness to carry out the following tasks before and after your qualification in Medical Education

1 - Not at all prepared
2 - A little bit prepared
3 - Somewhat prepared
4 - Quite a bit prepared
5 - Very well prepared

| | Before this qualification in Medical Education | After this qualification in Medical Education |
|---|---|---|
| **a.** I can carry out interactive teaching strategies | Select an answer | Select an answer |
| **b.** I can conduct a needs assessment for planning a curriculum | Select an answer | Select an answer |
| **c.** I can develop valid and reliable assessment methods | Select an answer | Select an answer |
| **d.** I can plan, adopt and lead an evidence based educational change | Select an answer | Select an answer |
| **e.** I can provide effective feedback | Select an answer | Select an answer |
| **f.** I can conduct rigorous medical education research | Select an answer | Select an answer |

**12.** Has a qualification in medical education influenced your educational practices in any way? *(Optional)*

- ○ Yes
- ○ No

Please explain how? *(Optional)*

**In this section, you will be asked about the impact of the course on your identity development**

**13.** Have you felt any difference in how your colleagues see you as an educator, since the qualification? *(Optional)*

- ○ Yes
- ○ No

Please explain how? *(Optional)*

**14.** Do you feel any different from those who have not taken formal qualifications as an educator? *(Optional)*

- ○ Yes
- ○ No

Please explain how? *(Optional)*

**15.** Can you please provide some examples of the educational changes you have successfully made in your practice as a result of this qualification in medical education? *(Optional)*

**16.** Please rate (1-4) according to your involvement in the following before and after the qualification in Medical Education

1 - Never
2 - Rarely
3 - Occasionally
4 - Frequently

| | Before this qualification in Medical Education | After this qualification in Medical Education |
|---|---|---|
| **a.** I engage in education related dialogue with colleagues | Select an answer | Select an answer |
| **b.** I contribute to journals or books on education | Select an answer | Select an answer |
| **c.** I attend seminars and conferences on education | Select an answer | Select an answer |
| **d.** I present seminars and conferences on educational topics | Select an answer | Select an answer |
| **e.** I conduct professional development workshops on education | Select an answer | Select an answer |

**17.** Is there anything you would like to add? *(Optional)*

Continue >

Alumni Survey - Centre for Medical Education, University of Dundee-TEST




## Impact of Postgraduate Qualifications in Medical Education on Graduates' Professional Identity Formation and Career Pathways

### Recruitment for Interview (Stage 2)

**18.** In the second stage of this study, I would like to discuss in-depth your educational experiences since completing the course. Please indicate below, if you are willing to be contacted for a single telephone interview.

○ Yes I would be willing to be contacted. ○ No I would not be willing to be contacted.

**a.** Full Name

**b.** Email Address

The information provided here will only be used to contact you for the second stage of this research. It will not be used to identify you and will not be shared with any third parties.

Continue >

## Alumni Survey - Centre for Medical Education, University of Dundee-TEST



## Impact of Postgraduate Qualifications in Medical Education on Graduates' Professional Identity Formation and Career Pathways

**Thank you for your interest and time in filling this questionnaire.**

If you have agreed to take part in the interview, you will be contacted soon to arrange a suitable date/time. For any other queries, please email me at **a.sethi@dundee.ac.uk**

## Appendix 3.2 - Participant Information Sheet (Study 1 & 2)


College of Medicine, Dentistry and Nursing

CENTRE FOR MEDICAL EDUCATION

# PARTICIPANT INFORMATION SHEET

## Impact of postgraduate qualifications in medical education on graduates' professional identity development and career pathways

### INVITATION TO TAKE PART IN A RESEARCH STUDY

You are being asked to take part in a research study, which aims to investigate the impact of postgraduate qualifications in medical education in the development of health professionals as educators. I am Dr. Ahsan Sethi and I am supervised by Dr. Sean McAleer, Rola Ajjawi and Susie Schofield at the Centre for Medical Education, University of Dundee. Please read this information sheet carefully.

### PURPOSE OF THE RESEARCH STUDY

Due to increased societal demands and expectation from health care, educational methods are now being scrutinized by communities of practice. Also, there is a growing trend towards accreditation of medical educators by the regulatory bodies. For example, the General Medical Council, UK is implementing an 'approval of trainers' process, which would make it mandatory for all those involved in educating medical students to have some minimum qualification /competencies in education. This has resulted in a significant increase in the number of institutions providing postgraduate programmes in medical education and in the development of medical education as a speciality. Therefore, this research will investigate the transformational change in terms of professional identity formation and educational practices of graduates from a UK award bearing course in medical education.

Participation in this research will benefit the professionalisation and evolution of medical education as a speciality. It will help new educators in identifying their needs and planning their careers. It will also determine the usefulness of these postgraduate programmes in meeting faculty and career needs.

### TIME COMMITMENT

Participation in this study is entirely voluntary. Should you choose to participate, you will be required to complete an online survey. This should take no more than 10 minutes to complete. You may also choose to participate in an audio recorded semi-structured phone interview about 30 minutes in duration for the second part of the study.

Your participation in the questionnaire is not related with your participation in the interview and you are free to decline either. However, if you agree to participate in both, then you will be contacted again to arrange a suitable date/time for the phone interview. The questions will look at your journey as an educator.

**COST, REIMBURSEMENT AND COMPENSATION**

We anticipate that you may benefit from reflecting upon your professional identity as an educator and career. You will not be paid for your participation and also there will be no costs to you, other than the time spent on the questionnaire and interview. A certificate can be provided to acknowledge your contribution to the study.

**RISKS**

There are no known risks of being involved.

**TERMINATION OF PARTICIPATION**

You may decide to stop being a part of the research study at any time without explanation and without penalty.

**CONFIDENTIALITY/ANONYMITY**

Only direct members of the research team (named above) will have access to the data. Any information you share will be kept confidential and your name will not be identifiable in any future reports and publications resulting from this work. Also no one will link the data you provided to your identity and name. The data collected will be stored securely in a password protected computer and the raw data will be destroyed 5 years after the study has been completed.

**FOR FURTHER INFORMATION ABOUT THIS RESEARCH STUDY**

Dr. Ahsan Sethi will be glad to answer your questions about this study at any time. Also, if you want to find out about the final results of this study, you should email:

Ahsan Sethi, a.sethi@dundee.ac.uk
Centre for Medical Education, University of Dundee
The Mackenzie Building, Kirsty Semple Way, Dundee, DD2 4BF, UK

"The University Research Ethics Committee of the University of Dundee has reviewed and approved this research study."

## Appendix 3.3 - Ethics Committee Approval Letter (Study 1 & 2)

From: Astrid Schloerscheidt
Sent: 26 July 2013 11:45
To: Ahsan Sethi <a.sethi@dundee.ac.uk>
Cc: Astrid Schloerscheidt <A.Schloerscheidt@dundee.ac.uk>; Elizabeth Evans <e.evans@dundee.ac.uk>
Subject: UREC 13093 - approved

Dear Ahsan,

I have now had a chance to review your ethics application. There are no ethical concerns regarding your study and your study is approved.

Best regards,

Astrid

Dr. Astrid Schloerscheidt
Chair, University of Dundee Research Ethics Committee

## Appendix 3.4 - Invitation Email (Study 1)

**Subject:** Invitation from the Centre for Medical Education, University of Dundee

Dear (CME Graduate Name),

Greetings from the Centre for Medical Education, University of Dundee

Dr. Ahsan Sethi, who is currently studying for a PhD at the Centre for Medical Education, University of Dundee, would very much like your assistance with his study. His research aims to explore the impact of a postgraduate qualification in medical education on graduates' work and career pathways. Your contribution is greatly valued and will help in the shaping of future medical education programmes. There are two parts to this study, a questionnaire which should take no more than 10 minutes and an audio-recorded semi structured phone interview. If you are willing to assist Ahsan with this, can you please complete the survey?

To complete the survey, please ctrl click here: http://www.survey.dundee.ac.uk/meded (If this link does not work, please copy and paste the following link into your internet window)

An information sheet is also attached (http://goo.gl/ytYnP) for your consideration and do not hesitate to contact Ahsan, if you would like any further information. His contact details are:
Dr. Ahsan Sethi - Tel: +44 (0) 1382 381779, Email: a.sethi@dundee.ac.uk

Thank you very much

Yours sincerely,
Dr. Sean McAleer
Senior Lecturer and Course Director
Centre for Medical Education, Dundee

## Appendix 4.1 - Interview Schedule (Study 2)

**Interview Guide**

Thank you for participating in this study, I acknowledge how busy you are and really appreciate the time you have taken. I am Dr. Ahsan Sethi, a PhD student at the Centre for Medical Education, University of Dundee.

This study constitutes a part of my PhD and through this interview; I am interested in finding out about your journey as an educator and any difference this qualification has made to it. You can respond to the questions with comments, thoughts and stories of your own.

As mentioned in the participants' information sheet, this interview will take about 30 minutes and it will be audio recorded. I assure you that any information you share will be kept confidential and you will not be identified in any future reports and publications. Please do not hesitate to ask any questions you may have.

So, if you are ready, shall we begin the interview?

1. Tell me about the overall events leading up to enrolling in the medical education qualification?
2. Have you experienced any growth in educational responsibilities since completion e.g. new roles or new jobs which this course helped you achieve?
3. In what ways this qualification has made a difference to your educational leadership activities or roles?
4. Has this qualification changed your perspectives on yourself as an educator i.e. how you see yourself as an educator today from before this qualification?
5. How do you think these qualifications helped you in your educational practice?
6. Can you recall any major shifts in your educational practices since the qualification?
7. Can you think of any particular event, where you drew your knowledge from the content of the program? Some questions to facilitate discussion may include:
    - Who was there?
    - What was your role?
    - What was good or bad about this experience?
    - How did you respond to this experience?
    - How did you feel?
    - In what ways it has contributed?
    - Can you provide other similar examples? Can you give me a specific example of pedagogical theory?
8. What were some of the challenges to implementing an educational change?

9. What were some of the enablers/facilitating factors to implementing an educational change?
10. Is there anything you wished to change following the qualification that you were unable to? Why?
11. Has the qualification impacted on your department? Can you please elaborate with examples or provide any indicators of the impact?
12. Has your qualification had an impact on your students? How?
13. In what ways this qualification has made a difference to your research or scholarship activities?
14. What were some of the tensions involved in being a medical educator? Any worries or fears related to your identity as educator? How do you see yourself fitting into the department?

Thank you for your time. Do you have anything you wish to add to the interview before I conclude?

I would like to remind you that any comments I feature in these reports will be anonymous.

## Appendix 4.2 - Invitation Email (Study 2)

**Subject:** Invitation from CME - Stage II Interviews

Dear (Graduate Name),

Greetings from the Centre for Medical Education, University of Dundee,

Thank you for agreeing to participate in the interview. In the interview, I will explore the impact of a postgraduate qualification in medical education on your educational beliefs, practices and career pathways. You will be encouraged to comment, give examples and share narratives from your own practices and how they had an impact on your workplace.

Your contribution is greatly valued and will help in the shaping of future medical education programmes. This interview will take about 30 minutes and it will be audio recorded. I assure you that any information you share will be kept confidential and you will not be identified in any future reports and publications resulting from this work.

I have attached a consent form and participant information sheet (http://goo.gl/ytYnP). Please review the information sheet and kindly return the consent form with your preferred date, time and contact details (Phone no. and Address for UK residents – Phone no. and Skype ID for Overseas) for an interview. Please do not hesitate to contact me if you would like any further information.

Thank you very much.

Dr. Ahsan Sethi
PhD Student & Part Time Tutor
Centre for Medical Education
University of Dundee
Mackenzie Building
Kirsty Semple Way
DUNDEE
DD2 4BF
Telephone: +44 (0) 1382 381779
Email: a.sethi@dundee.ac.uk
Web: www.dundee.ac.uk/meded

## Appendix 4.3 - Consent Form (Study 2)


College of Medicine, Dentistry and Nursing

CENTRE FOR MEDICAL EDUCATION

# CONSENT FORM

**Impact of postgraduate qualifications in medical education on graduates' professional identity development and career pathways**

This study aims to investigate the effectiveness of postgraduate qualifications in medical education in the development of health professionals as educators and the benefits that emerge.

By signing below you are indicating that you have read and understood the Participant Information Sheet and that you agree to take part in this research study.

| | | |
|---|---|---|
| I agree to the audio recording of the interview | YES ☐ | NO ☐ |
| I agree to the use of anonymous extracts from my interview in conference papers and academic publications | YES ☐ | NO ☐ |

_____ _____

Participant's signature Date

_____

Participant's name

_____ _____

Signature of person obtaining consent Date

_____

Name of person obtaining consent

## Appendix 5.1 - Interview Schedule (Study 3)

**Interview while doing the Course – Jan 2014**

1. Tell me about the overall events which led you to enrol in this qualification?
2. What was your role/responsibilities before joining this course?
3. What were your educational practices (in the roles mentioned above) before joining this course?
4. What made you study medical education as a field of study? (maybe covered above)
5. What have you learnt in past 3-4 months and how similar or different was it to your previous belief and practices in education? In what way will it be useful for your future practice?
6. Since you came here for a qualification in medical education, what are the expectations of your colleagues or organisation towards you and how do you think this qualification is helping you achieve that?
7. Can you think of any particular event from the course, which has changed your perspectives on yourself as an educator i.e. how you see yourself as an educator today from before this qualification? Any 'aha' moments? Can you recall any major shifts in your thoughts? Some questions to facilitate discussion may include:
    - Who was there?
    - What was your role?
    - What was good or bad about this experience?
    - How did you respond to this experience?
    - How did you feel?
    - Can you provide other similar examples?
8. Have your idea of what a good educator is changed based on your journey through the course? You can support it with examples from your professional practice. Anything you will do differently in future?
9. How do you see yourself different from others who do not have any qualifications in medical education?
10. In what areas you are stronger or weaker than them? Where you would like to improve?
11. What factors from the course have resulted in this shift?
12. What do you expect to achieve in education after this qualification and is this course helping you in getting that?

13. What do you want to change/improve about the current educational setup back at work, so that it become more in line with what you have learnt through this course in terms of educational theory/evidence? (Also reflects on future perspective)
14. What challenges and enablers do you anticipate to your future educational practice/work?
15. What were some of the tensions involved in being a medical educator? Any worries or fears related to having an identity as educator?

**Interview by the end of taught course - March/April 2014**

1. What have you learnt in past 3-4 months and how similar or different was it to your previous belief and practices in education? In what way will it be useful for your future practice?
2. Can you think of any particular event from the course in last 3-4 months, which has changed your perspectives on yourself as an educator i.e. how you see or describe yourself as an educator today from before this qualification? Any 'aha' moments
   Some questions to facilitate discussion:
   - What happened?
   - Who was there?
   - What were the factors?
   - What was good or bad about this experience?
   - How did you respond to this experience?
   - How did you feel?
   - Can you provide other similar examples?
3. How have your perceptions, beliefs or conceptualisation about education (teaching, learning or assessment) changed during this course?
4. What do you think are the roles and responsibilities of an ideal educator?
5. What factors from the course have resulted in this shift?
6. In what way this course or qualification will be useful for your future practice? Or While doing the course, what do you think, you would do differently in future or you think would be useful in future practice?
7. What factors from the course have resulted in this shift?
8. Based on your journey through the course, has your idea of what a good educator or educational practice changed? Can you support it with examples from your previous professional practice?
9. Since you came here for a qualification in medical education, what are the expectations of your colleagues or organisation towards you and how do you think this qualification is helping you achieve that? (What aspects from the course had that influence?)
10. How do you see yourself different from others who do not have any qualifications in medical education?
11. In what areas you are stronger or weaker than them? Where would you like to improve?

12. What do you want to change/improve about the current educational setup back at work, so that it become more in line with what you have learnt through this course in terms of educational theory/evidence?
13. What challenges do you anticipate to your future educational practice/work?
14. What are some of the facilitators/enablers?
15. Do you have any worries or fears related to becoming an educator? Please explain?
16. Is there any possibility of leaving this as a career, what may make you do so?
17. How do you improve your knowledge and skills in education?
18. What do you expect to achieve in education after this qualification and is this course helping you in getting that?

**Interview 3 months after joining the Workplace – August/September 2014**

1. Do you see yourself different from other teachers/educators, who have not taken any formal qualification in education? How?
2. Have you felt any difference in how others see you after doing this qualification?
3. Have you experienced any growth in educational responsibilities e.g. new roles or new jobs which this course helped you achieve? OR So what is the value of the qualification in medical education in terms of your career?
4. How do you think these qualifications helped you in your educational practice?
5. Can you recall any major shifts in your practices since the course or qualification? Any 'aha' moments?
6. What factors from the course have resulted in this shift?
7. Can you think of any particular event, where you drew your knowledge from the content of the program? Some questions to facilitate discussion may include:
    - What happened?
    - Who was there?
    - What was your role?
    - What was good or bad about this experience?
    - How did you respond to this experience?
    - How did you feel?
    - Can you provide other similar examples?
8. To what extent you were able to implement your learning?
9. What are some of the challenges or enablers in implementing those changes?
10. Has the qualification impacted on your department? Can you please elaborate with examples or provide any indicators of the impact?
11. Has your qualification had an impact on your students? How?
12. Has this qualification influenced your involvement in educational research or scholarship in any way?
13. What were some of the tensions involved in being a medical educator? Any worries or fears related to having an identity as educator? How do you see yourself filling into the department?

## Appendix 5.2 - Ethics Committee Approval Letter (Study 3)

**From:** Astrid Schloerscheidt
**Sent:** 08 October 2013 16:54
**To:** Ahsan Sethi <a.sethi@dundee.ac.uk>
**Cc:** Astrid Schloerscheidt <A.Schloerscheidt@dundee.ac.uk>; Elizabeth Evans <e.evans@dundee.ac.uk>
**Subject:** UREC 13144 - approved

Dear Ahsan,

I have now had a chance to review the documents you submitted in support of your ethics application regarding the third phase of your study. Given that you are now recruiting a different population, we decided to treat this as a new application, hence the allocation of a UREC number (see above).

I am very pleased to approve your application.

Best regards,

Astrid

Dr. Astrid Schloerscheidt
Chair, University of Dundee Research Ethics Committee

## Appendix 5.3 - Invitation Email (Study 3)

**Subject:** Please help with our research

Dear Student,

Greetings from the Centre for Medical Education, University of Dundee,

Dr. Ahsan Sethi, who is currently studying for a PhD at the Centre for Medical Education, University of Dundee, would very much like your assistance with his study. His research aims to explore the impact of a postgraduate qualification in medical education on the development of health professionals as educators. Your contribution is greatly valued and will help in the shaping of future medical education programmes.

You will be required to participate in 2-3 audio recorded semi-structured (face to face/phone) interview about 30 minutes each - 3 months apart. You may also be required to consent for the inclusion of written transcripts of your introductory reflections (video/audio/written) already recorded by CME during the induction module. However, you are free to decline either. An information sheet is also attached for your consideration.

If you are willing to participate, kindly return the consent form and do not hesitate to contact Ahsan, if you would like any further information. His contact details are: Dr. Ahsan Sethi - Tel: +44 (0) 1382 381779, Email: a.sethi@dundee.ac.uk

Thank you very much

Yours sincerely,

Dr. Sean McAleer

Senior Lecturer and Course Director

Centre for Medical Education, Dundee

## Appendix 5.4 - Consent Form (Study 3)


College of Medicine, Dentistry and Nursing

CENTRE FOR MEDICAL EDUCATION

# CONSENT FORM

**Impact of postgraduate qualifications in medical education on graduates' professional identity development and career pathways**

This study aims to investigate the effectiveness of postgraduate qualifications in medical education on the development of health professionals as educators and the benefits that emerge.

By signing below you are indicating that you have read and understood the Participant Information Sheet and that you agree to take part in this research study.

| | | |
|---|---|---|
| I agree to the audio recording of the interview | YES ☐ | NO ☐ |
| I agree to the use of my reflections from the induction module | YES ☐ | NO ☐ |
| I agree to the use of anonymous extracts from my interview and reflections in conference papers and academic publications | YES ☐ | NO ☐ |

_____ _____

Participant's signature — Date

(Please just type your name and email back, if you do not have an electronic signature or scanner/printer available)

_____

Participant's name

A Sethi

_____ **December 1st, 2013**

Signature of person obtaining consent — Date

**Ahsan Sethi**

Name of person obtaining consent

## Appendix 5.5 - Participant Information Sheet (Study 3)


College of Medicine, Dentistry and Nursing

CENTRE FOR MEDICAL EDUCATION

# PARTICIPANT INFORMATION SHEET

## Impact of postgraduate qualifications in medical education on graduates' professional identity development and career pathways

### INVITATION TO TAKE PART IN A RESEARCH STUDY

You are being asked to take part in a research study, which aims to investigate the impact of postgraduate qualifications in medical education on the development of health professionals as educators and the benefits that emerge. I am Dr. Ahsan Sethi and I am supervised by Drs. Sean McAleer, Rola Ajjawi and Susie Schofield at the Centre for Medical Education, University of Dundee. Please read this information sheet carefully.

### PURPOSE OF THE RESEARCH STUDY

There is a growing trend towards accreditation of medical educators by the regulatory bodies. For example, the General Medical Council, UK is implementing an 'approval of trainers' process, which would make it mandatory for all those involved in educating medical students to have some minimum qualification /competencies in education. This has resulted in a significant increase in the number of institutions providing postgraduate programmes in medical education and in the development of medical education as a speciality. This study will investigate the transformational change in terms of professional identity formation and educational practices of candidates enrolled in a UK award bearing course in medical education.

Participation in this research will benefit the professionalisation and evolution of medical education as a speciality. It will help new educators in identifying their needs and planning their careers. It will also determine the usefulness of these postgraduate programmes in meeting faculty and career needs.

### TIME COMMITMENT

Participation in this study is entirely voluntary. Should you choose to participate, you will be required to fill a single page information questionnaire and participate in two audio recorded semi-structured face to face/phone interview about 30 minutes each in January and April (3 months apart). If you plan to return to your workplace at the end of the taught modules in April 2014, then the researcher would also like you to take part in a third 30 minute semi structured (phone/face to face) interview about 3-4 months after your return, in order to better understand transfer of learning to the workplace. The

questions will look at your journey and transformation in educational beliefs as educators through the course.

With your informed consent, the researcher may also wish to acquire and include in his research a copy of your introductory reflections (written transcripts) recorded during the induction module from the courses office. However, you are free to decline.

**COST, REIMBURSEMENT AND COMPENSATION**

We anticipate that you may benefit from reflecting upon your educational experiences and the development of your professional identity as an educator and career. You will not be paid for your participation and also there will be no costs to you, other than the time spent on the interviews. A certificate can be provided to acknowledge your contribution to the study.

**RISKS**

There are no known risks associated with your involvement. The researcher will not be involved in assessment of your course work.

**TERMINATION OF PARTICIPATION**

You may decide to stop being a part of the research study at any time without explanation and without penalty.

**CONFIDENTIALITY/ANONYMITY**

Only members of the research team (named above) will have access to the data. Only Ahsan Sethi (principle investigator) will have access to identified data, the supervisors being members of the teaching and assessment team on the programme, will only have access to de-identified data. Any information you share will be kept confidential and your name will not be identifiable in any future reports and publications resulting from this work. Also no one will link the data you provided to your identity and name. The data collected will be stored securely in a password protected computer and the raw data will be destroyed 5 years after the study has been completed.

**FOR FURTHER INFORMATION ABOUT THIS RESEARCH STUDY**

Dr. Ahsan Sethi will be glad to answer your questions about this study at any time. Also, if you want to find out about the final results of this study, you should email:

Ahsan Sethi, a.sethi@dundee.ac.uk
Centre for Medical Education, University of Dundee
The Mackenzie Building, Kirsty Semple Way, Dundee, DD2 4BF, UK

"The University Research Ethics Committee of the University of Dundee has reviewed and approved this research study."

## Appendix 5.6 - Personal Information Questionnaire (Study 3)

**Personal Information Questionnaire**

This questionnaire will help us define the characteristics of our sample of participants. The information you share will be kept confidential and your name will not be identifiable in any future reports and publications resulting from this work. For further information please read the Participants Information Sheet attached.

1. Name: _____
2. Age: _____
3. Gender: ☐ Male ☐ Female
4. Email: _____**@dundee.ac.uk** _____**(Other)**
5. Contact No: **UK:** _____**Overseas:** _____**Skype:** _____
6. Nationality: _____
7. Profession: _____
8. First Language: ☐ English ☐ Other _____ (Please Specify)
9. Which country do you currently/expect to work in: _____
10. Please list here any other qualifications you have, relevant to your educational roles

| Qualification | Institution | Year |
|---|---|---|
| | | |
| | | |
| | | |

11. Please list your current educational roles and responsibilities:

| |
|---|
| |

12. Please tell us why you did this course in medical education:

| |
|---|
| |

**Thank you for taking the time to complete this questionnaire**

# The End

رَبِّ أَوْزِعْنِيٓ أَنْ أَشْكُرَ نِعْمَتَكَ ٱلَّتِيٓ أَنْعَمْتَ عَلَيَّ وَعَلَىٰ وَٰلِدَيَّ

‘My Lord, enable me to be grateful for Your favour which You have bestowed upon me and upon my parents’