BACK TO SCHOOL TO TEACH

The Transitional Learning Processes of New Medical Educators in Malaysia and the United Kingdom

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The candidate confirms that the work submitted is his/her own and that appropriate credit has been given where reference has been made to the work of others.

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ABSTRACT

New medical educators (NMEs) receive less attention in research about transition compared to medical students and junior doctors. While medical students and junior doctors are assumed to be lacking in experience and more prone to making mistakes during transition, NMEs are assumed to be competent doctors because they have accumulated several years of clinical practice experience. The transition of NMEs from clinical practice into a formal teaching role, however, is not straightforward. The aim of this study was to explore doctors' perceptions of how they negotiated their experience of learning in their transition to the role of medical educator and to study the implications of transitional learning processes for the management of NMEs' teaching and learning needs, including what factors influenced their learning processes. In this comparative longitudinal qualitative research conducted in Malaysia and the United Kingdom, NMEs were interviewed three times over one year about how they learn how to teach, what they learned during the transition phase and what factors affected their learning processes. The NMEs were found to be developing competencies in three domains; teaching, clinical practice and research. NMEs were teaching medical students without knowing the best way to carry out their teaching roles and responsibilities, and were mostly relying on past experience of learning in medical schools. Factors which supported or hindered the learning processes of the NMEs have been identified and it was found that some of these factors were localised to each country's context. Interestingly, the same factors could be experienced as either supportive or a hindrance to the learning of NMEs in different contexts. In explaining the learning processes of the NMEs in the workplace, it was found that the theory of Transformative Learning was more useful than the theory of a Community of Practice. The findings from this study have several implications for medical education systems in both countries. It is important that medical education providers acknowledge how NMEs navigate their transition into academia and identify what factors supported their learning, as easing the transition of NMEs into academia had the potential of developing them into excellent medical educators.

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KEYS TO ABBREVIATION USED

ACF	Academic Clinical Fellow
ACL	Academic Clinical Lecturer
ACT	Academic Clinical Tutor
BEI	British Educational Index
CCT	Certificate of Completion of Training
CoP	Community of Practice
CT	Core Trainees
CTF	Clinical Teaching Fellow
DoE	Department of Education
DoH	Department of Health
EdD	Doctor of Education
EdREC	Medical and Dental Educational Research Committee
ERIC	Education Resources Information Center
GP	General Practitioner
HEE	Higher Education England
HEA	Higher Education Academy
LIME	Leeds Institute of Medical Education
MD	Doctor of Medicine
MMC	Malaysian Medical Council
MoE	Ministry of Education
MoH	Ministry of Health

NIHR	National Institute of Health Research
NHS	National Health Services
NME	New Medical Educator
PhD	Doctor of Philosophy
PMETB	Postgraduate Medical Education Training Board
ST	Specialist Trainee
TEF	Teaching Excellence Framework
TL	Transformative Learning
TLS	Trainee Lecturer Scheme
TPB	Theory of Planned Behaviour
TPI	Teaching Perspective Inventory
UK	United Kingdom
ULTA 1	University of Leeds Teaching Award 1
ULTA 2	University of Leeds Teaching Award 2
UoL	University of Leeds
USIM	Universiti Sains Islam Malaysia

LIST OF PRESENTATIONS

Sanip, S. (2012). Novice Medical Teachers Drowning in the Sea Of Knowledge. In *White Rose Doctoral Training Centre Annual Conference*. University of York.

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CHAPTER 1

INTRODUCTION

1.1 Introduction to the chapter

As a medical educator in Malaysia, I have observed that a large proportion of undergraduate medical teaching is performed by new medical educators (NMEs) or doctors who are not trained as teachers. Despite their novice status, NMEs are given considerable teaching responsibilities and are expected to develop multiple teaching competencies and expertise quickly. At present, knowledge about the ways in which NMEs learn to become effective educators is still scarce. As NMEs have responsibilities for the training of future doctors, it is essential that we find out more about how NMEs learn how to become good educators. This knowledge is crucial for supporting NMEs' learning and for enhancing the quality of undergraduate medical education. Empirical evidence is needed to inform future provision of training and support for the NMEs.

1.2 Structure of the thesis

In this thesis, I will present my arguments by first highlighting the importance of studying the learning processes of NMEs in the transition phase into academia in Chapter 1. I will then set the scene by describing the medical education systems in Malaysia and the United Kingdom (UK) as well as the pathways to become medical educators in both countries in Chapter 2. In Chapter 3, the review of the literature on the learning processes of medical educators will be presented. In this chapter, I will highlight the importance of studying the topic and which areas require further empirical exploration. Subsequent to exploring these important areas, I will explain how my research questions were formulated. The justification for a longitudinal qualitative methodology and thematic data analysis will be elaborated in Chapter 4. My study findings will be presented in Chapter 5, 6 and 7. Chapter 5 will present the background of the NMEs with regard to their different teaching roles and responsibilities, teaching

perspectives and motivation to teach. Chapter 6 will highlight the learning processes of the NMEs and Chapter 7 will describe the factors influencing the learning processes of the NMEs. The synthesis of the overall findings, overall discussion on the topic and suggestions for future research will be presented in the penultimate chapter. I will end the thesis with an account of the implications for practice in medical education arising from my research, and my conclusion on the learning processes of NMEs in the transition phase.

1.3 Definition of terminology

In the literature, the words 'medical educator', 'medical teacher' and 'medical lecturer' have been used interchangeably to refer to someone who teaches medical students. At the start of my research, I used the term medical academic to refer to any doctors who were teaching medical students in Malaysia and the UK. However, the term academic is used with a different meaning in the UK context. In the UK, academics are doctors who are employed by the university mainly to conduct research and provide clinical services, while the teaching role is less prominent. As the study progressed, I recognised that there was difficulty in recruiting new medical academics as my research participants in the UK. I therefore extended the recruitment criteria to include academic clinical fellows (ACF), academic clinical tutors (ACT) and clinical teaching fellows (CTF) as long as they were actively teaching medical students. The different job titles also signify the different amounts of teaching carried out by each group. The amount of teaching involved in each role will be described later, in Chapter 5 of this thesis. I realised then that using the term medical academic throughout might be misleading. Therefore, I changed the term from medical academic to medical teacher so that the term encompassed all participants in my study, regardless of their job title. However, as my study progressed even further, I found that the NMEs were developing competencies in three domains; teaching, clinical practice and research. Using the term medical teacher might be misleading again as it could be limited to the description of only the teaching role of the teacher. I finally decided to use the term medical educator when referring to my study participants as a whole.

In terms of describing the development of medical educators, words such as ‘good’, ‘expert’, ‘excellent’ and ‘effective’ had been used in the literature. As there is no uniform definition of expertise in medical education, the term expert will be used with caution in this thesis. The difficulty in measuring expertise in medical education could be due to the multiple roles which medical educators are required to perform (Harden & Crosby, 2000). In describing the learning progression of the NMEs during the period of study, the term senior medical educator will be used to denote the development or transformation of NMEs from being novices at the beginning of the study to being more experienced when this study ends.

Due to the variety in UK medical educators’ job titles and job descriptions, in this thesis, each of the terms will be defined separately. This is done to illustrate the differences in NMEs’ job roles and responsibilities in terms of the amount of teaching they have conducted with medical students. In this thesis, I will use the term NME to refer to my participants as a whole group. The terms ACL, ACF, ACT and CTF are used when I am making a reference to individual job titles. Please refer to Table 1 below for the definition of each term.

Table 1: Definition of terminology for new medical teachers

Term	**Definition**
Medical Educator	Refers to any doctors who teach medical students. In this document, it refers to all the educators regardless of their job title or description.
Medical Lecturer	Refers to doctors who teach medical students. This term is commonly used in the Malaysian context, where lecturers have equal weightage in terms of their responsibilities to teach medical students, provide clinical services and conduct scholarly activities (research, writing and publication).
Trainee Lecturer	Refers to doctors in Malaysia who joined the

	trainee lecturer scheme to become a medical lecturer after successful completion of their postgraduate training.
Academic Clinical Lecturer (ACL)	Refers to doctors who are employed by universities in the United Kingdom to mainly provide clinical services and conduct clinical research with lesser teaching responsibilities for medical students. These doctors have obtained a Doctor of Philosophy Degree in their chosen clinical discipline.
Academic Clinical Fellow (ACF)	Refers to doctors who are employed by the National Health Service (NHS) Deaneries in the United Kingdom. These doctors are teaching medical students while undergoing academic and clinical specialist training at the same time.
Clinical Teaching Fellow (CTF)	Refers to doctors who are employed by the National Health Service (NHS) Deaneries in the United Kingdom. These doctors are employed specifically to teach medical students without any clinical service commitment. The job is an out of clinical specialist training programme job for the whole duration of the contract.
Academic Clinical Tutor (ACT)	Refers to doctors who are employed by medical faculties in the United Kingdom. These doctors are employed specifically to teach medical students. The job is an out of clinical specialist training programme job but the job description only requires between 10 to 25% of the doctor's time. The remaining percentage is for clinical service commitments.

1.4 Why this research was conducted

My interest in the topic of NMEs' learning started when I undertook my Masters in Medical Education at the University of Sydney, Australia in 2006. During the course, I was exposed to pedagogies of teaching and learning which were new to me, even though I had been a trainee lecturer in Medical Education in Malaysia since 2005. I learned many ways of becoming a better teacher and I felt that I should share this knowledge with my fellow colleagues. Upon returning to the faculty, my Dean asked me if I wanted to do my PhD straight away. I said no because I wanted to have a better understanding of the teaching and learning practices in my medical faculty, which was established in 2005. Since I have a postgraduate qualification in medical education, I felt that I had a responsibility to help the faculty grow in accordance with evidence-based medical education practices.

Prior to working as a medical educator, I was a medical officer in Obstetrics and Gynaecology in one of the government hospitals in Kuala Lumpur. After one unfortunate incident with a patient, I asked for a temporary transfer to a non-clinical job and I was posted to work as an Assistant Registrar in the Malaysian Medical Council (MMC). While working at the MMC, I was exposed to medical education through the accreditation exercise of medical schools in Malaysia. As I did not have any exposure to medical education during my undergraduate study, except as a medical student, I began to develop an interest in medical education. I was also enjoying the daytime working hours without any on-calls attached to the job. As my interest in medical education grew further, my interest in clinical work diminished. I then applied for a post as a trainee lecturer in Medical Education and was accepted at the university where I am working at the moment. While working in the faculty and meeting new colleagues, I learned that there were many reasons why doctors decided to make the transition into academia. I began to wonder whether the motivation for the transition would affect the delivery of medical education in my faculty.

While carrying out my responsibilities at the university, I noticed that many of my colleagues lacked the pedagogical understanding I had gained through my Masters study. As an individual, I felt limited in my ability to help

them develop the skills to become better educators. As I believe that good educators can be made, I began to question what I could do to help my fellow colleagues. I perceived that in order to help my colleagues, I needed an in-depth understanding of how doctors transition from their previous job to an academic career and what their motivations were for the transition. This transition is a major step for them and it involves learning many new things. Understanding the 'how' and 'why' this transition took place would enable me to help ease their transition into academia. The need for this understanding was therefore, the stimulus to undertake this study.

1.5 Problem statement

There is a growing body of literature addressing various transitions in medical education. Studies have explored the transition of medical students from the pre-clinical to clinical phase (Shacklady et al., 2009), from clinical schools to foundation year or house officer training (Brennan et al., 2010; Wilkinson & Harris, 2002), from junior house officer to senior house officer or transitioning to different level of responsibilities (Kilminster et al., 2010; Roberts, 2009), and from specialist registrar to hospital consultant (Westerman et al., 2013). Unfortunately, no attention has been paid to the transition of NMEs into academia. Although Cook (2009) has looked at the learning process of NMEs in the United Kingdom, her work concentrated more on the informal learning of NMEs rather than the transition of NMEs into their teaching career. As NMEs have a crucial role in determining the quality of future doctors, more research on the transition of NMEs into academia needs to be conducted. Greater understanding about that transition will allow medical schools to put in place appropriate supports for NMEs, which will ultimately enhance the quality of their teaching.

The transition of NMEs into academia from clinical practice is unlikely to be straightforward. The transition requires NMEs to learn many new things, from learning how to teach students, learning how to conduct research, learning to publish scholarly articles in high impact journals to learning how to adapt to the new working environment. In order to cope with their new working responsibilities, it is likely that NMEs rely and reflect

on their own past experiences (Hager & Hodkinson, 2009). As NMEs bring different kinds of past experiences into the workplace, they may only select workplace learning opportunities which they see as beneficial and worthy of their effort to participate in (Billett, 2001).

The period when doctors are transitioning to new roles has been termed as a 'critically intensive learning period' by Kilminster et al. (2011). Although Kilminster et al. (2011) focused on the transition of new doctors into early clinical practice, their proposal that any transition can be stressful and requires intensive learning is applicable to the transition of NMEs into their teaching role. The idea that transitions are a critical learning period is consistent with an earlier study by Day (1999), who concluded that teachers are highly motivated to learn in the first year of their career (the transition phase). These two studies suggest that the first year of teaching practice is a critical time when NMEs develop their standard of teaching. The learning in this period may also enable NMEs to cope with the complexities of teaching and learning in medical education as their career progresses. Whereas junior doctors are expected to struggle in their transition because of their lack of clinical experience, NMEs are assumed to have developed some expertise in their clinical discipline and have accumulated enough clinical experience to sail through their transition phase. While networks of support are available to help junior doctors in their transition phase: for example, through allocation of clinical and academic supervisors for each junior doctor; similar supports are rare for NMEs. This is problematic, as studies have indicated that clinical expertise does not equate to teaching expertise. Despite being an expert in a clinical discipline, the NME is not necessarily an expert in becoming an educator, particularly because a teaching and learning course is not a pre-requisite for becoming a medical educator.

There is no established document which mandates that medical educators need to undergo teacher training (courses), and this issue has been discussed extensively since the 1970s (WHO, 1972). Generally, knowledge of educational pedagogy is not deemed to be a pre-requisite to starting a teaching career in medical schools. It is assumed that as long as doctors are a subject expert, they should be able to teach others (Heflin et al., 2009). There is no established mandate regarding NMEs' training

needs, though documents published by the UK General Medical Council (GMC) and the Academy of Medical Educators (AoME) make reference to the requirement for medical educators to undertake proper training in teaching.

In *Good Medical Practice* (GMC, 2006), the need to develop competence as a medical educator is outlined in paragraph 16, *"If you are involved in teaching you must develop the skills, attitudes and practices of a competent teacher"*. There is no specific mention of competence in educational pedagogies. In *Developing Teachers and Trainers in Undergraduate Medical Education* (GMC, 2011), there is also no mention of training in pedagogies for medical educators. Although the word competence is mentioned on page 5, paragraph 23 with regard to the appointment of medical educators, the word competence here refers to the competence required of a doctor in general and not teaching competence.

The document which prescribes the competences needed from a medical educator is AoME's *Professional Standards* (2014). This document was first published in 2009 and has undergone two revisions since. The latest edition of the document was published in 2014. The document has a detailed description of 4 core values of medical educators (in medicine, dental and veterinary disciplines) as well as 5 medical education practice domains. Although the document is extensive and elaborative in describing medical educators' competencies, there is, again, no mention of the need to attend any teacher-training course. Snippets of guidance for medical educators are also included in the core competency documents for doctors in other parts of the world, for example CANMeds in Canada (Frank, 2005) and ACGME's (Accreditation Council for Graduate Medical Education) Outcome Project (Swing, 2007) in the United States of America. No such standards or guidance are established for doctors or medical educators in Malaysia. A comparison of these guidelines will be presented later in the literature review chapter.

If teaching competencies and knowledge on educational pedagogies are not pre-requisites prior to starting a career as medical educator, this suggests that teaching competencies and knowledge of educational pedagogies could be developed through deliberate practice and learning from experience (both as learners and teachers). Teaching

experience has been acknowledged as a factor which can help ease the transition of junior doctors from medical student to medical educator (Tso and Wood, 2012). However, only a small number of medical educators have had a prior formal teaching role or educational qualifications, either during medical school (Ten Cate, 2007) or during their postgraduate clinical training. Most medical educators do not have any formal teaching roles or educational qualifications when they start their teaching career (Srinivasan et al., 2011). Medical educators tend to rely on their past experiences as learners in medical schools and their teaching experiences in previous clinical settings (if they have any) to adapt to the new teaching roles and responsibilities. How teaching experience eases the transition of medical educators into academia remains unknown.

My study therefore aims to contribute new knowledge on NMEs' transitional learning processes by providing a detailed account of how they learn at the outset of their teaching career in Malaysia and the United Kingdom. Specifically, I would like to know how NMEs learn how to teach, how their personal biography and past experiences influence their learning and what factors are perceived by NMEs as influencing their learning processes in the transition stage. To date, no study has been carried out to study the learning processes of NMEs in Malaysia. In addition, no research has ever been conducted to compare the learning processes of NMEs in two countries. It was anticipated that cross-cultural comparison may facilitate detection of influences of biography and experience on learning and transition in medical education.

1.6 Research Objectives and Research Questions

In summary, the objectives of my study are:

a) To study doctors' perceptions of how they negotiated their experience of learning in their transition to the role of medical educator; and
b) To study the implications of transitional learning processes on the management of NMEs' teaching and learning needs.

In order to achieve my study objectives, the following research questions were developed:

a) What are the transitional learning processes of NMEs in Malaysia and the United Kingdom at the outset of their career?
b) What are the roles of prior learning and personal biography in preparing NMEs for their transition into academia?
c) What factors are perceived by NMEs as supporting or hindering their transitional learning processes?

1.7 Summary

In this chapter, I have identified and described in detail the problem with regard to NMEs' learning processes in the transition phase. I have also provided justification as to why this study needs to be conducted. In the next chapter, I provide a detailed description of the background of my study. This background exploration will highlight the complexity of the teaching profession by outlining the similarities and differences between NMEs and the medical education systems in both countries.

CHAPTER 2

RESEARCH BACKGROUND

2.1 Setting the scene

In order to understand the complexity of the job responsibilities of NMEs in Malaysia and the United Kingdom, I will first describe the health education system, followed by each job role in both countries. I will use diagrams and tables where possible to simplify the health education system, job roles or career progression process of the NMEs to enhance understanding. A summary of the commonalities and differences between the two countries will be presented, and I will speculate on how differences in health education systems, job roles and career progression may affect NMEs' perceptions of teaching and learning in medical education.

2.2 The Health Education System in Malaysia

The health education system in Malaysia is illustrated in Figure 1. Medical Education in Malaysia is governed by the Ministry of Health (MoH), Malaysian Medical Council (MMC), and Ministry of Higher Education (MoHE). The MoH is the body which governs the operation of all government and private hospitals and primary healthcare facilities in Malaysia. The MMC, which governs the practice of all doctors in Malaysia is also under the governance of the MoH. The MoHE is the body which governs the operation of all educational institutions including public and private medical schools. The undergraduate training of doctors is delivered by public and private medical schools. Although one private medical school has started a postgraduate programme in partnership with a public medical school, postgraduate clinical training is mainly delivered by public medical schools.

Medical schools without teaching hospitals use hospitals and primary care facilities governed by the MoH to provide their students with clinical training. Medical schools with their own teaching hospitals are primarily governed by the MoHE, though they still use the MoH's primary

care facilities to complement medical students' exposure to clinical services not available in university teaching hospitals.

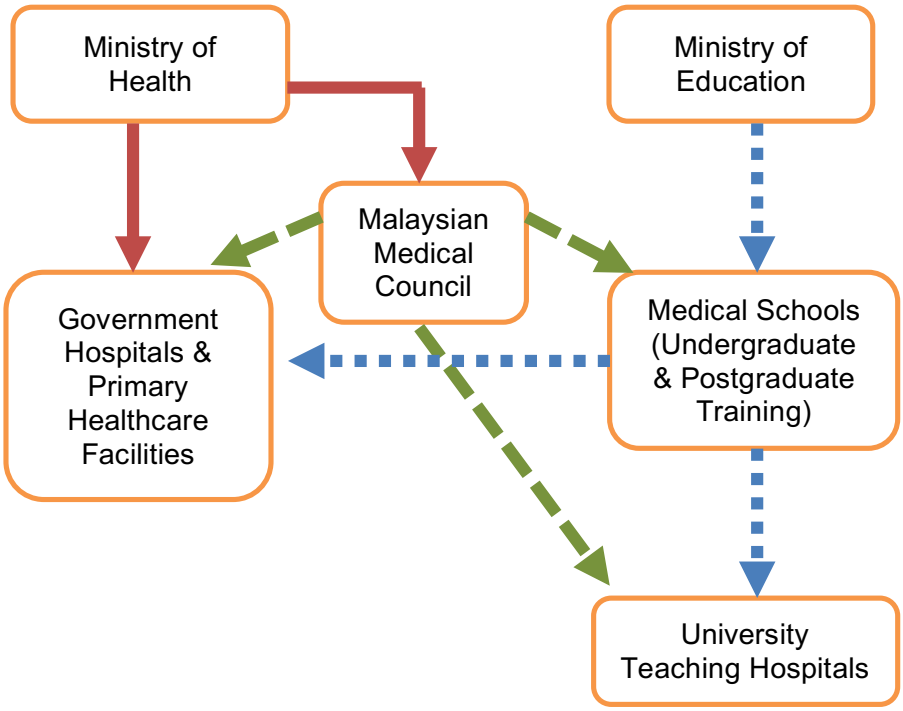

Figure 1: The Health Education System in Malaysia

2.3 The Health Education System in the UK

The health education system in the UK is illustrated in Figure 2. The Department of Health (DoH) governs the operation of NHS Trust hospitals, while the Department of Education (DoE) governs the operation of medical schools. The General Medical Council (GMC), which governs the practice of doctors in the UK, is an independent body, not related to the Department of Health or Department of Education. The GMC regulates and approves the education and training of undergraduate and postgraduate doctors in the UK, conducted in NHS Trust hospitals and Primary Care Trust facilities under the governance of DoH.

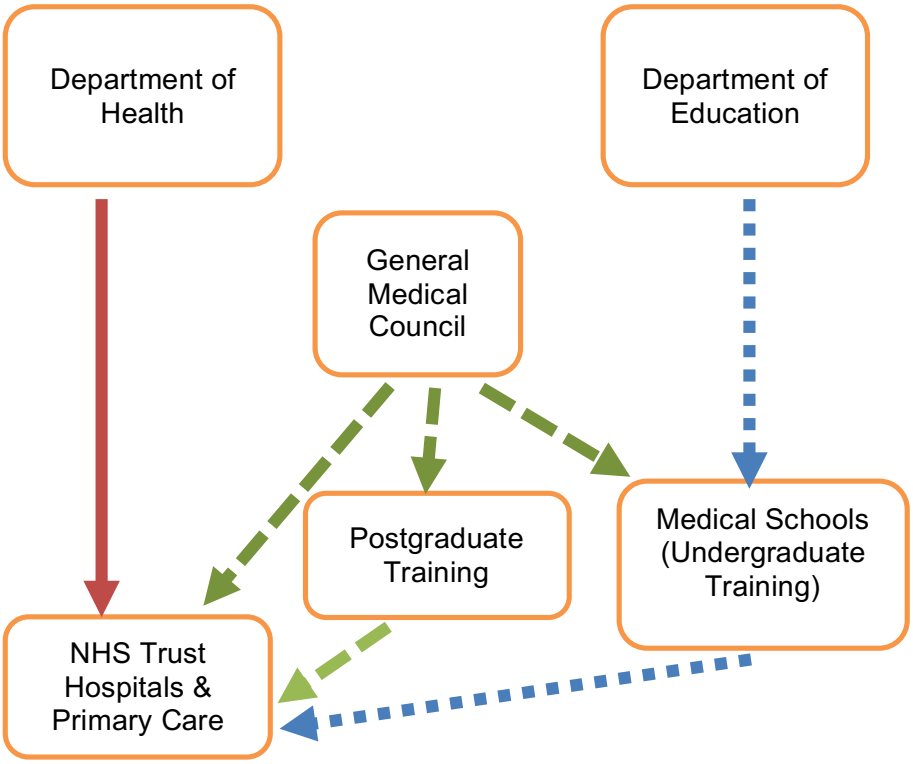

Figure 2: The Health Education System in the United Kingdom

2.4 Pathways to become medical educators in Malaysia

The three pathways to becoming a medical educator in Malaysia are illustrated in Appendix 1. The salary grade is included in each pathway to show how salary increments could be a motivation for NMEs to choose a certain pathway to become an educator. The minimum duration required to qualify as a clinical specialist is also included in the pathway to highlight the advantages and disadvantages of each pathway in pursuing a career in academia. All doctors working in the public sector, either for the MoH or MoHE are given permanent jobs. To further improve the working conditions for doctors and dentists in Malaysia, and to acknowledge the contribution of medical educators in higher education, the government introduced a time-based promotion scheme and academic allowance for medical educators in 2010 (JPA, 2010). The time-based promotion for medical educators and other doctors in Malaysia is illustrated in Appendix 2.

Most medical educators in Malaysia undertake Pathway 1 (Appendix 1) through the public universities' medical trainee lecturer

scheme. Through this pathway, doctors who are interested in becoming medical educators are recruited by public medical schools. They then undergo postgraduate training and develop expertise in the clinical or basic science discipline of their choice. Although Pathway 1 is the formal route to becoming a medical educator in Malaysia, the trainee medical lecturers do not undertake different training to other postgraduate doctors (please refer to Appendix 3). The trainee medical lecturers are not exposed to any formal training in teaching before or during their postgraduate training. They may teach medical students on and off informally but these sessions are not part of the postgraduate training curriculum. Therefore, none of the pathways are superior in terms of providing teaching experience for future medical educators in Malaysia. The two features which differentiate the pathways are the time taken in each pathway to complete postgraduate clinical training and the salary they receive at different grades. Since 2012, trainee lecturers in pathway 1 enjoy a higher salary compared to their colleagues in the MoH (JPA, 2012). It could be argued, then, that for some trainee lecturers their motivation to become medical educators is likely to be the salary incentive rather than a genuine interest in medical education.

In the public service under the MoH, doctors can be posted to anywhere in Malaysia upon promotion to a new grade. Doctors who are reluctant to relocate to a new place can opt to resign from the MoH and continue their service as a medical educator in the MoHE. In other words, NMEs in pathways 2 and 3 who become medical educators may do so out of a reluctance to move rather than a true passion for medical education. This is worth noting, as the motivation of doctors to become medical educators is likely to have a great influence on how they perceive teaching and learning to teach in medical education. The relationship between motivation to become an educator with perception of teaching and learning in medical education will be discussed in the literature review, findings and discussion chapters.

Although some trainee medical lecturers undergoing Pathway 1 may have some teaching experience before starting postgraduate training, they are not exposed to any teaching and learning skills courses. The teaching and learning skills course will be offered when the trainee medical lecturers have completed postgraduate training and report for duty at the university. Therefore, any NMEs undergoing Pathway 2 or 3 are not

disadvantaged in terms of exposure to formal teacher-training courses when they start their career in academia. In Universiti Sains Islam Malaysia (USIM), for example, the teacher-training course, which is compulsory for full time NMEs, runs only once a year. If NMEs miss the teacher-training course in the current year, they have to wait for the next course, which will be conducted in the following year. Meanwhile, they have to carry out their teaching responsibilities without any exposure to teaching and learning pedagogies.

The content of the teacher-training course for higher education in Malaysia was standardised through a module set by the MoHE in 2010 (MoHE, 2012). Although the content has been standardised, the duration of the course offered by each university varies. Some universities offer the course over 3 days' duration, some universities offer it over two weeks and some universities offer it as a certificate course over one semester. The topics covered during the teacher-training course are: concepts of teaching and learning in higher education; understanding students; higher education curriculum design; effective teaching and learning; assessment of learning; teaching project and professional practice. As the delivery of the course is different, it is likely that the breadth and depth covered is also different. This could lead to different levels of understanding among NMEs in different universities, thus different teaching and learning practices. One could speculate that universities that deliver the course over a longer period put more emphasis on their teaching and learning activities and probably provide more institutional support to their educators.

As an incentive to attract more doctors to become medical educators in Malaysia, the government introduced a new salary scheme for the trainee lecturers in 2012 (JPA, 2012). With the introduction of the new salary scheme, trainee lecturers enjoy a higher salary compared to their colleagues in the MoH. It could be argued, then, that for some trainee lecturers their motivation to become medical educators is likely to be the salary incentive.

At present, all doctors and medical educators working in the public sector are offered permanent jobs. However, job security for doctors and medical educators in Malaysia is likely to change in the future. A recent development in Malaysia indicates an oversupply of qualified doctors in the MoH. Currently, some medical graduates are still waiting for their

housemanship placement more than six months after graduation. This recent development of medical graduate oversupply may lead to the possibility that the government will not be offering permanent posts to doctors in the future. This is an important point to note because, as I will highlight in my research finding chapters, job security emerged as an important factor which influences doctors' and medical educators' decision making for their career progression.

The trainee lecturer and medical educator work scheme also benefit from a vertical promotion scheme (please refer to Appendix 3). As opposed to their colleagues in MoH, who have to wait for vacant posts to become available before they can apply for career promotion beyond grade UD54, medical educators can apply for promotion beyond grade DU54 without waiting for a vacant post to become available. Doctors in the MoH also have to relocate to hospitals where such vacant posts are available whereas medical educators can enjoy their career promotion without having to relocate to another place.

2.5 Pathways to become medical educators in the United Kingdom

In the UK, teaching of medical students is undertaken by experienced NHS staff, as well as NMEs in the roles included in this study. This section describes the pathways undertaken by participants in this PhD study.

In comparison to Malaysia, the pathway to becoming an NME in the UK is even more complex. There is no similar trainee lecturer scheme in the United Kingdom. The integrated academic training pathway, as illustrated in Appendix 4, provides junior doctors with more opportunities to develop their interest into becoming medical educators. Upon graduation, all junior doctors undergo two years training as foundation doctors. During foundation year training, junior doctors undergo training in major disciplines in which they may develop interests for further training. Junior doctors who are interested in developing other skills such as research, teaching, leadership and management simultaneously while developing clinical skills during foundation year, can also apply for the Academic Foundation Programme (AFP). In the AFP, foundation doctors are allocated dedicated

time for academic activities. These foundation doctors also have dedicated academic supervisors to guide them during their academic placement.

An AFP doctor who wishes to continue on the academic pathway can apply for an Academic Clinical Fellow (ACF) post upon completion of their foundation training. The ACF programme runs for 3 to 4 years (4 years for General Practitioner Trainees). Under the integrated academic training pathway, ACFs are allowed to spend 25% of their time doing research and teaching while the other 75% is for clinical training. In comparison to the trainee lecturer scheme in Malaysia where a trainee lecturer is attached to a specific public medical school, an ACF is only partly attached to a medical school in the UK. For example, an ACF who works at the University of Leeds (UoL) is only partly an employee of the UoL because his/her salary is paid by both the National Institute of Health Research (NIHR) and the UoL. Although ACFs are partly attached to medical schools, their job is on a temporary contractual basis. ACFs have to look for another job when their work contract finishes.

Upon successful completion of ACF training, ACFs can either continue on an academic pathway (PhD, MD or EdD) or continue with their specialty training. To pursue a career in academia, ACFs who have obtained a PhD in their chosen specialty compete again for ACL jobs as illustrated in Appendix 4. At present, pursuing a PhD, MD or EdD qualification is carried out part-time or as an out of clinical training qualification. Upon obtaining a PhD, MD or EdD, these doctors compete again for the clinical lectureship posts (Academic Clinical Lecturer) and resume clinical training.

The ACLs are allowed to spend 50% of their time doing research and teaching while the other 50% is for clinical training. As the ACF and ACL posts are allocated to institutional partnerships of University, NHS Organisations/Trusts and the Local Education Training Boards, ACFs and ACLs are expected to teach medical students although their job descriptions are for research and clinical training. The recruitment of ACFs and ACLs is undertaken by the NIHR's Trainees Coordinating Centre through open competition (NIHR, 2014), as opposed to the recruitment of trainee lecturers in Malaysia, which is undertaken by each medical school. The coordination of academic posts (ACFs and ACLs) has now been taken over by Higher Education England (HEE), which began operation in 2012.

HEE is currently the governing body which oversees the training of NHS staff in the UK. The 50% academic job scope of ACLs is further divided into doing research, bedside teaching and other scholarly work, including writing for publications and presenting at workshops and conferences. As clinical academics are judged by their successful grant applications and research publications, it is understandable that some academics may pay more attention to doing research than teaching medical students. I will discuss further the implications of job roles on the quality of teaching received by medical students in the discussion chapter.

There are also doctors who opt to become academic clinical tutors (ACT) to teach medical students. ACTs only need to teach medical students, without any other obligations to the medical school. An ACT with an interest in the curriculum, for example, can have the opportunity to teach and participate in curriculum activities such as curriculum planning and evaluation. The tutoring job is approximately 10% to 25% of their full time equivalent. The ACT post is also an out-of-clinical training post. Doctors who work as ACTs will have to extend the duration of their clinical training equivalent to the amount of time they spend working as ACTs.

In this study, the teaching post with the most responsibility towards formally teaching medical students is that of a clinical teaching fellow (CTF). The CTF post is established solely for the purpose of teaching medical students. Junior doctors who are interested in medical education may apply for a CTF post in certain medical disciplines to gain valuable experience in teaching. The CTFs' teaching roles vary between medical disciplines and the hospitals they are attached to (Furmedge, 2013; Roberts et al., 2014; Wilson et al., 2008). More CTF jobs are created by Trusts and Deaneries as they acknowledge the benefit of having CTFs as teachers for the training of medical students. The CTF job is also carried out as an out-of-clinical training programme experience. Similar to ACTs, CTFs need to extend the duration of their specialty training depending on the time they spent working as CTFs. As the CTF post is a 9 am to 5 pm teaching job, CTFs are only expected to carry out teaching during work hours. The 9 to 5 job also means that a CTF's monthly income is less because there is no on-call commitment attached to the post. CTFs may need to make their own arrangements for on-call or locum jobs outside their work hours to supplement their monthly income.

2.6 Comparisons between Malaysia and the United Kingdom's health education systems

Despite the difference in job titles, job roles, geographical location and culture, there are some similarities between NMEs in Malaysia and the UK. The first similarity is in terms of their workplace environments. Except for CTFs, who only work in the hospital environment, the other NMEs are working across university and hospital environments. This means that NMEs may be faced with differing priorities depending on the environment they are working in at the time.

The second similarity is in terms of exposure to formal teacher training courses. Completion of a teacher training course is not mandatory in either country before a NME commences work in medical education.

There are six differences between the NMEs in Malaysia and the UK. These differences are in terms of job availability, job description, career progression, job security, teaching duties of other doctors and teacher training courses. First, the academic job availability in Malaysia is governed by the MoHE. The MoH has no involvement in the employment of NMEs. In the UK, some teaching and academic posts are offered by the NIHR, which is under the governance of the DoH, while some other academic posts are offered by the universities, which are under the governance of DoE.

Second, the job description for NMEs is uniform across Malaysia, as it is under the purview of the MoHE. The job description is more varied in the UK, as described earlier. Not only is the job description different between teaching roles, some teaching jobs with the same title have different job roles between Deaneries. The CTF job description in Radiology, for example, varies between two hospitals under different Deaneries.

Third, the career progression for NMEs in Malaysia is well established and documented because the NMEs are employed under one work scheme. The career progression for NMEs in the UK is not well documented because NMEs have to compete for new job openings at the end of their teaching contracts, and there may not be any new job openings at the end of their contract as NMEs. The UK NMEs' career progression

becomes more established once they manage to secure a permanent job. The introduction of the new integrated academic pathway has improved the career progression of doctors who wished to be medical academics in the UK because the academic and clinical training can be undertaken simultaneously.

Fourth, in terms of job security, NMEs in Malaysia are offered permanent jobs, while in the UK, many teaching jobs are offered on a temporary contractual basis. The contract durations are often based on grants available to NIHR, Deaneries or research grants available to the universities. NMEs in the UK can be offered a permanent academic job once they manage to secure a senior lectureship post in the university.

Fifth, there is also a striking difference in terms of payment given to individual clinicians who teach medical students. In Malaysia, individual clinicians receive payment for teaching medical students. It is a well-paid part-time job. In the UK, individual clinicians do not receive payment for their teaching sessions. All doctors in the UK are expected to 'be prepared to contribute to teaching and training doctors and students' (GMC, 2006 p 14). Local education providers (Secondary Care Hospital Trusts and Primary Care Practice) are funded to teach medical students through the Multiple Professional Education Tariff (MPET) funding. This is provided by the DoH through Health Education England (HEE). It is administered locally by the Local Education and Training Boards (LETBs) in consultation with medical schools. One could therefore argue that there is less financial reward for individual doctors who teach medical students in the UK (when compared with Malaysia).

The final difference is in terms of teacher training courses provided to medical educators. This difference can be illustrated by comparing Universiti Sains Islam Malaysia (USIM) with the University of Leeds (UoL). In USIM, the teacher-training course is only offered to full-time medical teachers. In UoL, a teacher training course is offered to part-time, as well as full time, medical educators and to research staff, teaching assistants and postgraduate research students who are interested in teaching medical students. They are encouraged to attend the University of Leeds Teaching Award 1 (ULTA 1) course to gain recognition of their teaching experience and enhance their practice. The University of Leeds Teaching Award 2 (ULTA 2) on the other hand, is compulsory for staff (including NMEs)

employed to teach at the university and deemed new to teaching and learning in higher education settings. Teacher training courses such as ULTA 1 and ULTA 2 are standardised in the UK as they must satisfy the requirements of the Higher Education Academy (HEA, 2011). The HEA is the national body which oversees learning and teaching in higher education in the UK through the UK Professional Standards Framework. As CTFs are not university employees, they do not have access to these courses. NMEs who are not university employees may choose to undertake a postgraduate qualification in medical education, with funding from NIHR or through committing their own finances. 23 out of 33 medical schools in the United Kingdom offer postgraduate courses in medical education either at the level of Certificate, Diploma, Masters or PhD. In comparison, only 2 out of the 33 medical schools in Malaysia offer postgraduate courses in medical education. I will highlight the demand for extra postgraduate qualifications for medical doctors in the UK in my findings and discussion chapters. It is likely that the difference in job security between Malaysia and the UK is one of the factors influencing doctors in both countries to participate in professional development programmes or postgraduate medical education courses. The differences between NMEs' work environments in Malaysia and the UK are summarised in Table 2.

Table 2: The differences in NMEs' work environment in Malaysia and the United Kingdom

	Malaysia	**The United Kingdom**
Employer	Ministry of Education	Deaneries and universities
Job description	Uniform across Malaysia	Varied (Examples include Clinical Teaching Fellow, Academic Clinical Fellow, Academic Clinical Tutor, Academic Clinical Lecturer)
Career progression	Well established	Well established after securing a permanent job. Better with new academic pathway

Job security	Permanent job	Often contractual, though permanent after securing a senior lectureship post. Contracts are often based on grants.
Teaching duties of other doctors	Clinicians who are not medical educators are paid to teach medical students.	Teaching is a professional duty of all doctors. No payment is made to individual clinicians to teach medical students.
Teacher training course	Only offered to full time teachers.	Offered to both full time and part time teachers who are university employees.

2.8 Summary

I have described in this chapter the complexity and differences in NMEs' roles and responsibilities, the different pathways to becoming medical educators and the different work affordances in medical education between Malaysia and the United Kingdom. The differences in job titles in the UK lead to differences in teaching roles and responsibilities, and therefore make it difficult to standardise teaching jobs roles and responsibilities in medical education. The differences in teaching job descriptions between the two countries also indicate that it is difficult to standardise teaching job descriptions in medical education across the globe, hence comparison between countries are difficult to conduct. In the following chapter, I will present my literature review on the topic of study.

CHAPTER 3

LITERATURE REVIEW

3.1 Introduction

A review of the literature was carried out to look for relevant studies in the medical, health and education databases on the learning processes of new educators. These databases include PubMed, MEDLINE, CINAHL, PsycINFO, Web of Science, Education Resources Information Center (ERIC), British Education Index (BEI) and Google Scholar. Keywords used during the literature search were: “medical/clinical educator”, “medical/clinical teacher”, “medical/clinical lecturer”, “medical/clinical academic”, “transition”, “novice”, “expert”, “faculty” and “preparedness”. Each keyword was further expanded to include words with similar meaning for example expanding “preparedness” to include “readiness”. Articles relevant to teaching and learning in medical and health education were selected. The selected articles were used to further refine my literature review search. Keywords in the chosen articles were entered into database searches to increase the sensitivity and specificity of the searches. Desk based searches were also conducted to include journal articles, books, conference abstracts, government documents, web pages and newspaper articles not found through database searches. Additional references were also sourced using the reference lists of the chosen articles.

The results of the literature review search yielded more articles when the term medical educator was used. This finding reinforced my decision to use the term medical educator for my participants. The term medical teacher may imply a singular teaching role, whereas the term medical educator encompasses all the roles which need to be undertaken by a medical teacher. The literature search exercise was conducted regularly to ensure that the most recent and relevant literature was included in the thesis.

This chapter presents my review of relevant literature in four main areas: understanding transition in medical education; developing medical educators; workplace learning theories and factors influencing learning in the workplace. The review of the literature has helped me to understand the journey undertaken by medical educators from other countries and educators from other allied health professions in developing educational competence. As the development of NMEs involved transitioning from clinical practice into academia, my literature search was undertaken to understand transition and the issues associated with transition in medical education. Acknowledging the importance of personal biography in the learning processes of adult learners, I will also describe what is already known about how personal biography influences NMEs' development towards becoming senior medical educators in the workplace. As NMEs are learning in multiple workplace environments, a critical review of relevant workplace learning theories will be presented. This is followed by a summary of factors which have been identified as influencing the learning processes of medical educators. Throughout the chapter, I will highlight the knowledge gap on the learning processes of NMEs in transition and how my research proposes to address this gap.

3.2 Understanding transition in medical education

Doctors undergo many and different stages of transition throughout their career. The first stage of transition occurs upon entrance into a medical school, either as an undergraduate or graduate student. Subsequent transitions occur as students progress in their studies, typically from the pre-clinical phase to the clinical phase, from the clinical phase to practising as junior doctors, from junior doctors to senior doctors, senior doctors to qualified consultants and consultants to retirement. As many medical schools are employing an integrated or problem-based curriculum, the transition from the pre-clinical to clinical phase can occur as early as in the first year of undergraduate study. There are also different types of transitions: for example transitioning to a different clinical discipline (from the medical to surgical wards), to a different workplace (from tertiary

hospitals to primary care centre) or to a different practice (from clinical practice to academia). From my own experience and the review of the literature, I have noticed that the transition from clinical practice to academia can occur at different stages of career progression. Figure 3 illustrates the different stages of transition in medical education.

Each solid arrow in the figure represents a stage of transition in clinical practice. The bold arrows indicate the transition to obtaining higher degrees in medical education, whereas the broken arrows represent the transition points to academia. It is also important to note that although the figure illustrates a linear progression from high school to retirement, what happens at each phase of transition is not the same. In the clinical setting for example, junior doctors rotate between clinical disciplines. Each rotation is a new transition and requires new sets of learning (Kilminster et al., 2010) because the junior doctor has to work in a new ward with a new set of nurses and consultants. According to Kilminster et al. (2011), the period of transition is the period where critical intensive learning takes place. As there is a lack of formal learning sessions for these doctors, it is likely that the learning is mainly informal and perhaps incidental. The interlinked and inseparable relationship between learning, practice and performance during transition and its dependence on the specific setting (Kilminster et al., 2011) has led researchers to study the consequences of transition in different stages in more detail.

A comprehensive review on the consequences of different transition stages in medical education was provided by Teunissen and Westerman (2011). Out of the seventy-three articles reviewed, there were no articles on the transition of practising clinicians to the role of medical educator. The articles reviewed mainly focussed on those transitions which involved a marked change in terms of responsibility and authority towards patients' care: that is, from non-clinical to clinical training, medical student to junior doctor or specialist trainee and specialist registrar to consultant. Although Teunissen and Westerman (2011) provided an extensive review on how transition can be conceptualised as an opportunity or threat to learning, they failed to identify the transition into academia as a stage of transition in medical education.

The most significant conclusion regarding transition in medical education is drawn by Kilminster et al. (2010), who conclude that doctors can never fully prepare for their transitions. This is supported by Kellett et al. (2014), who found that junior doctors were especially unprepared in the areas of making diagnoses, prescribing and acting in emergency situations. Whereas the transition of medical students to junior doctors was found to be problematic because they lacked practical experience (Kellett et al., 2014), medical educators' transition into academia may also be problematic when a doctor lacks teaching experience. However, it is also possible that learning experience as medical students and working experience as doctors can guide medical educators during the transition phase. No studies have ever been conducted in detail on how NMEs use undergraduate or postgraduate learning experience for their transition into academia. The findings from such studies could illustrate which parts of the medical curriculum are useful and how this curriculum content is used by NMEs when navigating their transition into academia. Another important point to note is medical students are lacking in terms of work experience during their transition into becoming junior doctors. NMEs on the other hand, tend to already have work experience and have previously undergone multiple transitions. An interesting question now arises as to whether NMEs' transition into academia is easier because they have prior experience of working and navigating multiple transitions, including the major transition from being medical students to becoming junior doctors.

As learning, practice and performance are 'mutually constitutive' (Kilminster et al., 2010), the performance levels of doctors vary during transition because many factors influence their learning and practice while in transition. In order to ensure that doctors are able to see transition as an opportunity for learning, they need to be equipped with coping skills which can help them deal with the various transitions in medical education (Teunissen & Westerman, 2011). It is understandable that doctors can never fully prepare for transition in the clinical setting because clinical settings are chaotic, emergencies can occur at any time and patient management is constantly changing due to new treatment protocols. In contrast, the settings in academia are likely to be more stable. Despite

curricular changes and changing educational directives, these changes take some time to be implemented and, arguably, medical educators have time to respond and prepare for these changes. Therefore, it will be interesting to explore whether doctors are more able to prepare for their transition into academia.

3.3 Developing medical educators

Previous studies on the development of medical educators have highlighted the importance of several areas of development. These studies will be presented with reference to six themes; medical educators' roles, medical educators' competency domains, clinical competence development, the need for good medical educators, training doctors as teachers and teaching competence development.

3.3.1 Medical educators' roles

Studies on the development of excellent educators have supported the notion that good educators can be made (Pinsky et al., 1998). However, it is not easy to become a good medical educator, since there are many roles which medical educators have to be competent in. The multiplicity of medical educators' roles has been frequently emphasized in the medical education literature (Frank & Danoff, 2007; Harden & Crosby, 2000; Heflin et al., 2009; Steinert, 2009). On top of the basic skills of teaching, in which they have to be competent (Srinivasan et al., 2011), medical educators must take up other roles as well: for example as curriculum developer, administrator and medical education scholar. The most comprehensive list of medical educators' roles (twelve roles in all) was described by Harden and Crosby (2000). The twelve roles are; lecturer, clinical or practical teacher, resource material creator, study guide producer, course organiser, curriculum planner, curriculum evaluator, student assessor, mentor, learning facilitator, on-the-job role model, and teaching role model.

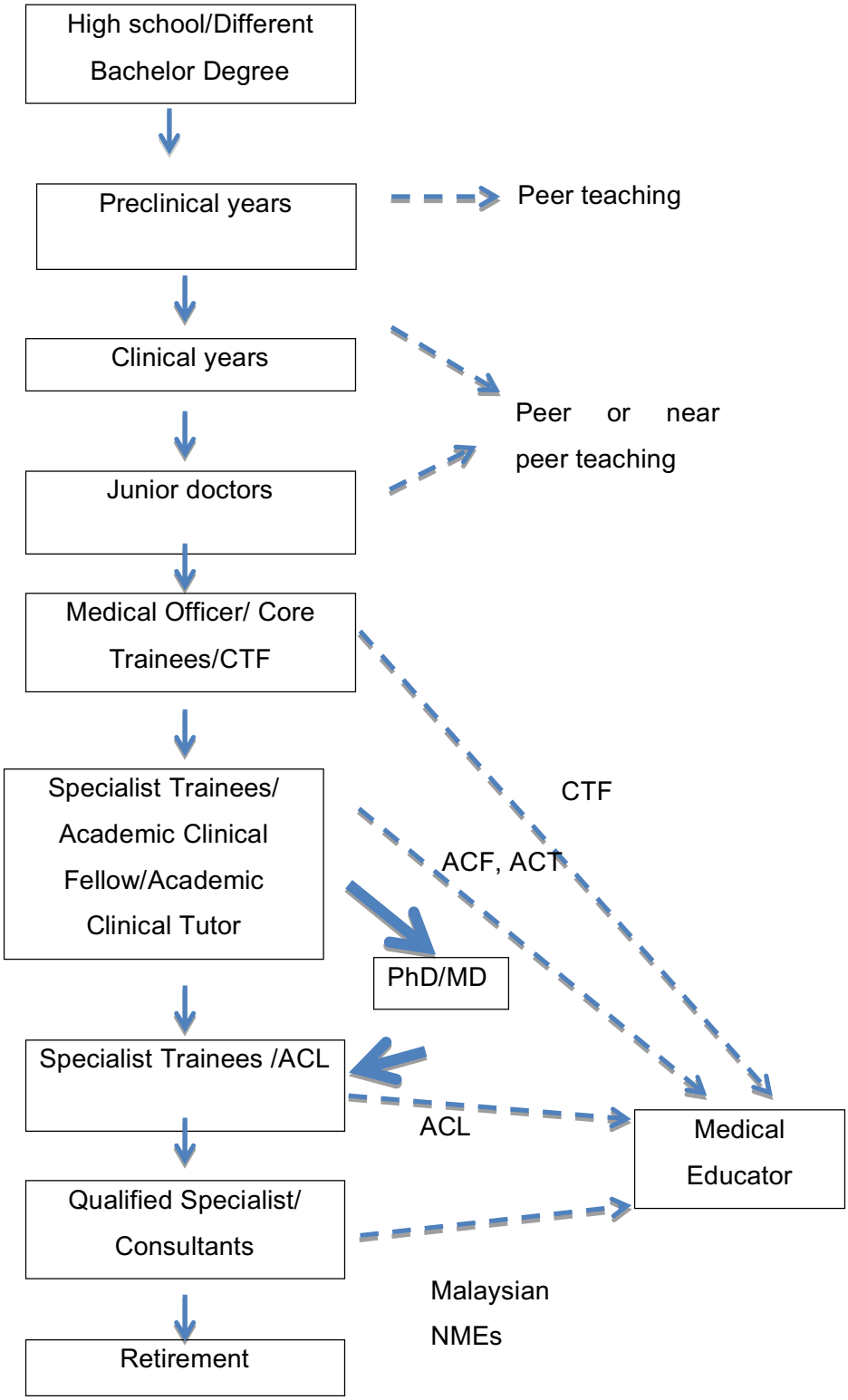

Figure 3: The different stages of transition in medical education

The medical educator's job is further complicated by a dual role as medical educator and practising clinician. While these roles can work in synergy, they can also serve as a constraint to the learning process (MacDougall & Drummond, 2005). In the transition phase, NMEs may have to carry out more than one role simultaneously. In my experience, while learning to master one role was not easy, learning to master more than one role simultaneously was a great challenge. Besides learning about their roles and responsibilities, new educators also need to acclimatise to new workplace environments.

3.3.2 Medical educators' competency domains

In some countries, medical educators need to demonstrate competency in prescribed teaching domains for the purpose of accreditation. The teaching domains and the countries in which medical educators have to demonstrate competence in these domains are illustrated in Table 3. According to literature, new educators take between one and a half to four years to develop competence on average, and several more years to reach proficiency (Feiman-Nemser, 2003; Hurst, 2010). Compared to new educators in other disciplines, NMEs are learning to develop competence in teaching, clinical practice and research skills simultaneously. It will be beneficial to explore how much time is needed by NMEs to develop competence and proficiency in clinical practice and teaching skills and what type of supports are needed in the process, as these factors will affect NMEs' career progression.

The specific requirement for teaching competencies in the UK is outlined in *Professional Standards 2012,* published by the Academy of Medical Educators (AoME) in 2011. The Professional Standards defines seven core values and five domains for medical educators to guide them in their daily activities as well as setting standards for accreditation of their competencies in medical education. The five domains are teaching and supporting learners; assessment and feedback to learners; educational research and evidence-based practice; educational management and leadership; and design and planning of learning activities. The Professional

Standards 2012 has been adopted by the London Deanery to accredit their educational and clinical supervisors. Currently, the London Deanery in the UK and AoME have implemented the accreditation of medical educators for the award of membership and fellowship of the academy.

Table 3: Medical teachers' competence domains

AoME (2011) (United Kingdom)	**Molenaar et al. (2009) (The Netherlands)**	**CanMEDS 2005 Physician Competency Framework (Frank, 2005) (Canada)**	**ACGME's Outcome Project (Swing, 2007) (The United States of America)**
Teaching & supporting learners Assessment & feedback to learners Educational research & evidence-based practice Educational management & leadership Design & planning of learning activities	Development Organization Execution Coaching Assessment Evaluation	Medical expert Communicator Collaborator Manager Health Advocate Scholar Professional	Patient care Medical knowledge Practice-based learning & improvement Inter-personal & communication skills Professionalism Systems based practice

The work on defining a teaching competency framework for doctors has also been carried out in other parts of the world. A framework for teaching competencies has been introduced in the Netherlands. Molenaar et al. (2009) identifies six domains of teaching; development; organization; execution; coaching; assessment and evaluation. Although the number of domains is different in the UK and the Netherlands, both frameworks cover similar domains of competencies. Other guidelines on medical education practices and standards in the UK are also available from the GMC, such as *Doctors as Teachers* (GMC, 1999), *Good Medical Practice* (GMC, 2006) and *Tomorrow's Doctors* (GMC, 2009). The competencies required of a doctor in Canada are well defined in The CanMEDS 2005 Physician Competency Framework (Frank, 2005). The document specifies in detail the key and enabling competencies for the seven overlapping roles of doctors as medical experts. The seven roles are Medical Expert, Communicator, Collaborator, Manager, Health Advocate, Scholar, and Professional. The competencies in teaching are specified under the Scholar role. In the United States, the competency framework is defined by the Accreditation Council for Graduate Medical Education (ACGME) in their Outcome Project (Swing, 2007). The framework is used to assess the outcome of graduate training programmes for doctors. The framework contains six domains; patient care; medical knowledge; practice-based learning and improvement; inter-personal and communication skills; professionalism; and systems based practice. Teaching responsibilities are not specified in this framework. No such guidelines are available in Malaysia. Although these frameworks are available to be used in assessing the quality of educational training, Ten Cate and Scheele (2007) warn that the term competency must be defined clearly in the first place in order to avoid the term being misinterpreted.

3.3.3 Clinical competence development

In 1980, Dreyfus and Dreyfus introduced a theory on the development of expertise as a five-stage mental activity. The study concluded that professionals develop expertise through the sequence of

being a novice, advanced beginner, competent practitioner, proficient practitioner and expert (Dreyfus & Dreyfus, 1980). Each stage of development is differentiated by the way in which professionals mature in their ability to use their experience to inform their practice (Daley, 1999). There are also changes in their performance as they move up the stages towards expertise. Initially, there is a paradigm shift from dependence on abstract principles towards concrete past experience; this is followed by the shift from seeing situations as discreet, unrelated parts to seeing them as part of a whole; and finally the professional is able to shift their position from being a detached observer to becoming an involved performer (ibid). Research on how clinical competence is developed through deliberate practice is also extensive (Duvivier et al., 2011; Sargeant et al., 2006; van de Wiel et al., 2011). However, this literature may not be as relevant for the current study as literature about the development of teaching competence.

3.3.4 Teaching competence development

The literature search regarding how medical educators develop teaching skills yielded several results, all of which were conducted as qualitative studies. Of all the studies identified, only Cook (2009) recruited novice medical educators as participants in her study. The other studies explored how experienced medical educators developed teaching competence retrospectively.

In the USA, Starr et al. (2003) reported intrinsic satisfaction from being involved in education; the enjoyment of having knowledge and skills regarding teaching, the sense of belonging to a group of teachers, and the feeling of a sense of responsibility to teach medicine as some of the themes which contributed to the development of community physicians' identity as clinical teachers. MacDougall and Drummond (2005) explored the different ways in which doctors learn how to teach. They found that doctors started as learners, moving on to learning to learn and observing other teachers' in their teaching session; followed by teaching medical students while at the same time acquiring and practising their teaching skills further. MacDougall and Drummond (2005) identified four important

influences on medical educators' development; acquisition of educational knowledge and skills; modelling and practice of teaching skills; encouragement and motivation of teachers; and constraints on teaching and learning. Educational knowledge and skills for teaching were usually gained through on the job experience. As medical educators' learning was usually 'unsupervised and rarely assessed' (p 1217), having good role models was especially important. In terms of motivation to teach, the motivation of medical teachers came from the rewards of interacting with the students. Unsurprisingly, the constraints of medical educators' development came largely from the institution where they worked and this factor affected all areas of teachers' development.

Cook (2009) studied the non-formal learning processes of NMEs in 3 work-based settings: hospital, general practice and medical schools. She wanted to find out the 'what' and 'how' of the non-formal learning processes for the NMEs in their development to become expert educators. The research was conducted across three teaching sites to identify whether the non-formal learning processes differed across teaching sites. The participants consisted of 12 clinical and non-clinical novice medical educators. Cook used a semi-structured interview and concept map to ask participants to identify people and tasks which they considered as central in their development to become expert educators. As she used Eraut's (2004) work to guide her interpretation of the research findings, Cook's (2009) findings closely matched Eraut's categories of non-formal learning. Eraut (2004) argued that what is learned through non-formal learning in the workplace can be categorised into eight categories; task performance, role performance, awareness and understanding, academic knowledge and skills, personal development, decision making and problem solving, and teamwork and judgement. Cook (2009) found that the NMEs were learning about personal development, task performance, role performance, and awareness and understanding about the context of teaching non-formally at their workplace.

Another interesting finding in Cook's (2009) study is the difference in learning opportunities across the teaching sites. She used Evans et al. (2006) work and their concept of 'expansive' and 'restrictive' professional

environments, otherwise known as workplace affordances by Billett (2001), to describe the degree to which the workplace environment facilitated learning. Cook found that both medical educators located in the hospital and general practice settings had fewer opportunities to be involved in expansive professional activities and received limited feedback from their colleagues. Medical educators in the general practice setting also had fewer opportunities to observe teaching as well as to engage in assessment and curriculum design. By contrast, medical educators located in medical school settings had more opportunities to attend learning events, receive feedback from colleagues and observe teaching as well as to participate in assessment and curriculum design. Medical educators located in the hospital were facing the barrier of heavy clinical workloads. Finding time to teach was a challenge because clinical service was given more importance compared to teaching. The solo practice in the GP setting made it hard for GP educators to communicate with other medical educators during work. Attendance at formal learning opportunities meant leaving their practice. The availability of collegial support and the reduced clinical commitments of medical educators located in medical schools made it easier for these educators to receive feedback from their colleagues or mentors as well as finding someone to take over their job when they wanted to attend external learning opportunities.

Although Cook's study gave a detailed account of how NMEs learned through informal learning, how the NMEs learned through formal learning still remains under-researched. In medical education, professional development initiatives have been indicated as measures to improve teachers' perceived competence in their teaching roles (Boerboom et al., 2009). A review of the literature by Steinert et al. (2006) has also reported other benefits of formal learning opportunities through faculty development initiatives for example an increase in knowledge of educational concepts and principles as well as increased motivation and enthusiasm for teaching. These studies were undertaken with experienced educators rather than NMEs, and it is known that novice and experienced educators learning processes are different (Daley, 1999; Patel & Groen, 1991). Therefore, a

study which looks at the role of formal learning opportunities in the development of NMEs is needed.

A study to explore academic clinician-educators' experience of entering and navigating academia was conducted by Kumar et al. (2011). Kumar et al. were particularly interested in educators who favoured teaching over research. The four key themes identified in this study were contextual factors associated with how academic medicine is structured as a discipline, cultural perceptions regarding what constitutes legitimate practice in academia, experiential factors associated with the opportunity to develop a professional identity commensurate with being an educator, and socialisation practices. Academic medicine has been strongly associated with research rather than teaching. Through research, supervision and publications, academics develop their academic profile. As research is given higher value than teaching in academic medicine, legitimate participation is measured though research activities. The study concluded that the strong emphasis on research for academics may cause new academics and academics who prefer teaching over research to feel excluded.

From all of these studies, the main finding was that the learning processes of medical educators were mainly constructed through social interaction in the workplace. These studies also highlighted the importance of the workplace environment in helping NMEs to embrace their new identity as educators. In respect of my research interests, I was struck by the limited discussion on the role of formal learning: for example, teacher training courses, induction programmes, scientific meetings, conferences and events which award CPD points on the development of medical educators' teaching skills. Consequently, in developing my own research project, I wanted to look at the role of formal learning opportunities, particularly teacher training courses, in the development of NMEs.

3.3.5 The need for good medical educators

It has been reported in the literature that there was a positive correlation between good clinical education and students' clinical performance (Griffith et al., 2000; Roop & Pangaro, 2001). Griffith et al. reported that good attending physicians, who manage to make learning fun, enjoyable and exciting for the residents, were able to help residents score better during the United States Medical Licensing Examination (USMLE) examination. Roop and Pangaro also found that teaching behaviours that reflected good teaching (leadership style, fostering understanding and retention, providing feedback and good learning climate) had a positive effect on students' academic performance. It is also reported that educators with poor teaching skills can hinder students' learning. Young et al. (2009) found that educators who were lacking in clinical teaching skills were unable to promote high-level cognitive processing or deep learning among the students. It is therefore crucial to develop good medical educators because they will provide quality learning to the students and subsequently, improve the students' academic performance.

Although medical educators have many roles, Harden and Crosby (2000) argue that they are not expected to be competent in all roles to become good educators. As medical educators learn mostly in the workplace while gaining on the job experience, it is important to provide positive learning experiences and learning support in the first few years of their career. This is because the first few years of their career (the transition phase) is the time when their learning curve is very steep (Feiman-Nemser, 2003) and reaches its peak (Day, 1999).

3.3.6 Training doctors as teachers

The need to train medical educators in pedagogy was brought to WHO's attention as early as the 1970's. A meeting was held in 1972 to discuss this issue (WHO, 1972). Although 30 years had passed since the WHO recommendation that medical educators should have educational training, it seems that changes have only taken hold in the last 15 years.

Currently, more universities are offering postgraduate qualifications in medical education (Tekian & Artino, 2013), due to increased demand from doctors to train in medical education courses.

According to Hesketh et al. (2001), all new educators in the UK are required to complete an accredited course in teaching or to have equivalent teaching experience. As a teaching course is not a pre-requisite of starting a teaching career in medical education, the course is offered as an on the job training course. The need to train doctors who teach is mandated by the GMC in their document published in 2011, titled, *'Developing teachers and trainers in undergraduate medical education'* (GMC, 2011). With the robust use of technology in teaching and learning, more and more course providers employ online learning as one of their teaching methods. Online learning suits medical educators who are not able to leave their clinical practice easily. Online learning also allows medical educators to learn on their own at a time which suits them. Besides the document by GMC, there are no other documents which prescribe the need for doctors to train as teachers. Medical educators are training future doctors to look after other people's lives. This leads me to wonder why such a high stake job is not as strictly regulated by the governing body of the profession in other parts of the world.

3.3.7 Impact of teaching courses in developing medical educators

Through my journey of becoming a medical educator, I found that learning about teaching and learning pedagogies helped me to better understand my students and the process of teaching and learning in medical education. In order to evaluate the importance of pedagogical knowledge to medical educators, a review of the literature on the impact of teaching courses to the development of medical educators was carried out. A comprehensive review on the impact of faculty development initiatives to the teaching effectiveness of medical educators was carried out by Steinert et al. (2006). The systematic review was published as BEME Guide No. 8 in Medical Teacher. The articles that Steinert et al. reviewed were published between 1980's to 2002's, a time when postgraduate

qualifications in medical education were still scarce. According to Tekian and Artino (2013), there were less than ten Master's Degree in Health Professions Education (MHPE) at the time, compared with more than 120 Master's Degrees in Health Professions Education currently available worldwide. Not surprisingly, the types of faculty development initiatives chosen for the systematic review were mainly workshops and seminar series. Out of the 53 articles chosen for final review, only 1 article was classified as a fellowship programme, 1 as a longitudinal programme and 6 as short course programmes. The length of courses is likely to affect the learning of medical educators. Longer courses may be appropriate for developing a stronger foundation in the theory and practice of medical education while shorter courses and workshops may be helpful for learning from best practices and from experienced senior faculty (Tekian, 2014).

The number of MHPE courses has increased since then, probably as a response to changes in medical education delivery and professionalisation of health professional educators. Some institutions require completion of MHPE for career tracks, for accreditation by Accreditation bodies or as a pre-requisite for becoming an educator (Tekian & Artino, 2013). Despite the high number of MHPE courses available, studies which report on the impact of these courses on the teaching effectiveness of its graduates are limited. Although the impact of faculty development initiatives on the teaching effectiveness of medical educators are available, these impacts were measured using participants' perception of the initiative, rather than the impact of the initiative on students' learning (Steinert et al., 2006; Weber et al., 2016).

Despite the lack of evidence on the impact of faculty development initiatives on students' learning, available evidence suggests that medical educators could be trained to become better educators through faculty development programs. Elliot et al. (1999) evaluated an 18-month long initiative in introducing and reinforcing new teaching skills. The seven participants reported that the longitudinal contact provided them with collegial support to identify behaviour effectiveness and reinforce new teaching skills. Elliot's findings were supported by the systematic review conducted by Steinert et al. (2006). Steinert et al. concluded that effective

faculty development initiatives were able to promote positive behavioural changes as well as increasing knowledge of educational principles and teaching skills in medical educators. Similarly, the initiative reported by Weber et al. (2016), consisting of readings, guided small group sessions and a mandatory project was found to improve plastic surgical faculty's teaching practice. Although there was evidence to suggest that faculty development initiatives could improve the teaching practices of experienced medical educators (Elliot et al., 1999; Steinert et al., 2006; Weber et al., 2016), none of the studies reported the impact of faculty development initiatives on the understanding of teaching and learning pedagogies among novice medical educators. The impact of exposure to teaching and learning pedagogies on the teaching practices of novice medical educators therefore, remains unknown.

Although medical educators in Malaysia and the UK are now exposed to teacher-training courses after entering academia, there is no empirical evidence available on the adequacy of these courses in helping NMEs to cope with their job roles and responsibilities. It is important to note that the teacher-training course offered to NMEs by the universities in both Malaysia and the United Kingdom is a generic course, attended by all new educators regardless of their discipline. The specific exposure to teaching and learning in medical education is available through postgraduate qualification courses namely Postgraduate Certificate, Postgraduate Diploma and Masters in Medical Education. It is important to know the adequacy of the generic teacher-training course in helping NMEs to cope with their teaching and learning responsibilities that are specific to medical education, especially during the transition phase. If the generic course is enough to help NMEs in the transition phase, medical schools do not have to look into providing teacher-training courses specific to medical education. If the current courses are inadequate, there will be serious implications for NMEs when they start teaching medical students. This is where medical education departments in medical schools can play a role in supporting NMEs by providing teacher-training courses specific to medical education. It is hoped that with better support early in their career, NMEs can navigate the transition phase smoothly and productively.

3.4 Workplace learning theories

The workplace is increasingly understood to be a legitimate place for learning through experience (Billett, 2004) and existing research has emphasized the critical role played by workplace learning in learning about an occupation. Eraut (2007), for example, has shown that workers' learning occurs mainly in the workplace and argues that educational learning will only be useful when the content is relevant, well-timed and supported by workplace learning. Several other theorists have also developed theories about workplace learning. In his review of workplace learning theories, Hager (2011) divided the theories into three broad categories; psychological, socio-cultural and postmodern. The unit of analysis in these three categories is different. In the psychological category, the focus is on individual learning. In the socio-cultural category, the focus is on the individual's interaction with the society and encompasses both individual and social learning. In the postmodern category, learning is seen as an ongoing process and the emergence of learning from its context is unanticipated and unpredictable. Theories included in the psychological category are commonly associated with the acquisition or transfer metaphor; the socio-cultural category is associated with the participation metaphor while the postmodern category is associated with new metaphors such as engagement, (re)construction, emergence or becoming.

As the focus of this study is how NMEs are learning in the workplace and my experience and review of literature has indicated that the learning of the NMEs is mainly through interaction with other people, only theories categorised under the sociocultural category will be reviewed and considered as possible lenses for this study. The first of these is the theory of Communities of Practice (CoP).

3.3.1 Communities of practice

In 1991, Lave and Wenger introduced a theory which described learning in the workplace as socially constructed through legitimate peripheral participation in a community of practice (CoP) (Lave & Wenger,

1991). According to Lave and Wenger, *"Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly."* (Wenger, 2011 p 1). The CoP is characterised by the mutual engagement, joint enterprise and shared repertoire of its members.

Legitimate peripheral participation (LPP) is described as the movement of newcomers from minimal (periphery) towards full (central) participation, while learning to master the knowledge and skills of that community (Lave & Wenger, 1991). According to this theory, newcomers are introduced to the 'sociocultural practices' of the community through the act of apprenticeship. Newcomers are introduced to the practice of the community by being engaged in tasks with low accountability status. As the newcomers build more engagement in the community, they are given tasks with more accountability status, until they have achieved the mastery status of that community and are considered to have gained full participation in the CoP. In this theory, learning is deemed as the 'integral constituent' of LPP rather than the end product. Most importantly, the contribution of this theory to the understanding of learning in the workplace is that the theory has changed the focus from understanding learning as a process of knowledge acquisition or knowledge transfer to learning as participation in a CoP.

The theory has been used to describe workplace learning in multiple disciplines, including medicine. However, its utility to fully explain learning in the workplace has been questioned. In anaesthesia, Goodwin et al. (2005) found that in the operating theatre CoP, there was no legitimate peripheral participation of the operating department practitioners (ODP) and nurses towards centripetal movement. In the heterogeneous membership of anaesthetists, surgeons, ODPs and recovery nurses in the CoP towards patient care, the ODPs' and nurses' degree of participation is limited to the responsibility awarded to their profession. Similarly, in a CoP of multiple cancer specialists who share a joint enterprise in decision-making and action for treating cancer patients, there was no evidence of legitimate peripheral participation because every specialist had a central role in their own discipline. In order to facilitate learning, the members of this CoP had

to negotiate discipline boundaries and acknowledge others' perspectives before the final treatment decision could be made (Oborn & Dawson, 2010). The theory of CoP has also been used to describe the learning of NMEs in the UK through a regional teaching fellow network (Little et al., 2014). However, the authors described the CoP as a support group for the CTFs rather than exploring how CTFs were moving towards central participation in academia.

Since its inception in 1991, the CoP theory has received critiques due to its inability to capture all the elements of workplace learning. Although the theory was refined by Wenger (1998) to include the concepts of meaning and identity (Illeris, 2011), it is still inadequate to fully explain adults' learning in the workplace. Fuller et al. (2005) noted four major flaws in the theorisation of CoP by Lave and Wenger (1991). First, the theory fails to explain the lifelong learning of a practitioner. Second, the theory does not take into account the role of formal education and learning outside the workplace. Third, the theory fails to acknowledge the influence of personal biography on the learning of the practitioner and finally, there is no full explanation of the power relations between members of the CoP and wider contexts. On another note, James (2007) highlights the point that experienced practitioners are members of multiple CoPs and can move laterally into central participation in a different CoP rather than having to learn through legitimate peripheral participation. On top of that, the theory is only concerned with the process of learning and does not explain what is learned in the process (Cairns, 2011). The limitations of the theory of CoP revealed by the researchers above has prompted me to look at other learning theories which could be useful in explaining the learning of NMEs.

3.3.2 Other workplace learning theories

Besides Lave and Wenger's CoP theory, another popular theory in the socio-cultural category is activity theory, as proposed by Yrjö Engeström in 1987 (Engeström, 2011). According to activity theory, the workplace is an activity system comprising several components, including for example the workers, workplace rules and equipment. Learning occurs

through resolving the continual ‘contradictions’ and ‘tensions’ that arise in the workplace. Engeström argues that changes in any of the components will result in changes in the system. The question surrounding the use of this theory is associated with whether all learning in the workplace occurs due to contradictions and tensions. Despite the introduction of the concept of ‘boundary crossing’ to describe transfer of learning in activity theory (Tuomi-Gröhn et al., 2003), this theory has lost its appeal to educational researchers in understanding learning because learning in this theory is still seen as a process of knowledge transfer (Hager, 2011).

Several other researchers have also provided conceptual frameworks in describing the different aspects of workplace learning. Eraut (2004) for example was concerned that the non-formal aspect of learning in the workplace was often taken for granted. The focus in Eraut’s work was on identifying how non-formal learning influences workplace learning in terms of ‘what is being learned’ and ‘how is it being learned’. His conceptual framework is based on his work on mid-career learning in the business, engineering and healthcare sectors. He was interested to know whether learning in the workplace is the ‘principal intention’ of the workers or only a by-product (Eraut, 2011). Eraut’s (2004) work had successfully highlighted the extensive nature and importance of non-formal aspects of workplace learning by establishing 53 types of workplace learning progression which workers learn through non-formal learning. Besides non-formal learning, the other key aspects of workplace learning according to Eraut and Hirsh (2007) are the individual’s capabilities, workplace performance, contexts for work and learning, and formal learning. Although Eraut’s (2004) work on explaining the workplace learning of mid-career workers was interesting, his lack of attention to the contribution of formal learning in the workplace learning of mid-career workers made his conceptual framework less appealing to me.

Fuller and Unwin (2003) proposed that the quality of learning which occurred in the workplace could be evaluated using an expansive-restrictive continuum. The framework was developed based on three underpinning themes; participation at work, personal development and institutional arrangements. Specifically, Fuller and Unwin’s (2003) work on

studying the UK's Modern Apprenticeship programme provided a detailed account of what it means to participate in a CoP in terms of how novices were allowed to participate in the practices of a company, the personal development of the novices following such participation and how the company's institutional arrangements affected the learning of the novices. They found that expansive approaches to apprenticeship, characterised by the inclusion of 'access to a range of qualifications', explicit recognition of the apprentice's status as a worker and learner, and 'highly developed reification of apprenticeship' are more likely to foster 'deep learning' and the 'integration of personal and organisational development' (p. 423). Similar to Eraut, Fuller and Unwin (2004) also recognised the contribution of 'personal backgrounds, prior educational experiences and aspirations' (p 127) to the learning of these apprentices in the workplace.

Billett is another researcher with a strong interest in workplace learning. He was concerned that the role of personal biography was often neglected in the formulation of workplace learning theories. According to Billett (2001), adult learners desire to participate in workplace learning experiences and opportunities are influenced by many factors, including personal biography. According to Billett (2011), the novice workers' interest, motivation and intention to learn through engagement with more experienced workers is as important as the opportunities to learn afforded to them in order to maintain employability throughout their career. In order to enhance understanding on the 'multimodal and complex' nature of workplace learning, Billett proposed that knowledge on workplace learning drawn from educational literature alone is not enough (Billett & Choy, 2013), and suggested that the anthropological and historical literature should also be explored, considering the importance of the socio-cultural context in workplace learning (Billett, 2014). According to Billett (2014), literature from multiple disciplines has proposed that the circumstances of practice (workplace) are shaped by an interdependence between personal epistemologies, practice curriculum and practice pedagogies, and influenced by a range of factors including cultural, societal and situational factors. Again, similar to Eraut and Fuller and Unwin, Billett emphasizes the importance of personal biography to the learning of workers in the

workplace. Realising the importance of personal biography in the workplace learning of adult learner, the role of personal biography in influencing the learning of NMEs will be explored in this study. The NMEs have worked in other workplace settings prior to becoming NMEs. It will be very interesting to know how and what part of their personal biography is influencing their learning.

3.5 Transformative learning theory

As I transitioned from being a practitioner to being an educator, I was the only medical educationalist in the faculty. I did not have a community of medical education practitioners to learn from. I was learning on my own most of the time prior to pursuing my Master degree in medical education. As I undertook my Masters, I began to wonder whether the other NMEs, who are trainees in an established CoP of practitioners, also learned by themselves. I was interested to know why such learning was necessary when there was a CoP that they could learn from. A review of the literature led me to a transformative learning theory, introduced by Jack Mezirow in 1978. The theory is defined as 'learning that transforms problematic frames of reference to make them more inclusive, discriminating, reflective, open, and emotionally able to change' (Mezirow, 2006, p 26). Frames of reference 'are structures of assumptions and expectations on which our thoughts, feelings, and habits are based' (ibid). Mezirow's theory posits that learning occurs in four ways; elaborating existing meaning schemes, learning new meaning schemes, transforming meaning schemes and transforming meaning perspectives.

Mezirow's theory of transformative learning has been used to explain adult learning in various disciplines. In medical education for example, Mezirow's theory was used by Courtenay et al. (2000) and Baumgartner (2002) to study how adults make meaning of being diagnosed with Human Immunodeficiency Virus (HIV) infection, while Macleod et al. (2003) and Mallory (2003) used the theory to foster transformative learning about palliative care among medical and nursing students. The theory was also used by Taylor (2003) to assess whether adult educators' beliefs about

teaching would change after attending a Master's course in adult education. Taylor's most significant finding relates to the lack of transformation or change in the teaching beliefs of the adult educators upon completion of the Master's course. The lack of transformation was attributed to several possible sources. First, the influence of personal and socio-cultural contextual factors; secondly, a strongly held belief about teaching which was related to their individual sense of self making them resistant towards change; thirdly, how transformative learning was fostered in the graduate school's curriculum and finally, the lack of support for transformative learning in the workplace of these adult educators. Subsequent to finding the lack of transformative learning among the adult educators, Taylor (2003) argued that it should not be assumed that individual beliefs are similar or have constant value because they are dependent on a specific context. What teachers bring into their practice is an accumulation of experience throughout their school lives. This experience informs the teachers about teachers' work, students' expectations, school structure and the curriculum (Britzman, 1986; p. 443), which serves as their frame of reference. Different teachers bring different experience and expectations, therefore, what they learn in the workplace will be very likely dependent on their frame of reference.

Mezirow's theory has been criticised for a number of other reasons. First, the theory is said to give too much attention to critical reflection (Boyd and Myers, 1988). Compared to Mezirow, who relies on ego to explain the process of perspective transformation, Boyd and Myers believe that reason and logic are the basis of accepting transformation. Second, although the theory proposes that individual transformation leads to societal change, a person's life course is itself socially constructed (Tennant, 1993), therefore, societal change can also lead to individual transformation (Segers and De Greef , 2011). Third, Mezirow is also criticised for limited explanation of the role of power in transformation (McDonald et al, 1999). Equal power distribution among peers has been shown to play an important role in the promotion of transformative learning. For example, positive collegial relationships were seen by Taylor (1998) as an essential factor in a transformative experience. Taylor's views are reinforced by Eisen (2001),

who declared that peer relationships built on trust, non-evaluative feedback, non-hierarchical status, voluntary participation and partner selection, shared goals and authenticity, allow individuals to have two-way discussions to achieve mutual and consensual understanding. The equal power distribution encourages learning autonomy, therefore, providing opportunities for adult learners to reflect on their transformation (Taylor, 2007). Finally, it has been suggested that Mezirow's theory fails to account for the cultural context of learning (Clark and Wilson, 1991; Taylor, 2007).

Despite these critiques, Segers and De Greef (2011) believe that it still has the ability to explain why a learning opportunity may lead to transformative learning in one individual but not another. In response to the critiques, other researchers have either attempted to refine the theory (for example Knud Illeris) or developed a new theory (for example Stephen Billet). A refinement of Mezirow's theory was undertaken by Knud Illeris (2014b), who defined transformative learning as learning which results in a change in the learner's identity. Acknowledging critiques of the earlier transformative learning theory, the refined transformative learning theory proposed by Illeris identified the cognitive, emotional and social dimensions of learning. The relationship between the three elements are described in the following way, '… the cognitive content is always subjectively influenced by the learners and the individual emotional and motivational value ascribed to it, and that the emotional and motivational engagement is always influenced by the learning content in question.' (Illeris, 2015, p. 35). The terms were subsequently changed from cognitive to content, from emotional to incentive and from social to interaction in an effort to clarify uncertainty associated with the initial formulation of the theory (ibid). Most importantly, Illeris (2014) states that the incentive must be strong enough to result in transformative learning. Transformation may be progressive or regressive in nature, depending on the incentive for learning, which is also dependent on an individual's personal biography and preconditions. He also argues that individuals may practice identity defences in order to preserve individual identity from too much transformation.

The importance of content, interaction and incentive proposed by Illeris in the refined transformative learning theory was also echoed in

Billett's work. According to Billett (2016), practice (workplace) curricula, practice pedagogy and personal epistemologies are required in order to promote health care workplaces as a learning environment. The difference between the work of Illeris and Billet is in the focus of their study. Illeris' work focussed on learning at an individual level while Billett's work focussed more on how workplace affordances supported learning in the workplace. The practice curricula or mandatory on the job training proposed by Billett is similar to that of CoP theory, in which novice workers have to be introduced to work experience with incremental accountability. Practice pedagogies are activities that could enrich the learning experience for example through interaction in the workplace. There are learning experiences in clinical practice that could not be accomplished through trial and error as they require specific guidance from more senior colleagues. The interaction required in this case is similar to the interaction of members of a CoP, which is through the apprenticeship model. The focus on personal epistemologies by Billett (2016) seems to reinforce the importance of personal biography in the refined TL theory. The need for lifelong learning and transformation is also highlighted by Billett, who believes that an individual needs to continuously transform their knowledge and skills, in order to respond to the changing nature of their work and remain valid in their profession. This transformation is shaped by personal epistemologies, through individuals appraising the worth of each experience. The transformation described by Billett is also similar to the transformation described by the refined TL. This transformation is not explained by the CoP theory because the theory only focuses on the movement of a novice from peripheral to central participation, not beyond that.

The main difference between CoP theory and TL theory lies in terms of the weighting given to the role of incentives in the learning process. There was no explicit mention of learning incentive in the CoP theory, whereas TL theory puts this at the heart of understanding the learning process. Similar to the claim made by Kilminster et al. (2011), that learning, practice and performance are interlinked and inseparable, Illeris (2015) also highlights the point that the content learned and the incentives for learning the content were integrated and inseparable. He further argues that no learning process can be fully understood without considering the

content, the incentive and the interaction. According to Illeris (2015b), content could represent any kind of human capacity: for example belief, knowledge, skills and attitudes; whereas the incentive is what drives the learning process, including, for example, motivations, emotions and volitions (the power to make own choice or decision).

The main question commonly asked about transformative learning is what the transformation is about. The original TL theory proposed that transformative learning leads to changes in learners' frames of reference (Mezirow, 2006). According to Illeris (2014a), however, the form of transformation proposed by Mezirow was too cognitively orientated. Taking the work of Erikson on identity development (in 1950, 1968 and 1982), Illeris proposes that transformative learning leads to transformation in the learners' identity. Identity represents an individual uniqueness compared to other individuals and the ability to remain the same in different situations as well as how we present ourselves to others.

In order to explain transformation as a result of learning, Illeris (2014b) described the identity of an individual as consisting of three important layers; the core identity layer, the personality layer and the preference layer. The core identity layer of an individual is established from the first months of life and fully developed by the end of youth. Throughout the development of this core layer, the individual is shaped by influences such as gender, family relations and religion. Although the core identity layer of an individual is thought to be stable, some elements of the core identity can be subject to changes which are seen to be required, relevant or necessary. The middle layer of an identity is known as the personality layer. This layer represents how an individual relates to others in the society, environment or world to which they belong. Illeris (2014b) argues that the personality layer is the layer that individuals are willing to make changes to when they see good reasons for doing so. The effect of transformative learning is thought to result in changes to the personality layer of the individual. The outermost layer, known as the preference layer, is thought to be where our identity deals with changes in our everyday lives which are meaningful and of some importance but not crucial.

The CoP and TL theory had its own strengths and limitations, based on my review of literature. I wonder if the findings from my study can be explained using any of these theories. On reviewing the literature, both the CoP and TL theory have recognised strengths and limitations. I was therefore interested to see whether they could be applied to the experiences of the NMEs recruited for my study.

3.6 Factors influencing learning in the workplace

The factors which influence learning in the workplace have been explored in several studies. When no studies on medical educators could be found, studies undertaken with sciences or other health professional's educators were useful. The review of these studies will be presented from the point of view of the influence of past experiences of learning and teaching, teaching perspectives, motivations and other factors on the learning of medical educators in the workplace.

3.6.1 Past experiences of learning and teaching

MacDougall and Drummond (2005) note that in medical educators, it was learning experiences which mostly influenced future teaching style. Therefore, arguably, good learning experiences would lead to good teaching practice. A study by Oleson and Hora (2013) supported MacDougall and Drummond's claim as they found that faculty members in science, technology, engineering, and mathematics modelled their teaching after previous instructors and drew upon a varied repertoire of knowledge and prior experience of being instructors, students, researchers and work in non-academic roles. Unfortunately, the knowledge and prior learning experiences that medical educators draw upon most in their academic practice remains unknown.

Literature on the benefit of teaching experiences for the academic performance of medical students is abundant. However, literature on the benefit of teaching experience for the development of NMEs' teaching

competence is still lacking. As well as this, the current practice of medical education in many medical schools provides very minimal or no teaching experience for medical students. As some of my participants might have some teaching experience, I wanted to find out whether the benefits that they received from that teaching experience could ease their transition into the role of NMEs.

In the UK, Tso et al. (2014) reported that Foundation Year One doctors wanted continuous professional development in teaching skills after attending the Homerton Teacher Development Training Programme. The programme was delivered in three stages over a two-to-three year period. There was a clear progression from stage 1 to stage 2 and the participants were given ample time to reflect on their teaching practice in the workplace. The prolonged exposure to the programme is the strength of this study. However, it may also have been the cause of a high rate of non-completion. Despite this limitation, Tso et al. claimed that the teacher development programme helped ease trainee doctors' transitions to their future roles as educators.

Several other researchers have also reported their experience in providing formal teaching experience to students. In the Netherlands, Ten Cate (2007) described his experience of organising a one-week obligatory teacher-training course and an optional six-week elective teaching rotation for senior medical students. The teaching rotation involved extensive content, including 30 hours of independent teaching of junior medical students, an examination on the BMJ's ABC of Learning and Teaching series, development of 14 test questions, completion of an advisory project for the unit coordinator and an essay on a medical education topic of choice. Students who successfully completed both courses were awarded a student teaching qualification. The programme managed to train student teachers who were valued by the junior medical students as equal to or slightly better than the regular teachers.

In another study, Erlich and Shaughnessy (2014) described their experience of delivering a longitudinal 12-week curriculum to final year students. The course, presented weekly over the course of a semester,

consists of a morning lecture delivered by faculty members on medical interview and history-taking techniques, followed by an afternoon of session of small-group practice with actual patients, led by student teachers. The teaching experience increased the student teachers' self-confidence in giving oral and written feedback, mentoring and working with difficult learners.

The studies illustrated above highlight a role for undergraduate and postgraduate teaching experience in the development of medical educators. Since empirical evidence is still lacking on the benefit of teaching experience to NMEs' transition into academia, a study which establishes a correlation between prior teaching experience and easier transition into academia would be useful for supporting access to teaching experience.

3.6.2 Teaching perspectives

Teaching perspectives form a part of NMEs' personal biography which plays an important role in how they conduct teaching sessions (Williams & Klamen, 2006). A teaching perspective includes an individual's teaching belief, intention and action. In higher education, the assessment of teaching perspectives has been conducted using several measures. Early work on assessment of teaching perspectives was undertaken by Samuelowicz and Bain (1992) with science and social science teachers and Prosser et al. (1994) with chemistry and physics teachers. Both studies were conducted using phenomenographic approaches and qualitative methods. Since learning was understood as the acquisition of knowledge during that time, it is unsurprising that the conceptions of teaching held by teachers in both studies were consistent with knowledge transmission.

In 1998, Pratt and Associates introduced the Teaching Perspectives Inventory (Pratt & Associates, 1998). Compared to the conceptions of teaching proposed by Samuelowicz and Bain (1992) and Prosser et al. (1994), Pratt and his associates developed an inventory, which is a quantitative questionnaire, to study the teaching perspectives held by

teachers. They proposed that there are five teaching perspectives held by teachers; transmission, apprenticeship, developmental, nurturing and social reform. The teaching perspectives, their descriptions, possible strengths and limitations are presented in Table 4.

Table 4: Teaching Perspectives' description, strength and weakness

Perspective	**Description, strength and weakness**
Transmission	Description: Effective teaching requires a substantial commitment to the content or subject matter.
	Strength: Able to efficiently deliver high-yield information.
	Weakness: Temptation to focus exclusively on factual information rather than providing experiential learning due to brief teaching encounter and work pressure.
Apprenticeship	Description: Effective teaching is a process of socializing students into new behavioural norms and ways of working.
	Strength: Students benefit from actual experience.
	Weakness: The challenge of balancing safety with authenticity. Students may not be allowed to touch real patients to protect patient's safety. Experiential learning is therefore provided through simulated patients.
Developmental	Description: Effective teaching must be planned and conducted "from the learner's point of view."
	Strength: Empowerment of the learner for her own education.
	Weakness: Difficulty in coordinating educational links across many teachers during brief encounters.
Nurturing	Description: Effective teaching assumes that long-term, hard, persistent effort to achieve comes from the heart, not

	the head.
	Strength: Emphasizes good personal relationships between teachers and students. Teachers serve as mentors.
	Weakness: Temptation for teachers to overextend and overcommit to multiple students.
Social Reform	Description: Effective teaching seeks to change society in substantive ways.
	Strength: Able to inspire students in a way that teachers with other perspectives cannot.
	Weakness: Temptation to negatively judge colleagues and students who do not share the zeal that defines this perspective.

Adapted from Pratt & Associates (1998) and Cable et al., (2012)

An important point to note with the TPI is that, according to Pratt and Associates (1998), each teacher holds all the five perspectives but of varying strength. Therefore, acknowledging that NMEs are teaching different groups of students and using different teaching approaches (lectures, tutorials, bedside teachings) in different settings, it is very likely that their teaching perspective changes when they are considering different groups of students or teaching approaches. Although the TPI is not a complete reflection of NMEs' teaching perspectives, the instrument is useful in making NMEs reflect on the way they teach their students. The TPI introduced by Pratt and Collins has been widely used in higher education since it was first introduced in 1998 (Collins & Pratt, 2010).

In medical education, TPI had been used for various purposes. Taylor et al. (2007) used observation of practice, TPI and semi-structured interviews to evaluate the teaching beliefs of medical educators in Paediatrics. The observation of practice and TPI were used as platforms for discussion during semi-structured interviews with the medical educators.

Courneya et al. (2008) used the TPI to investigate which perspective teachers in Medicine, Science and Arts use to evaluate the teaching performance of their peers. The participants were asked to evaluate the teaching performance of their peers through video vignettes. The TPI was administered prior to watching the video vignette. After watching the video, participants attended a workshop which explained the five teaching perspectives. Participants were asked to re-evaluate the performance of the same peers after the workshop. The study showed that participants who had different perspectives from their peers in the video vignettes demonstrated a positive upward shift in their rating after the workshop, while participants who had the same perspective showed no significant changes in their rating. Cable et al. (2012) used the TPI to illustrate how a hypothetical teaching in plastic and reconstructive surgery could be conducted through the five basic teaching perspectives.

In medical education, several other methods have also been used to study the teaching beliefs of medical educators. Williams and Klamen (2006) used the Core Teaching Beliefs Questionnaires to investigate the core teaching beliefs of 125 medical educators and found that those beliefs could be classified into four groups; student oriented, content oriented, performance oriented or a blend of these. The study found that 26% of the educators believed that teaching should be student oriented, 6% believed that teaching should be content oriented, 27% believed that teaching should be performance oriented, while the remaining 41% had mixed beliefs of what teaching should be.

In 2012, a different statistical instrument, the Conceptions of Learning and Teaching (COLT) questionnaire was developed by Jacobs et al. to measure medical teachers' conceptions of learning and teaching (Jacobs et al., 2012). The findings of this study were similar to the findings by Williams and Klamen (2006), in which teaching belief could be classified into student oriented, content oriented, performance oriented or a blend of these. In addition, Jacobs et al. found two more classifications of teaching belief; the appreciation of active learning and orientation to professional practice. These two studies however, indicated that the majority of the medical educators had no fixed teaching belief.

Although the TPI was not designed to measure the teaching perspectives of medical educators exclusively (as compared to the Core Teaching Beliefs Questionnaires and COLT), I decided to use TPI in my study. This is because I perceived that the five teaching perspectives reported by Pratt and Collins reflected the learning process in medical education better compared to the other instruments. The TPI encompasses assessment of teachers' beliefs, intentions and actions compared to the other two methods described above. Besides, the TPI has better established validity and reliability as it has been tested on more than 100,000 respondents (Collins & Pratt, 2010).

It is also important to recognize that medical educators' practice may not be a straight forward reflection of their teaching perspectives. Taylor et al.'s (2007) study, which employed the Teaching Perspectives Inventory (TPI), practice observations and in-depth interviews for data collection, found that there was a mismatch between the educators' teaching perspective and practice. Although the majority of medical educators believed that they held developmental and apprenticeship teaching perspectives, their teaching practice reflected the transmission, apprenticeship and nurturing perspective. Despite the medical educators' belief that learning in the clinical setting should be more interactive and providing students with experiential learning, it was likely that the pressure of providing effective clinical service, ensuring patient safety and reducing patient's waiting time were pressuring the medical educators to conduct clinical teachings in a rush. Transmission of knowledge was therefore the preferred teaching practice as it enabled the medical educators to deliver more knowledge within the short clinical teaching encounters.

Taylor et al. proposed that medical educators should be aware of their teaching perspective so that they can be more open to other learning instructional interventions and responsive to the needs of the learners. Taylor et al.'s proposal was echoed in Courneya et al.'s, (2008) work who found that teachers would rate their peers' teaching as less effective when the perceived dominant perspective of that peers was different from their own. Similarly, the hypothetical teachers reported by Cable et al. (2012) highlighted the need for a medical educator to be aware of each

perspective's strengths and weaknesses and that different perspectives maybe more suitable for different roles.

The findings from these studies prompted me to look into what teaching perspectives the NMEs brought to their teaching sessions and how their teaching perspective influenced how they taught medical students. I intended to use the TPI to compare NMEs' belief of what teaching means (through semi-structured interviews) with the result of their TPI. I wanted to address the following questions in my longitudinal study. Are the NMEs aware of their own teaching perspective? Does their teaching perspective change as they progress in their career? Is there a similar perspective – practice mismatch as reported by Taylor et al? As this study was conducted in two culturally different countries, I was further interested to know if culture would influence the NMEs' teaching perspective.

3.6.3 Motivation

The transformative learning theory has illustrated the importance of motivation (termed incentive in the theory) in the learning of adults in the workplace (Illeris, 2015). The importance of perceived need as a motivation to learn is echoed in findings by other researchers, for example by Tennant (2006) and Thompson (2009), who proposed that adults are motivated to learn when they see that there is a need and interest to do so. The need to learn could also be triggered by conflicts and crises experienced by adults in the workplace (Lehesvirta, 2004). Williams and Klamen (2006) reported that passion is one of the main reasons for teachers to teach. Similarly, Duvivier et al. (2009) also concluded that passion for teaching is an important motivation to work as a teacher.

However, as Schormair et al. (1992) pointed out, teaching in medical schools is not valued as highly as research. The lack of value placed on teaching may favour applicants who show more motivation to do research and other scholarly work and little motivation to teach. When teaching is not valued, teachers have found it difficult to find protected time

to teach (Roshetsky et al., 2013; Sutkin et al., 2008; Waters & Wall, 2007). It is also worth noting that for NMEs who are learning how to teach, they have to teach medical students who are also adult learners. In doing so, the NMEs have to reflect on how they learn and understand how their students' learn.

3.6.4 Other factors

The importance of collegial support has been demonstrated through the establishment of a regional NMEs' network by Little et al. (2014) and reports of peer learning (for example, O'Keefe et al., 2009). Accompanying senior educators is also identified as a factor which is important for medical educators' development (Cook, 2009; Duvivier et al., 2009; Heflin et al., 2009; McLeod & Steinert, 2009; O'Keefe et al., 2009). Due to the lack of research on NMEs, factors which influence the learning of medical educators have been identified mostly through studies on expert medical educators. A study of general practitioner (GP) trainers in the UK identified continuous professional development (CPD) in education as a factor perceived by GP trainers as important for the development of their teaching skills (Waters & Wall, 2007).

Ease of transition in medical education has been associated with maturity (Shacklady et al., 2009) and coming back to an alma mater (Duvivier et al., 2009), whereas difficult transitions have been associated with a lack of preparation (Luthy et al., 2004), racial minority (Case and Jawitz, 2004) and female gender (Lease, 1999). Lease (1999) reported that new female teachers were facing high levels of stress early in their career due to the conflict of career progression and raising a family. As it has been shown that stress may reduce the ability of an adult to learn (Papp et al, 2004; McManus et al 2004) it is possible that being a female may be associated with a more difficult transition.

3.8 Conceptual framework

According to Maxwell (2005), a conceptual framework can be developed based on four elements: the researcher's experience, literature review, pilot study findings and thought experiments. As my own experience was the impetus for this study, I could not exclude the importance of my experiential knowledge in the formulation of my conceptual framework. My experience of working in the hospital and university settings had led me to believe that the transition of novice medical educators into becoming senior medical educators was achieved in the workplace through apprenticeship. The most feasible learning theory which looked at workplace learning from an apprenticeship angle had been the CoP theory developed by Lave & Wenger. The availability of social factors such as collegial interaction (Eisen, 2001) and support (Little et al., 2014; O'Keefe et al., 2009) and senior educators' support (Cook, 2009; Duvivier et al., 2009; Heflin et al., 2009; McLeod & Steinert, 2009; O'Keefe et al., 2009) through apprenticeship have been identified as supporting the learning of NMEs. As this theory has previously been found to be applicable in medical education by Fung-Kee-Fung (2008) and Parboosingh (2002), I wondered if this theory could also explain the learning of NMEs.

My review of the literature on the topic also highlighted to me the importance of individual factors and workplace affordances. The learning of the NMEs in the workplace could be affected by multiple individual factors previously identified in the literature such as learning experience (MacDougall and Drummond, 2005; Oleson and Hora, 2013), teaching experience (Erlich and Shaughnessy, 2014; Ten Cate, 2007; Tso et al., 2014), teaching perspectives (Courneya et al., 2008; Taylor et al.,2007), motivation (Duvivier et al., 2009; Williams and Klamen, 2006), maturity (Shacklady et al., 2009), lack of preparation (Luthy et al., 2004), racial minority (Case and Jawitz, 2004) and female gender (Lease, 1999). These factors were likely to support or hinder NMEs' learning depending on the affordances available in the workplace (Billett, 2011; Fuller and Unwin, 2003; Roshetsky et al., 2013; Sutkin et al., 2008; Waters & Wall, 2007).

Coming back to one's alma mater (Duvivier et al., 2009) was also perceived to ease NMEs' transition into academia due to familiarity with the academic institution. Some of the factors that I have listed above also emerged from the findings in my pilot studies. These findings helped me to justify the need to study these factors in further depth.

The conceptual framework that I developed for my study is illustrated in Figure 4. I perceived that while learning in a community of practice, the mutual engagement, joint enterprise and shared repertoire of the NMEs were influenced by their personal factors and the workplace affordances. Personal factors, such as gender and race, could influence an individual's past experiences in learning or teaching. An individual's past experience of learning may also influence their current perspective towards teaching. What individuals perceived as good teaching would be influenced by their own experience of learning from their teachers. Taken together, both past experience and teaching perspective could influence the teaching practice of an individual. In terms of workplace affordances, factors which were seen as supporting or hindering the learning processes of an individual would depend on the context in which it occurs. Similarly, workplace affordances could also be influenced by an individual's personal profile. For example, factors that were seen as hindering the learning of female NMEs may not hinder the male NMEs. The objective of my study therefore, was to explore relationships between these factors.

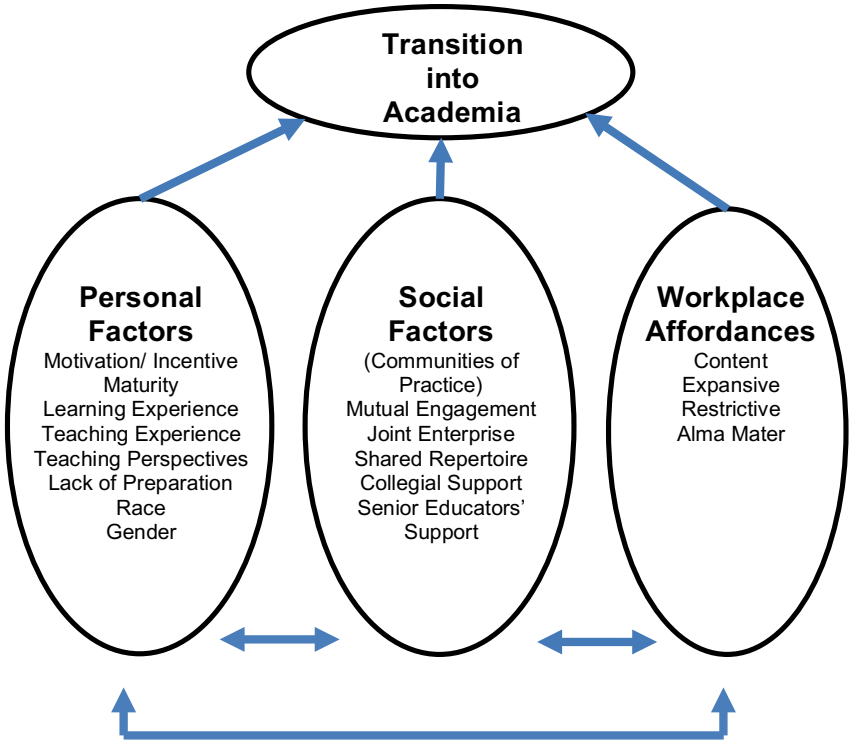

Figure 4: The conceptual framework for NME's learning process

3.7 Summary

In this chapter, I have presented my review of the literature in terms of what is known about the learning processes of NMEs. Previous studies on the development of good medical educators were mostly conducted in retrospect. There was no distinction made in terms of what was developed in the transition stage and subsequently, as medical educators gained more teaching experience. Therefore, a prospective study on the development of medical educators is needed to ascertain what is learned during the transition phase. The need to develop good medical educators has been well established in the literature. In developing teaching competence, the multiple roles associated with being a medical educator lead to a complicated learning process. The learning for medical educators is further complicated by a lack of formal teaching courses and the need to develop competency as a clinician and researcher at the same time. I have also considered the impact of faculty development initiatives and teaching

courses on the development of medical educators. The Communities of Practice theory is a learning theory which could be suitable as a theoretical lens in exploring how NMEs learn how to develop teaching competency, while the Transformative Learning theory is a potential alternative. The factors which have been identified as important in the development of medical educators include teaching experiences, teaching perspectives, motivations and social support through colleagues, mentors and coming back to alma mater. In the next chapter, I will outline my research methodology.

CHAPTER 4

METHODOLOGY

4.1 Introduction

This chapter begins with a description of my research paradigm and the methodology through which I chose to study the learning processes of NMEs during the transition stage. This is followed by a detailed description of how I carried out my study. I will describe what I planned to do in the beginning of my study and how this changed as my study progressed. The chapter concludes with a description of how I conducted my data analysis.

4.2 Research paradigm

NMEs are individuals and their lived experiences are unique to each NME. Therefore, in studying the learning processes of NMEs, I believe that knowledge is relative in nature (Lincoln et al., 2011) and is dependent upon participants' personal biography and what they make of their workplace context (Billett, 2014). Besides, the fluidity of knowledge means that whatever knowledge was considered true in the past might not still be true now, as a result of changing perspectives. In terms of my epistemological stance on the topic of study, I realised that my own experience learning as an NME not long ago made me part of the phenomenon I am studying. It was impossible for me to exclude my own experience in the interpretation of the learning processes because my own experience was also the stimulus for this study. Although I had no prior knowledge of how the medical education system works in the UK, I am not a total outsider because I have a similar background to my participants in the UK. In this study, my subjectivist epistemological stance (Lincoln et al., 2011), gave me two advantages. First, as I was also a NME, it was easier for me to understand the meaning of the language or technical terms which NMEs used in their daily practice. Second, I was able to pre-empt important issues pertaining to NMEs to guide me in formulating interview guides. I

was conscious of the influence of my own working experience on this study. However, knowing that knowledge is relative in nature, I did recognise that what was deemed important for me might not be important to my participants.

Although it was initially my aim to study the topic only within the Malaysian context, being in the UK, I was fortunate to have the opportunity to study the topic within the UK context as well. As I planned to collect data from several NMEs from different educational institutions in both countries, I decided to conduct my study using a phenomenological approach. In a phenomenological study, the phenomenon being studied is described from what the participants experienced in common. Data collected from the participants who have experienced the phenomenon is analysed to find the essence of the experience for all of the participants (Creswell, 2013). According to Moustakas (1994), the essence of the experience consists of "what" they experience and "how" they experience it. The phenomenological approach described by Creswell (2013) fits nicely into the aims of my comparative study, which are to investigate doctors' perceptions of how they negotiated their experience of learning in transition to the role of medical educator, and the implications of transitional learning processes on the management of NMEs' teaching and learning needs.

In this study, the phenomenological approach was chosen for three reasons. First, my aim was to find the similarities and differences between NMEs' learning experiences in Malaysia and the UK. As I am studying the learning processes of NMEs from their own lived experience, I believed that NMEs are the best source of information. Second, I planned to see the learning progression of these participants over a year to have a deeper understanding of how NMEs learn how to teach. My study was prospective in nature and due to the geographical distance between the two countries, ethnography was considered to be impractical. Third, there were striking differences in the medical education systems between both countries. The variety in teaching roles and responsibilities further complicated the comparison. A phenomenological approach therefore was feasible for my study design, as this approach could accommodate the differences between the two countries in order to study the learning processes of the

NMEs. The phenomenological approach has also been used by other researchers to study the learning processes of medical educators; for example by Cook (2009), MacDougall and Drummond (2005) and McNally et al. (2009).

In this study, I was looking at learning as a process. By definition, a process is

> ‘an ongoing flow of action/interaction/emotions occurring in response to events, problems, or as part of reaching a goal. The events, problems, and/or goals arise out of structural conditions and the actions/ interactions/ emotions which are taken in response lead to outcomes or consequences. Action/interaction/emotions may be strategic, routine, random, novel, automatic, and/or thoughtful.’ (Corbin & Strauss, 2008, p 247)

I needed to conduct the study over a period of time to document any changes in the transitional learning processes of my participants. Hence, I decided to use a longitudinal phenomenological approach (Saldana, 2003), as this method allows me to see the learning progression of the NMEs as they develop from being an NME to becoming a more senior medical educator within the period of data collection.

The great advantage of my comparative study between the two countries was that I was able to have multiple perspectives on my study topic. I was an insider and partly an outsider at the same time. As stated earlier, my own experience learning as a NME made it impossible for me not to refer to my past experience during data collection and data interpretation. In the UK, I had no knowledge of how the system worked and I had no friends who worked as NMEs. However, I was only partly an outsider to the phenomenon in the UK because I shared some similarities with the UK participants in terms of the job roles of being an NME. I relied on my own working experience in Malaysia when I was trying to understand what my participants in the UK were talking about. As the study

progressed, I kept comparing the experiences of my participants both in Malaysia and the UK to my own.

4.3 Methods

A longitudinal approach was chosen for this study in order to capture the lived experience of the NMEs and to document their learning progression. Through a longitudinal approach, I would have the opportunity to analyse participants' response to changes in their roles and responsibilities at an individual level (Cohen et al., 2007). The prolonged contact with the same participant would also allow me to ask questions that I have not asked during the last interview (French, 1993) or to ask for opinions on what was said by the other participants. The prospective nature of a longitudinal approach was also beneficial in reducing recall bias by the participants (Cohen et al, 2007).

I planned to conduct a series of interviews with the participants. There were three possible interview types which I could have used for data collection; structured, unstructured and the semi-structured type (Fontana & Frey, 2003; Kvale & Brinkmann, 2009). In structured interviews, participants are asked the same questions, in the same sequence, by the same interviewer and it is very limited in flexibility. In unstructured interviews, there is no structure or sequence to follow and the flexibility is limitless (Fontana & Frey, 2003, p 68). Semi-structured interviews fall in between the spectrum of structured and unstructured interviews. Semi-structured interviews use open ended questioning to allow participants to have the freedom to share their experience about the phenomena being studied (Kvale & Brinkmann, 2009). It is different from unstructured interview because in semi-structured interviews, the interviewer has earlier formulated the questions. However, the interviewer is not rigidly bound by the sequence of the interview questions compared to structured interviews. The questions in semi-structured interviews, also known as an interview guide, are prepared to guide the interviewer on what questions need to be asked. In this study, the semi-structured interview was chosen as the method of choice for two reasons. First, semi-structured interviews gave

me the opportunity to study the topic from the participants' perspectives. Second, semi-structured interviews allowed the participants to have some freedom in expressing their opinion on their transitional learning experience (Kvale & Brinkmann, 2009). As this longitudinal qualitative study was conducted in two countries, I needed some structure in the interviews to enable me to make comparison between the two countries. The use of unstructured interviews in this study would have made it difficult for me to make the comparison.

A total of three semi-structured interviews were planned for each participant. The first and the last interviews would be face-to-face while the second interview would be over the phone. The interviews were planned at six-monthly intervals in order to capture the learning processes and progressions which the NMEs may have missed if the interviews were conducted one year apart. The second interview also allowed me the opportunity to maintain prolonged rapport with the participants. I also planned to use the Teaching Perspective Inventory (TPI) in the first interview to see whether there was any relationship between NMEs' teaching perspectives and their learning processes.

4.3.1 Face-to-face interview

The face-to-face interview has been used as a method of data collection in a number of qualitative studies looking at how medical educators' learn: for example, those by Cook (2009) and MacDougall and Drummond (2005). In face-to-face interviews, the interviewer has the opportunity to develop rapport and observe social cues given by the participants (Opdenakker, 2006). The interviewer also has a chance to study the workplace of the participants if the interview is conducted in the participant's workplace. The face-to-face interview also allows the interviewer to obtain a spontaneous answer from the interviewee. Due to the spontaneous nature of a face-to-face interview, the interviewer needs to listen and think at the same time: especially during unstructured or semi-structured interviews. The interviewer needs to listen carefully to what is being said by the participants and at the same time think of what questions

to ask next (ibid) so that the flow of the interview is smooth. At the same time, the interviewer needs to make sure that all questions have been asked regardless of the sequence of the questions and that no questions were asked repeatedly.

As this was my first time conducting qualitative research, I conducted 2 pilot interviews in the UK with clinicians who were involved in undergraduate teaching. The pilot interview sessions gave me the opportunity to gain an overview of the topic, refine my interview technique and rephrase difficult or ambiguous interview questions (Hunt et al., 2011). The pilot interview participants were not included as my study participants.

As English is not my mother tongue, and when I conducted the interview, I needed to listen, think and translate at the same time. During the interview, when my participants said something interesting and I wanted to know further details, I needed to utilise both quick thinking and translating. In formulating what question to ask next, I needed to think quickly in Malay and translate the question into English. I needed to do this quickly so that there were no pauses in the interviews. Due to this language barrier, at times I needed to use leading or closed ended questions because my participants could not understand my question. I also needed to seek clarification at times when they used colloquial terms which I was not familiar with. There were also times when I gave my opinion in the interview: especially when my participant expected some response from me, for example when he/she wanted to get some feedback on whether what he/she underwent had happened to me as a new educator as well. This happened early in the data collection phase. I realised that the more I gave cues or responses to the participants, the less data I collected on the participant's perspective of the topic. I had to refrain from giving cues or responses to the participants because it was the participants' perspectives that mattered, not mine. As I developed my interviewing skills further, I was better able to restrict my influence on the interviews. I had a steep learning curve in terms of developing my interviewing skills from a structured to a semi-structured format. The other limitations of my data collection will be presented in the discussion chapter.

4.3.2 Telephone interview

The telephone interview has been used as a method of data collection for its advantages of saving time, travel expenses and greater anonymity (Irvine et al., 2012). In this study, telephone interviews were planned as follow up interviews in between the two face-to-face interviews. As some of my participants are in Malaysia, a telephone interview was the best way for data collection to save time in travelling as well as to reduce travelling costs. The use of telephone interviews as a sole method of data collection may not be suitable in generating rich qualitative data due to the lack of rapport and natural encounter (ibid). In this study, the risks of lack of rapport and natural interaction had been minimised because the telephone interview was in combination with two other face-to-face interviews. I had met these participants during the first face-to-face interview, so some rapport had been established. Unfortunately, I had to rely on just telephone interviews with some participants in the UK because of logistical reasons. However, I had met these participants during a workshop. Therefore, some rapport with the participants had earlier been established.

4.3.3 Teaching Perspectives Inventory

The Teaching Perspectives Inventory (TPI) is an established questionnaire developed by Pratt and Collins (1998) to assess a teacher's orientation towards teaching. It was the product of Pratt and Collins' two decades of research across continents on various aspects of teaching practices. The TPI informs a teacher regarding their dominant and recessive perspectives based on five different categories; transmission, apprenticeship, developmental, nurturing and social reform. The validity and reliability of the TPI has been tested across time since its development. The inventory has been used to test the teaching perspectives of more than 100 000 people across many disciplines (Collins & Pratt, 2010) including medicine (Taylor et al., 2007) and veterinary medicine (Srinivasan et al., 2007). In my study, I planned to use the inventory to assess my participant's perspective towards teaching. I intended to use this

information to check on the influence of NMEs' teaching perspective on their teaching practice. Specifically, I would like to know if the NMEs are aware of their teaching perspective, whether there is a perspective – practice mismatch as reported by Taylor et al. (2007) and whether the NMEs' teaching perspective would change as they progress in their career.

4.4 Ethical approval

In view of the potential ethical issues arising from this study, ethical approval applications were submitted to the Division of Research and Development, MoHE, Malaysia and the University of Leeds' Medical and Dental Educational Research Committee (EdREC). The ethical approval to conduct this study in Malaysia was obtained on the 26th of April 2012. A copy of the approval letter is attached as Appendix 6. The ethical approval from University of Leeds' EdREC was obtained on the 6th of July 2012 and the approval letter is attached as Appendix 7. Some of the participants in this study are my junior colleagues in the faculty. I needed to ensure the anonymity of my junior colleagues and the other participants and made them aware that their participation in the study was totally on a voluntary basis. The anonymity of participants' identity was needed to ensure that they were not identifiable and what they said in this study would not be used against them later. The granting of ethical approvals from Malaysia and the UK and my adherence to the approvals is my assurance to the participants that this study has been conducted in an ethical manner.

4.5 Recruitment of participants

Cook's (2009) study was influential in the original design of my study. My initial recruitment strategy was to recruit NMEs from three different workplace settings - the hospital, medical school and general practice. I planned to interview eighteen NMEs from each country. The eighteen NMEs comprised six NMEs each from Basic Sciences, Clinical Sciences and Primary Health Care. I planned to interview three female and three male NMEs representing each discipline. I perceived that I would

have no problem recruiting the NMEs from Malaysia because I had access to these NMEs from the Dean of each public medical school. I was optimistic that I could get the same number of participants in the UK. As the study progressed, I struggled to recruit NMEs in Malaysia and the UK to fit into the discipline grouping. I then aimed to get at least ten participants from each country regardless of their medical discipline. However, it was still very difficult to recruit participants in the UK because my definition of NMEs at the beginning of my study was limited to the equivalent of the ACL role in the UK. There were only a few ACLs whom I could invite to participate in my study and after the initial email invitation, only two ACLs agreed to participate. Consequently, I had to expand my inclusion criteria to include other doctors (ACFs, CTs and CTFs) who had formal roles in teaching medical students.

The recruitment of NMEs was carried out through several means. The primary recruitment strategy was through communication with Deans of public medical schools both in Malaysia and the UK. Out of the thirty three medical schools in Malaysia, only ten are public medical schools, which offer a trainee lecturer scheme to become a medical educator. Out of the ten public medical schools, only eight are in Peninsular Malaysia. The other two medical schools in Sabah and Sarawak were excluded from the study because it would not be cost effective for me to travel to the two states for data collection.

As this study was looking at the learning processes of NMEs in transition, purposive sampling was chosen to fulfil the inclusion criteria. The inclusion criteria for the study were NMEs with a medical degree who had started teaching since 1 January 2011 and were actively involved in teaching medical students. The exclusion criteria were NMEs who did not have a medical degree, started their teaching career prior to 1 January 2011 or were no longer actively involved in teaching medical students.

A letter was sent to all the Deans of the eight public medical schools in Malaysia to ask for permission to conduct my study in their medical school. In my letter, I also asked for a list of NMEs who fulfilled the inclusion criteria. Six out of the eight Deans responded to my request. Out

of the six, I had to exclude one medical school because they requested that I pay one thousand Malaysian Ringgit (equivalent to two hundred Pounds Sterling) to access the list of participants. I was also required to select one of their academics as a co-supervisor for my study. The initial communication with the Deans of medical schools in Malaysia resulted in more than thirty NMEs who fulfilled the inclusion criteria. The communication with Deans of the Medical School of UoL resulted in nine NMEs who fulfilled the criteria. The Dean of another medical school in the UK was also contacted in view of him having been an academic in Leeds Institute of Medical Education (LIME) prior to his appointment. Unfortunately, I was not able to obtain any list of NMEs from his medical school.

NMEs who fulfilled the inclusion criteria in Malaysia and the UK were contacted via email and they were invited to participate in the study. The participant information statement and informed consent form were attached in each email to ensure that each participant received adequate information explaining the purpose of the study and how they could become involved. They were given a week to decide whether they wished to participate in the research or otherwise. Some of the participants replied straight away indicating that either they wished to participate or were not interested and wanted to be excluded. For those who did not respond to my invitation email, I sent another email after a week to invite them again to participate. Participation in the study was totally on a voluntary basis. Participants could opt to withdraw from the study at any time. The letter to the Deans, participants' invitation letter, information statement and consent form are attached as Appendices 8, 9, 10 and 11 respectively.

In Malaysia, I only had eight appointments with NMEs who had agreed to participate via email invitation. Snowball sampling during the first round of interviews resulted in the recruitment of four more participants. In the UK, I only managed to get three participants through email invitation. Snowball sampling during the first round of interviews resulted in the recruitment of the fourth participant. Snowball sampling is a recruitment strategy through referrals made by the participants (Biernacki & Waldorf, 1981). In this study, the participants recommended other NMEs who they

thought could contribute to the study and fit the inclusion criteria. As I found it more difficult to recruit participants in the UK, I started to ask for help from my supervisors. The fifth and sixth participants were recruited following my supervisors' suggestions for additional people to be invited while the seventh participant was recruited through a PhD colleague. The eighth and ninth participants were recruited after I attended a workshop for CTFs in Leicester on 18th May 2013.

4.6 Data collection

I undertook data collection in Malaysia from December 2012 to February 2014. In the United Kingdom, the study was carried out from November 2012 to September 2014. Each NME was interviewed three times over one year; the second interview took place six months after the first interview and the third interview took place one year after the first interview. The first and third interviews were carried out face-to-face while the second interview was conducted over the phone. The six-month gap between interview sessions was chosen to allow enough time for NMEs to reflect on their learning and teaching practices and to see whether there was any learning progression (Hermanowicz, 2013). The academic semester had changed within the six months duration and NMEs might have changes to their roles and responsibilities as the semester changes. Although the data collection period was planned to take one year, I needed to extend the period because of the initial problems with recruitment and the need to rely on my participants' schedules for the date of the interview.

As participants were interviewed three times in total, the previous interview transcripts were reviewed before I conducted the next interview session. By doing so, I was able to follow up on interesting issues from the previous interview and the progression of each participant's transitional learning process. Interesting issues emerging from the interview with one participant were also explored during interviews with the other participants. This was done to see whether these issues were important to other research participants. All interview sessions were recorded and transcribed

verbatim for qualitative data analysis. The names of the participants and all other names appearing in the transcripts were anonymised to protect their identity. The anonymised names reflected the participants' gender and ethnicity. When quotes are used in the thesis, the participant's name, job role, country of origin and interview number are denoted in brackets. For example, (Richard, ACF, UK, Interview 3) means that the quote was from Richard, a male participant, an ACF from the UK and the quote came from the third interview. The participant's clinical discipline was not anonymised because there were factors associated with NMEs' learning processes that were specific to the participant's clinical discipline. Although the clinical disciplines were not anonymised, the anonymisation of participants and other peoples' names and workplaces was deemed sufficient for ensuring that participants were not identifiable.

4.6.1 The first interview

In the first face-to-face interview, the focus was on how participants learn how to teach and the factors affecting their learning during the transition period. It was important to note that my first four participants worked in a university far away from Kuala Lumpur, the capital city of Malaysia. It was an hour's flight away or almost 6 hours of driving time. I therefore needed to fit in four interviews during my short trip to their university. If I was unable to interview all of the participants on the same day, I would have to drop some of the participants from my study because it would not be cost effective for me to travel to their university again after I went back to Kuala Lumpur. The rest of the participants worked in universities located in Kuala Lumpur. It was not a problem to reschedule interview appointments with these participants because I was staying in Kuala Lumpur.

My first face-to-face interview in the UK was in November 2012. The subsequent face-to-face interviews with the UK participants ran from March 2013 until July 2013, after I had completed my first round of face-to-face interviews with the Malaysian participants. Although my first interview with the participants was supposed to be face-to-face, due to the distance

between Leeds and the places where some NMEs worked, I decided to conduct some interviews over the phone. It took several hours of driving to get to the hospitals where some of the NMEs worked. It was not cost effective to travel to their workplaces for a one-hour face-to-face interview. These participants agreed to be interviewed over the phone. The information statement and consent form had been emailed to the participants earlier before the interview. I played back the recording after the phone interview and I am satisfied with the quality of the recording. Although there were some inaudible words in the recording, it did not affect the gist of the interview in total.

At the end of the first interview with each participant, they were given a laptop to fill in the TPI online. The result of the TPI was immediately discussed with the participant so that the participant could reflect on their teaching perspective and practice. Unfortunately, by the end of the first interview cycle, I was not able to collect the TPI results from all participants. There were times when the participants had to leave immediately without completing the TPI, there were times when the participants promised to fill the TPI in their own time but they did not do so and there were also times when there were some technical faults with the Internet connection or the laptop during the interview. There were only 12 TPI results from the 21 participants I interviewed after the first round of interviews. As a result of these challenges, I decided to exclude the use of TPI in this study. Although this meant losing significant information about NMEs' teaching perspective which forms part of their personal biography, I perceived I had insufficient data to make valuable conclusions.

4.6.2 The second interview

In the second interview, which was the telephone interview, my aim was to ask about changes in NME roles and responsibilities since the first interview. Changes in this sense included increases or decreases in job roles and responsibilities as well as changes in the supporting or hindering factors they identified during the first interview. The second interviews with my Malaysian participants started on 23rd of July 2103 and finished on 17th

of October 2013. As July was a fasting month for the Muslims and there was almost one week of public holidays for Eid in the middle of August, I was not able to undertake many telephone interviews during that period. Despite the distance between Malaysia and the UK, the quality of the telephone interviews was very good. Three of the Malaysian participants were dropped from the study at this point because they did not answer their phone on three occasions. The calls to them were made on three different days and times.

I started my second round of interviews with the UK participants in November 2013. The first participant opted for a face-to-face instead of telephone interview when I interviewed her in June 2013. Both the second and third participants were interviewed in the second week of November, 2013. The second participant was on her maternity leave but she agreed to do the telephone interview when I contacted her. The fifth and sixth participants opted for a face-to-face interview instead of telephone interviews. The fourth, seventh, eighth and ninth participants were dropped from the study because they were no longer actively involved in teaching medical students when the second interviews were undertaken (refer to Tables 5 and 6).

4.6.3 The last interview

For the last interview, my aims were to ask my participants to reflect on what they had learned and how their learning could have been enhanced in the past year. I wanted to explore their career progression and how they had developed since starting their journey as a NME. For the last interview, I started my data collection in Malaysia in January 2014. The dates of the interview appointments were set when I was still in the UK. Since the first, second, third and fourth participants worked in a university far away from Kuala Lumpur, I had to set a date when all four participants were available for face-to-face interview over two days' duration. The seventh participant was dropped from being a participant in the last face-to-face interview because she did not respond to my emails, messages and calls to set a date for the last interview. The eight final face-to-face

interviews which I conducted in Malaysia were undertaken as planned. I was very satisfied to have a longer interview duration compared to the first or second round of interviews. My longitudinal methods gave me the opportunity to develop a rapport over a longer period with my participants. As they were more comfortable talking to me in the last interview, they were opening up more and they were sharing their experiences about learning in the workplace.

In the UK, the first participant was dropped from being a participant in the third round because she had finished her teaching contract and had moved overseas. I had to conduct my final interview with the second participant over the phone because she was still on her maternity leave. The third participant was also still on her maternity leave. She lived not far away from Leeds and had agreed for a face-to-face interview. Although on maternity leave, both the second and third participants still continued with their academic work. The interviews with the second and third participants made me realize that a maternity break is not necessarily a total break from academia. Some NMEs still carry out their academic work during their maternity leave. I will explore this issue further in my discussion chapter. I had my final face-to-face interview with the fifth participant in July 2014. He was towards the end of his teaching contract and was talking about his future plans in the final interview. The sixth participant was interviewed face-to-face in September 2014. By the end of the study, I managed to get eight completed interviews from my participants in Malaysia and four more from my participants in the UK. Tables 5 and 6 below summarise participants' contributions to the study. The reasons why some participants were dropped and at what stage of the study are also provided in the tables. As participant attrition is very common in longitudinal studies, the challenge of participant attrition associated with this study will be discussed further in Chapter 8.

Table 5: List of participants in Malaysia

Names	First Interview	Second Interview	Third Interview
Fatimah	√	√	√
Hafizah	√	√	√
Rita	√	√	√
Dina	√	√	√
Marlene	√	Not answering calls	-
Kamal	√	Not answering calls	-
Sabrina	√	√	Not answering calls
Hilmi	√	√	√
Farah	√	√	√
Atiqah	√	√	√
Rashid	√	Not answering calls	-
Maisarah	√	√	√

Table 6: List of participants in the United Kingdom

Names	First Interview	Second Interview	Third Interview
Najwa	√	√	No longer involved in teaching medical students
Aisha	√	√	√
Ruby	√	√	√

Zainab	√	No longer involved in teaching medical students	-
Richard	√	√	√
Aaron	√	√	√
Lucy	√	No longer involved in teaching medical students	-
Michael	√	No longer involved in teaching medical students	-
Jeremy	√	No longer involved in teaching medical students	-

4.7 Data saturation

As opposed to quantitative studies, which often aim to ensure generalisability, qualitative studies are more concerned with gaining a deep understanding of the topic of interest. Although qualitative studies' findings are not always generalisable to the general population, qualitative studies too have to be robust and thorough to ensure that the interpretation of data is credible in explaining the phenomenon that the study is trying to explain. There have been efforts made by some qualitative researchers to prove that they have managed to achieve qualitative data saturation in their study (Francis et al., 2010). These qualitative researchers wished to show that they had achieved data saturation to generalise the results of their study to the population. Data saturation is claimed to have been achieved when there is no new theme arising from a new research participant. As my study was a longitudinal qualitative study, I knew that it was impossible for me to

reach data saturation given the limit of manpower and timing that I had to complete the study. Nevertheless, this does not mean that my study is not worthwhile. As NMEs' transitional learning processes is a new topic of study, I wished to gain a deep understanding of the transitional learning processes of a small number of NMEs, rather than generalising my findings to all the NMEs in Malaysia and the UK.

4.8 Data Analysis

I decided to use thematic analysis in this study because I was trying to describe the essence of NMEs' learning as elaborated by my participants. I was also trying to identify themes that were important for several participants and across countries (Joffe & Yardley, 2004). Thematic analysis was appropriate for my study because of its flexibility and compatibility with my research paradigm (Braun & Clarke, 2006). Thematic analysis has also been used by other researchers, for example by Cook (2009) and Hurst (2010), in studying the learning processes of new educators. I started data analysis after transcribing the interviews of each participant. As I conducted longitudinal qualitative interviews, I needed to constantly look for emerging themes which I could further explore with other research participants within Malaysia as well as from the UK.

4.8.1 Developing a coding frame

Although the data I collected from pilot interviews was not used in this study, the transcribed interviews were analysed to look for emerging themes that I could use in developing the interview guide for the first round of interviews. In order to look for emerging themes, I developed a coding frame to help me code the transcribed conversations systematically. The initial coding frame consists of a list of deductive codes I found through my review of the literature and the description for each code. Examples of the codes and the description of each code are illustrated in Table 7. The themes that emerged from the pilot interviews were used to refine the interview guide that I used for my first round of interviews with the

participants. The development of a coding frame was important in my study because it enabled me to be consistent with the use of codes throughout the coding process across participants and across countries (Joffe & Lucy Yardley, 2004; Saldana, 2013). The coding frame also enabled me to identify the need for the development of new codes when I found interesting conversations which I could not code based on the initial coding frame.

Table 7: Examples of codes and its description in a coding frame

Code	**Description**
Teaching Perception	NMEs' perception of what teaching means to them. Examples of transcribed conversations: *"Teaching is trying to impart knowledge to other people…"* *"… trying to encourage high quality learning in the students…"*
Motivation	Motivation to work as medical educators. Examples of transcribed conversations: *"I enjoy being able to see students ... developing their own sort of knowledge with my help."* *"I actually wanted to do it …"*
Learning	How NMEs learn how to teach. Examples of transcribed conversations: *"You just learn from your seniors... how you handle this, what is expected…"* *"I think you learn by being a medical student and experience good teaching and bad teaching and … you watch other people do it."*

Experience	Any past experience related to teaching and learning in medical education. Examples of transcribed conversations: *"I started teaching the medical students … on the course … so every Friday morning…"* *"I was an Anatomy demonstrator for a year which is very good experience and then when I came here as an SHO I did a lot of sort of clinical bedside teaching."*
Support	Any factors identified by NMEs as supporting their learning. Examples of transcribed conversations: *"Good colleagues is good support and I think it's organised colleagues basically."* *"I had needs and they were very well looked after by my supervisors."*
Barrier	Any factors identified by NMEs as hindering their learning. Examples of transcribed conversations: *"… it doesn't fit on certain days and I still have to fit in my ¾ clinical commitment."* *"Time time time ... yeah the lack of time."*

4.8.2 Coding

During the first round of interviews, the transcribed conversations were coded based on the coding frame which I had refined after the pilot interviews. The use of deductive codes in a coding process allowed me to compare my findings with the literature either by replicating, extending or refuting it (Joffe & Yardley, 2004). As I read my transcripts again and again, I began to develop more codes inductively. I repeated the coding process several times until I had completed my first round of interviews. As I conducted more interviews, I found more interesting codes emerging from the transcribed interviews. The new codes were added to the coding frame

to ensure that there was no duplication in the list of codes. Examples of the new emerging codes were job variety and learning needs. The codes were analysed repeatedly to look for themes that emerged across participants and across countries.

Before I started conducting the second round of interviews, I looked again at all the transcripts to prepare the second interview guide. Since this was a longitudinal qualitative study, I needed to make sure that I had read each participant's transcript so that I could follow up on issues we had talked about in the first interview. I particularly wanted to explore NMEs' learning progression. I also wanted to ensure that I discussed the interesting issues which arose during interviews with participants within the same country and those in the other country. Therefore, throughout the data collection phase, I needed to go back to my interview transcripts again and again. I also found more interesting codes emerging from the transcribed conversations from the second round of interviews. The new codes developed after the second round of interviews were related to the learning progression of the NMEs. These were also added to the coding frame to ensure that there was no duplication in the list of codes. Examples of the new emerging codes were increase or decrease in teaching role and family-work life balance.

The same process was repeated before I conducted the final face-to-face interview with the participants. I needed to look at the transcripts from the same participants during the first and second rounds of interviews. Several new codes were also developed after the third round of interviews. The new codes were related to the personal and professional development of the NMEs. Examples of the new emerging codes were confidence and job security. These codes were also added to the coding frame. By the end of data collection, I had a total of forty-seven interview transcripts; twenty-one from the first round of interviews, fourteen from the second round of interviews and twelve from the third round of interviews. Coding forty-seven transcripts was not an easy task. I had to refer to my coding frame repeatedly to ensure there was no duplication and that I remained consistent throughout the coding process.

4.8.3 Generating themes

After each transcript had been coded, I needed to analyse the codes and look for themes that emerged through the coding. To ensure that the emerging themes were credible, I needed to map the themes and the codes that supported each theme. After each round of interviews, I needed to refine my list of themes several times. Some themes were spliced into two new themes and some themes were merged to form new themes so that I had a manageable number of themes for reporting my research findings. As I was conducting a longitudinal, qualitative study, I had to repeat this process after each round of interviews to ensure that the codes and themes that I developed and refined would answer the research questions at the end of the study. Examples of the themes and their description are listed in Table 8. I also made thematic maps to ensure that the emerging themes were supported by the codes. An example of a thematic map is shown in Figure 5.

Table 8: Examples of themes and its description

Theme	**Description**
Learning from other colleagues	NMEs learning from their colleagues at work regarding how to carry out their job roles and responsibilities.
Learning from experience	NMEs learning from their past experiences as students or as teachers.
Learning Progression	The development of NMEs in one of their roles as a teacher.
Learning needs	The factors that NMEs perceived as necessary for their learning development.
Collegial support	Emotional support received from colleagues.
Departmental barriers	Departmental factors perceived by NMEs as hindering their learning in the workplace.

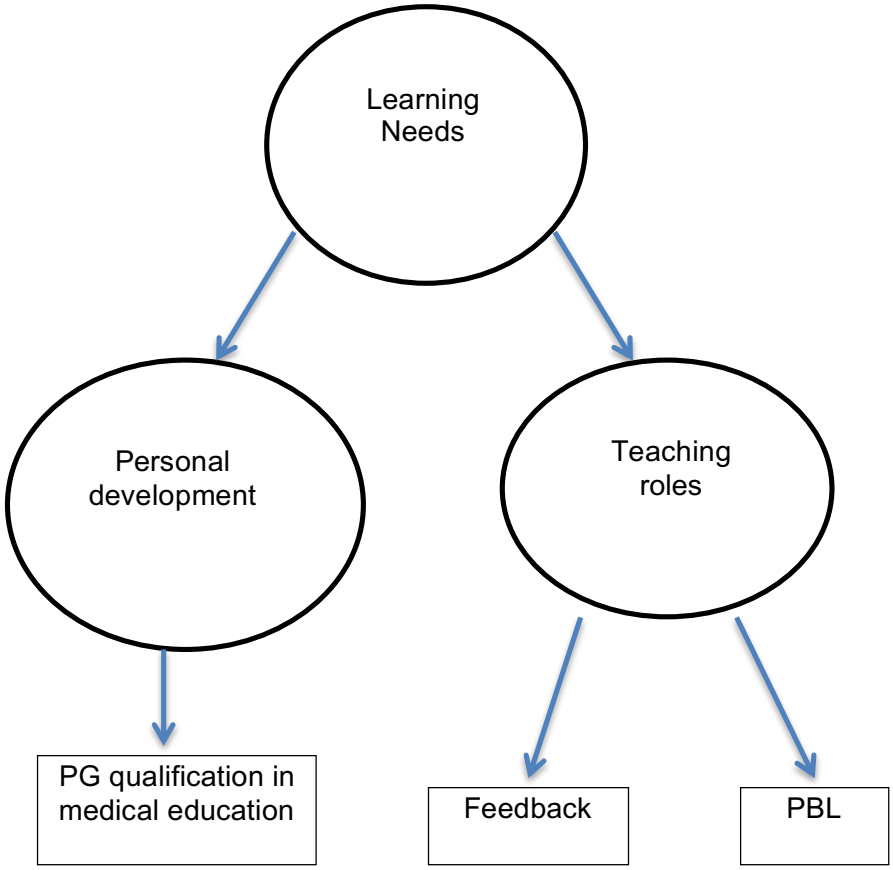

Figure 5: A thematic map of NMEs' learning needs

4.8.4 Data interpretation

At the end of the study, I had forty-seven transcripts altogether but in terms of completeness in the longitudinal interviews, I only had twelve complete sets of interview transcripts. Although there were only twelve completed sets of transcripts, all of the transcripts were used in data interpretation throughout the study. I used the first round interview transcripts to look at the initial learning processes of NMEs. I used the second round of interview transcripts to explore NMEs' learning progression and I used the third round interview transcripts to look at the personal and professional development of NMEs over one year. Figure 6 summarises the steps that I undertook during data analysis. Figure 7 is the

initial step that I took to group the codes under themes that have been established from the literature. Figures 8, 9 and 10 are the themes and codes generated in this study.

4.9 Reflexivity

According to Berger (2015), several strategies could be used in order to maintain reflexivity throughout the qualitative study duration. These strategies include repeated interviews with the same participants, prolonged engagement, member checking, triangulation, peer review, forming of a peer support network and back talk groups, keeping a diary or research journal for 'self-supervision', and creating an 'audit trail' of researcher's reasoning, judgment, and emotional reactions (page 222). Some of the strategies described by Berger (2015) were used in this study to maintain reflexivity. The three scheduled interviews were planned to ensure that the prolonged engagement would give me many opportunities to validate my assumptions and findings with the participants. My dual role as a researcher in this study, an insider in the Malaysia context and an outsider in the UK context, provided me with the opportunity to view the phenomenon from different perspectives, thus challenging and validating my assumptions of how NMEs learned. The use of deductive and inductive coding frame during data analysis allowed me to make comparisons between my research findings and the literature. The deductive coding frame serve as a reference to validate the themes emerging from the interview transcript, thus minimizing the influence of my own assumptions on what was important. I also sent a weekly journal to my supervisors as an audit trail of my reasoning and judgement, especially during data collection and analysis.

4.10 Summary

This study was conducted in two countries over a period of more than one year using a longitudinal qualitative interview approach. There were difficulties in recruiting participants at the beginning of the study as a

result of participants' varied teaching roles. The first and final semi-structured interviews were conducted face-to-face while the second semi-structured interviews were conducted via telephone where possible. Transcribed data was analysed thematically using an emergent coding frame. In the next chapter, I provide the background of my participants.

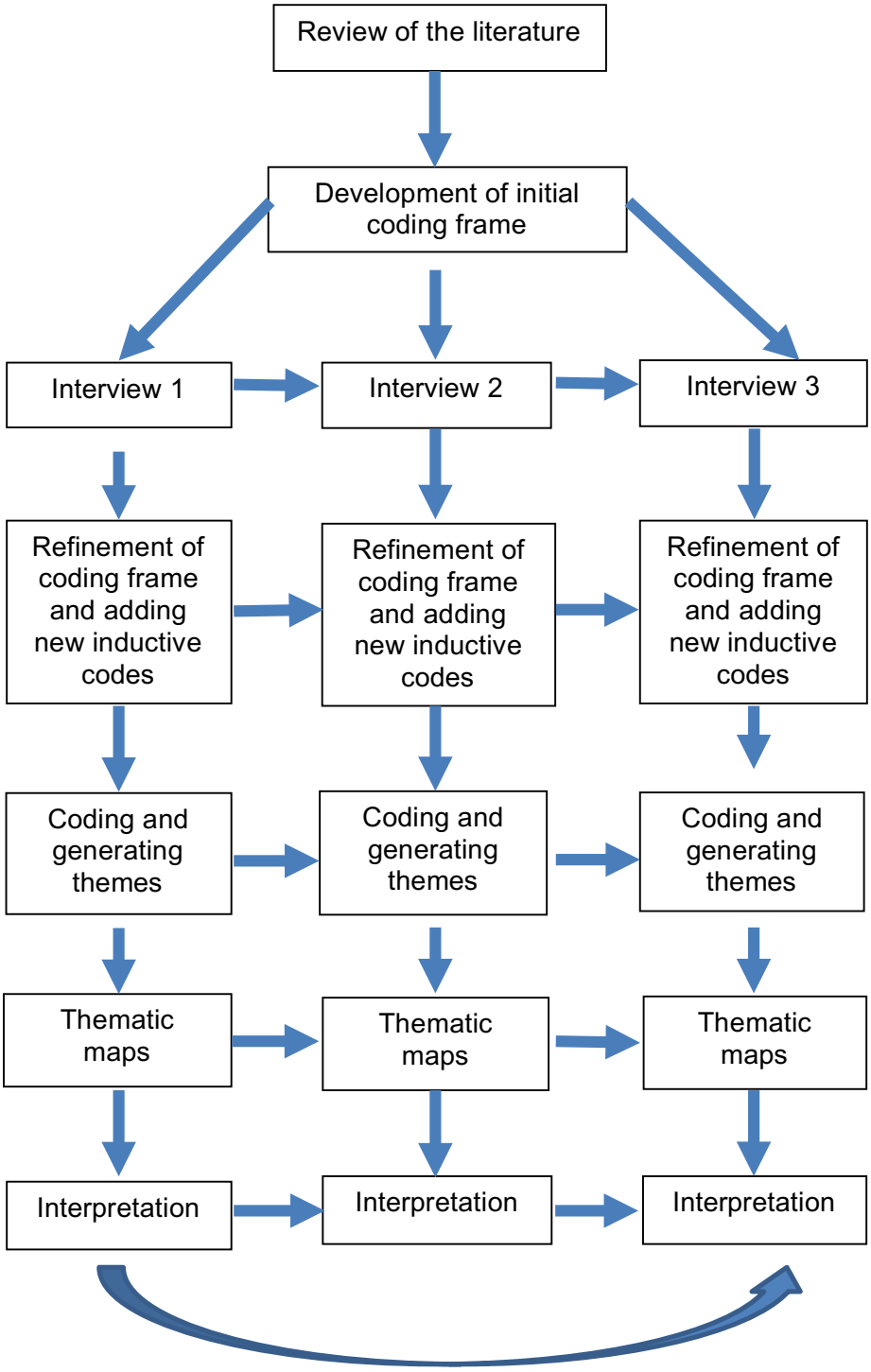

Figure 6: The steps in longitudinal qualitative data analysis

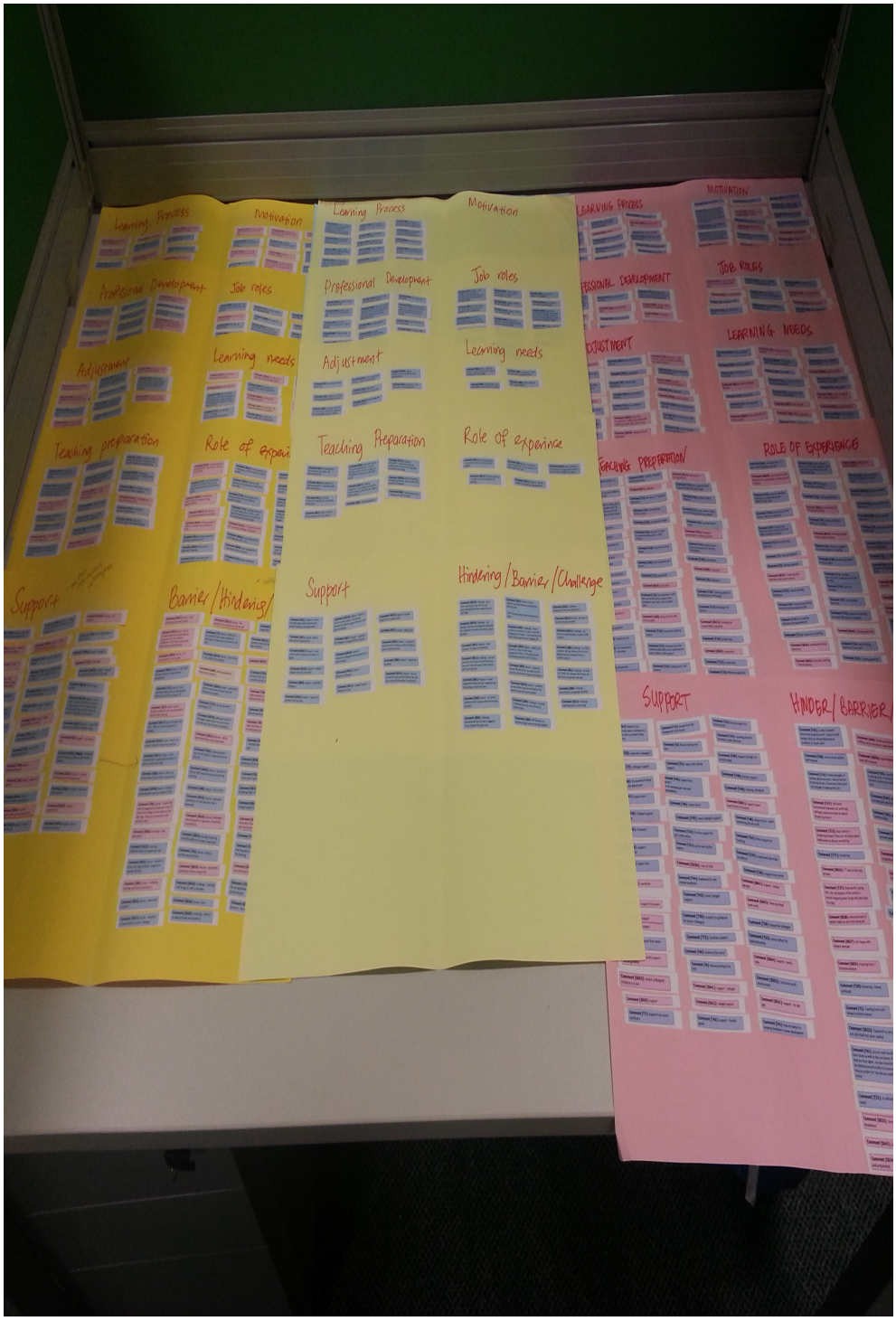

Figure 7: The initial step in grouping the codes

Figure 8: The themes and codes for belief, motivation and experience

Figure 9: The themes and codes for learning processes

Figure 10: The themes and codes for factors influencing learning

CHAPTER 5

THE PARTICIPANTS

5.1 Introduction

This chapter provides background to the participants, including their teaching experience, identified teaching perspectives, and motivation to teach. Findings from the Malaysian and UK participants are interwoven in relevant paragraphs to enable comparisons between the two countries.

5.2 The Participants

5.2.1 The Malaysian participants

The characteristics of the Malaysian participants are summarised in Table 10. All the Malaysian participants had completed postgraduate training and were qualified to practise their clinical specialty without supervision. The majority of the Malaysian participants were females who were married and had children. The age of the participants ranged between 30 to 40 years old. Most of the participants became medical educators through the Trainee Lecturer Scheme (TLS), except for Dina and Marlene. Dina decided to become a medical educator after working as a specialist in a government hospital. Marlene did not want to work in the government service hospital because she did not want to be only providing clinical service.

Several of the NMEs in Malaysia underwent undergraduate medical training overseas. In terms of postgraduate training, only Marlene underwent postgraduate training overseas. The rest of the participants underwent postgraduate training in Malaysia. Some of the NMEs were working at the same university where they had undertaken their postgraduate training. Dina was the only NME who worked at the same

university where she had undergone both undergraduate and postgraduate training.

The Malaysian participants had varied teaching experience. Fatimah gained her teaching experience through informal teaching sessions before she joined the TLS. While in the UK for undergraduate training, Fatimah also taught at a local primary school during summer holidays. Dina's teaching experience came from the informal teaching sessions that she had conducted with the junior doctors when she was working in a government hospital. As a specialist trainee in the UK, Marlene was used to teaching medical students and attending teaching and learning courses because teaching was one of the domains she was assessed on for her clinical training. The rest of the Malaysian participants did not have any teaching experience prior to joining the TLS. The majority of the Malaysian participants were involved informally in the teaching of medical students during postgraduate training. However, the informal teaching sessions were not part of the domains they were assessed on.

In terms of exposure to teaching and learning courses, only Dina, Marlene and Sabrina had been exposed to a teaching and learning course when the first interview was conducted. The rest of the participants, except for Farah and Kamal, undertook the course after the first interview was conducted. Some universities in Malaysia have made the teaching and learning course a requirement for job confirmation. Since Farah had obtained her job confirmation, she was not required to attend the course. Hence, Farah had no exposure to the teaching and learning course. Kamal was only two weeks into his medical teacher career and dropped out of the study before information about his exposure to the teaching and learning course was obtained.

Table 9: Demography of Malaysian participants

Participant	Gender	Job Title	Clinical Specialty	Undergraduate Training	Postgraduate Training	Teaching Experience	Teacher Training Course
Fatimah	Female	Clinical Lecturer	Medical based	United Kingdom	Malaysia	Teaching school children in the UK	Yes (after the first interview)
Hafizah	Female	Clinical Lecturer	Medical based	Australia	Malaysia	Informal (during postgraduate training)	Yes (after the first interview)
Rita	Female	Clinical Lecturer	Medical based	Malaysia	Malaysia	Informal (during postgraduate training)	Yes (after the first interview)
Dina	Female	Clinical Lecturer	Medical based	Malaysia	Malaysia	Teaching junior doctors in government hospital	Yes (prior to the first interview)
Marlene	Female	Clinical Lecturer	Medical based	United Kingdom	United Kingdom	During postgraduate training in the UK	Yes (during postgraduate training in the UK)
Kamal	Male	Clinical Lecturer	Surgical based	Malaysia	Malaysia	Informal (during postgraduate training)	No (he was excluded after the first interview)

Sabrina	Female	Clinical Lecturer	Medical based	New Zealand	Malaysia	Informal (during postgraduate training)	Yes (prior to the first interview)
Hilmi	Male	Clinical Lecturer	Medical based	Malaysia	Malaysia	Informal (during postgraduate training)	Yes (after the first interview)
Farah	Female	Clinical Lecturer	Medical based	Malaysia	Malaysia	Informal (during postgraduate training)	No
Atiqah	Female	Clinical Lecturer	Medical based	United Kingdom	Malaysia	Informal (during postgraduate training)	Yes (after the first interview)
Rashid	Male	Clinical Lecturer	Surgical based	United Kingdom	Malaysia	Informal (during postgraduate training)	Yes (after the first interview)
Maisarah	Female	Clinical Lecturer	Medical based	Malaysia	Malaysia	Informal (during postgraduate training)	Yes (after the first interview)

Table 10: Demography of the UK participants

Participant	Gender	Job Title	Clinical Specialty	Undergraduate Training	Postgraduate Training	Teaching Experience	Teacher Training Course
Najwa	Female	ACT	Medical based	United Kingdom	United Kingdom	None	Yes (ULTA)
Aisha	Female	ACL	Surgical based	South Asia	United Kingdom	Anatomy demonstrator in India, teaching junior doctors during PhD	Yes (During PhD Training)
Ruby	Female	ACL	Medical based	United Kingdom	United Kingdom	Life Saving Trainer	Yes (ULTA)
Zainab	Female	ACT	Medical based	South Asia	United Kingdom	None	Yes (ULTA)
Richard	Male	ACF	Surgical based	United Kingdom	United Kingdom	Personal tutor to junior medical students	Yes (PG qualification in Med Education)

Aaron	Male	ACF	Surgical based	United Kingdom	United Kingdom	Personal tutor to junior medical students	Yes (PG qualification in Med Education)
Lucy	Female	ACF	Medical based	United Kingdom	United Kingdom	Summer course for high school students	None
Michael	Male	CTF	Medical based	United Kingdom	United Kingdom	None	Yes (PG qualification in Med Education)
Jeremy	Male	CTF	Medical based	United Kingdom	United Kingdom	English Teacher in Europe	Yes (PG qualification in Med Education)

5.2.2. The UK participants

The characteristics of the UK participants are summarised in Table 11. These characteristics are presented according to the participants' job titles. The UK participants were still undergoing postgraduate training when the interviews were conducted. Therefore, they had both clinical and educational supervisors. There was almost equal representation of males and females in terms of gender. The majority of the UK participants were married and had children. The age of the participants ranged between 30 and 40 years old as per the Malaysian participants.

5.2.2.1 The ACLs

The two ACLs in this study, Aisha and Ruby, were recruited through email invitation. Aisha graduated from a university outside the UK. She came to the UK for her postgraduate clinical training and she obtained her PhD from a university in the UK. She moved for her ACL post, so that she could access a particular area of clinical expertise which she is interested in. Aisha was pregnant when the first interview was conducted. Although I assumed that she would want to be excluded from subsequent interviews, Aisha was very interested in this study and said that she was willing to be interviewed during her maternity leave. I had thought that during her maternity leave, Aisha would not have any academic activities. However, when the subsequent interviews were conducted, I found out that Aisha was still very much involved in academic activities during her maternity leave. Aisha's teaching experience came from working as a demonstrator in the university where she graduated. She had also helped her mother teaching in a secondary school. Her formal exposure to teaching and learning philosophies, pedagogies and methodologies was through a staff teacher-training course that she attended in the university where she obtained her PhD.

Ruby graduated from a university in the UK. Ruby obtained her PhD not long previously and was on a less than full time work contract because she had a young family. Although Ruby's ACL post was attached to one

university, she also taught medical students from another university in the region. Ruby's formal exposure to teaching and learning philosophies, pedagogies and methodologies was through the university's teaching award courses that she attended in the university she was attached to. Prior to working as an ACL, Ruby's teaching experience came from her experience teaching a Life Saver's course. Ruby was pregnant when the second interview was conducted. Similar to Aisha, Ruby was very much interested in the study and was willing to be interviewed during her maternity leave. Ruby was also actively involved with her academic activities, except for her clinical training, during her maternity leave.

5.2.2.2 The ACFs

There were three ACFs in this study. Richard and Aaron were in their second year of fellowship while Lucy had completed her ACF training when the first interview was conducted. The ACFs were undergoing academic training in parallel with clinical training. Richard had been involved in teaching as a personal tutor for his juniors to earn extra income during his undergraduate training. His exposure to teaching and learning philosophies, pedagogies and methodologies was through a Masters in Clinical Education course that he attended in the university he was attached to for his ACF post. Compared to Richard, Aaron had more teaching experience. He intercalated in a social science discipline when he was an undergraduate. His learning experience during intercalation (spending one year studying a complementary subject) had had a great influence on the way he taught medical students. Aaron's teaching experience came from his experience working as a tutor in the social science discipline upon finishing his intercalation. Similar to Richard, Aaron's exposure to teaching and learning philosophies, pedagogies and methodologies was through a Masters in Clinical Education course that he attended in the university he was attached to for his ACF post.

Prior to working as an ACF, Lucy had been actively involved in teaching medical students as well as high school students who were interested in Medicine. While waiting for her placement as a foundation year doctor, Lucy conducted a summer school for high school students who

were interested in pursuing medicine as a career. She wrote the content and delivered the course herself as part of a grant that she won. Lucy only worked as an ACF for 9 months. Her ACF contract ended because she was accepted to do her PhD. She went out of her clinical training at the level of ST4 to do her PhD. During the 9-month contract as an ACF, Lucy had not had the opportunity to work towards attending any postgraduate qualification in medical education like Aaron or Richard. However, she did attend other workshops relevant to teaching and learning. She had started her PhD when the first interview was conducted and was no longer actively involved in teaching medical students. Therefore, she was excluded from subsequent interviews.

5.2.2.3 The ACTs

The two ACTs in this study were involved in the teaching of medical students in a medical-based department. Najwa was a final year specialist trainee (ST7) when she took some time off her clinical training to get involved in teaching. She graduated from another university in the UK. Najwa had completed her specialist training when the second interview took place. She was no longer involved in the teaching of medical students and therefore, she had to be excluded from subsequent interviews. During her short teaching contract as an ACT, Najwa was exposed to teaching and learning philosophies, pedagogies and methodologies through the university's teaching and learning courses.

Zainab was also a final year specialist trainee when she was involved with the teaching of medical students as an ACT. She graduated from a university outside the UK. Similar to Najwa, Zainab's exposure to teaching and learning philosophies, pedagogies and methodologies was through the university's teaching and learning courses. Although Zainab likes to teach, she did not want to become an academic because she was not interested in conducting research or pursuing a higher degree such as MSc, MD or PhD. Zainab had also completed her contract as an ACT by the time the second interview was due. As she was no longer actively involved in the teaching of medical students, she was excluded from subsequent interviews.

5.2.2.4 The CTFs

I met both Michael and Jeremy during a workshop on CTF posts in Leicester. When I approached and invited them to participate in my study, they were very keen to participate and agreed to be interviewed at a later date after the workshop. Michael was the only CTF in the hospital where he worked. His exposure to the teaching and learning philosophies, pedagogies and methodologies was through a postgraduate certificate in medical education that he attended and for which he was funded as part of the CTF post's incentives. Michael took a year out of his clinical training for the CTF post before he applied for his postgraduate training. He believed that his teaching experience as a CTF had helped him in getting a job as a specialist trainee in his chosen discipline. Michael was no longer actively involved in the teaching of medical students when the second interview was due. Therefore, he was excluded from subsequent interviews.

Similar to Michael, Jeremy was working as a sole CTF in the clinical setting he was attached to. Compared to the other NMEs, Jeremy was different in terms of his background because Jeremy had been a teacher in Europe before he decided to pursue his medical degree in the UK. Jeremy graduated with his first degree in the UK. Jeremy decided to pursue a medical degree because he believed that medicine was a career which could give him the opportunities to be creative. Jeremy also took a year off from his postgraduate clinical training to be a CTF because he loves teaching and he wanted to explore teaching as a career in medical education. When comparing his teaching experience as a school teacher and a medical educator, Jeremy reported some very interesting similarities and differences. These similarities and differences will be reported in the next chapter. Jeremy's exposure to teaching and learning philosophies, pedagogies and methodologies was through a postgraduate certificate in medical education that he attended and was funded for as part of the CTF post incentives, as well as the teacher training course that he had taken when he worked as a school teacher. Jeremy was also excluded from subsequent interviews because he had completed his CTF contract and was no longer actively involved in the teaching of medical students when the second interview was due.

5.3 Teaching perspective

In order to assess NMEs' teaching perspective, the participants were asked what teaching means to them and how they taught medical students during the first interview. Since this study was conducted in two different countries, the questions were asked to find out if there were cultural differences in what teaching means for the NMEs. It is important to know what teaching means to the educators because one could speculate that this affects the way they teach medical students. The findings on NMEs' teaching perspectives are also important to faculty's top management and policy makers because they need to ensure that NMEs' teaching perspectives and practice are in accordance with the mission and vision of their educational institution. The data collected from these questions were intended to be compared with the participant's TPI result. The participants were asked to take the Teaching Perspectives Inventory (TPI) questionnaires online at the end of the first interview after they had been asked what teaching meant to them, however TPI data was not obtained for all participants. The teaching perspectives of the NMEs reported in this section are therefore derived from their interview responses about what teaching meant to them and how they taught medical students at the time. To be able to make comparisons between participant's perspectives and practice, participants' answers to what teaching means and how they teach medical students were coded based on the five perspectives of TPI developed by Pratt and Associates (1998) (refer to Table 4).

The majority of the NMEs in my study perceived teaching as a process of knowledge transmission at the time of the first interview. They believed that the process of communicating with others to transfer knowledge, skills or exchanging knowledge would improve the knowledge of the other people they were communicating with.

> *"… an exchange of information to improve the recipient's knowledge on a subject."* (Sabrina, Malaysia, Interview 1)

They also believed that they could improve their own knowledge through the process of transmission to and from another person.

> *"… it means to sort of consolidate your own knowledge whilst working with others."* (Michael, CTF, UK, Interview 1)

None of the participants in Malaysia conveyed a developmental teaching perspective. A small number of the NMEs in the UK held the developmental perspective. They believed that teaching is the process of helping students to develop their potential.

> *"It means the sharing of experience and expertise to develop that in others."* (Jeremy, CTF, UK, Interview 1)

Some NMEs from Malaysia held the perception that teaching was an act of apprenticeship. They believed that teaching is about guiding and inspiring others to be good doctors.

> *"Teaching should be inspiring … it should be able to inspire the one that we teach … to come up with new ideas, new solutions, it makes life interesting."* (Farah, Malaysia, Interview 1)

None of the participants from the UK conveyed an apprenticeship teaching perspective. This was a surprising finding considering that the apprenticeship is a commonly reported learning method in medical education in the UK.

None of the participants from either country thought of teaching as a process of nurturing or social reform. One possible explanation for this finding is that the majority of the participants were trained in a traditional medical curriculum where there was a heavy emphasis on knowledge transmission. That was the way they were taught as medical students. It is unlikely that they were aware of other approaches to teaching medical students, unless they had had an opportunity to learn from other disciplines. For example, Aaron's developmental perception of teaching could have been influenced by his experience intercalating in a social science discipline during his undergraduate study or his postgraduate

certificate qualification in clinical education. He believed that he was able to help the students develop their potential by challenging them to think about other alternatives in managing patients.

> *"I like to challenge students … it comes from my experience [during intercalation]… make them think why are you doing this … the way it is done and why should I do that."* (Aaron, ACF, UK, Interview 1)

5.4 Motivation to teach

The NMEs in this study cited many motives for becoming medical educators. These motives could be categorized into intrinsic and extrinsic motivations. Intrinsic motivation refers to "…the doing of an activity for its inherent satisfactions rather than for some separable consequence" (Ryan & Deci, 2000, p 56). On the other hand, extrinsic motivation refers to "…a construct that pertains whenever an activity is done in order to attain some separable outcome." (Ryan & Deci, 2000, p 60). Based on these definitions, the participants' intrinsic motivations were passion for teaching, a desire to improve the learning of medical students and a preference for the job variety that academic posts offered. The participants' extrinsic motivations were inspiration by other people, better career prospects, settling down permanently in a place of choice and religious belief.

The first and most common theme which emerged under the intrinsic motivation category was passion for teaching. Some NMEs believed that they could share their knowledge with their students, colleagues, mentors, subordinates and patients through their teaching. They felt satisfied when they were able to see the end product of their teaching session knowing that they had achieved something they could be proud of.

> *"I feel like it's a bit of adrenaline rush after you've made it … you put a lot of work into planning a session and if the session goes well you get quite a sort of good*

> *feedback to yourself … you realised you have achieved something quite good."* (Lucy, ACF, UK, Interview 1)

Some NMEs also believed that any doctor who wanted to be a teacher must do so for the right reasons so that they can get the full benefits that the teaching job has to offer.

> *"There are people that do it because they didn't get the training job … I think they get much less out of it."* (Michael, CTF, UK, Interview 1)

The second theme under the intrinsic motivation category was experiences of poor teaching. Interestingly, some NMEs were triggered by their own experience of poor teaching when they were medical students to become good medical educators. For example, Richard's experience of poor quality teaching during his undergraduate days became a stimulus for him to be a good educator. He also felt that the medical profession should take teaching seriously because he believed that good quality teaching could produce high quality doctors who will subsequently improve the medical profession. Richard's motivations were evident during the first interview:

> *"Perhaps experiences of poor teaching that I experienced as a student drive me on to think … I don't want the students to suffer in the same way and I think it's about trying to improve the profession … it's important to bring about the next generation of high quality doctors… the profession has got to take teaching seriously."* (Richard, ACF, UK, Interview 1)

The third theme under the intrinsic motivation category was the job variety associated with academic posts. Some NMEs in this study chose to become medical educators because they liked the variety of the roles and responsibilities of the job. Although most NMEs reported that they were struggling to cope with the multiple roles and responsibilities, some NMEs found it exciting and rewarding.

> *"When it becomes repetitive I know that something is wrong. Some people call it comfort zone … to me it's boredom… You have to be kept abreast of your trade … your knowledge on this must be true must be correct must be robust so it keeps you going, always looking, always searching, very inquisitive, I like that."* (Farah, Malaysia, Interview 1)

Some other NMEs liked the mixture of research and clinical practice.

> *"I really enjoy the mix of research and clinical work."* (Ruby, ACL, UK, Interview 1)

Some of the NMEs in this study were really enthusiastic about teaching medical students but they were put off by the research component associated with the academic posts.

> *"I don't want to be an academic but I like teaching … I don't like sitting in the lab and spending time on my audits, it's very depressing I think."* (Zainab, ACT, UK, Interview 1)

Doctors in the UK who were only passionate about teaching may have opted for teaching posts such as academic clinical tutors and clinical teaching fellows because these posts did not require them to conduct any research during their teaching contract.

Turning now to NMEs' extrinsic motivations to teach, the first theme under this category was inspiration from other people. In this study, some of the NMEs from both countries were motivated to become medical educators because they were inspired by their parents who worked as teachers, or by previous medical educators. I reported earlier that to some NMEs, teaching was about inspiring others. It is possible that their belief about teaching came from their experience of learning from their inspirational parents or from their previous medical educators. The inspiration from previous educators or parents was seen in participants from both countries.

> *"The reason I became what I am doing now – ... [was] because I had a good teacher who inspires me."* (Rashid, Malaysia, Interview 1)

and

> *"I suppose probably my interest in teaching … both my parents are school teachers … and … I had a wonderful placement as a medical student… All the consultants in that hospital … were very inspirational."* (Richard, ACF, UK, Interview 1)

The second theme under the extrinsic motivation category was career prospects. Some NMEs in this study explained that they had become medical educators because they wanted better career prospects. In Malaysia, the trainee lecturer scheme (Pathway 1 in Appendix 1) offers a faster route for doctors to enter postgraduate clinical training and become clinical specialists. NMEs who joined the trainee lecturer scheme are at an advantage because they will automatically get into postgraduate training without having to compete, unlike their colleagues from the MoH.

> *"Some of the trainee lecturers just take the course because [it is] easier to become a specialist especially for the clinician."* (Hilmi, Malaysia, Interview 1)

In the UK, particularly for ACTs, ACFs and CTFs, they were motivated to take on teaching jobs because they believed that the skills they gained from working as medical educators will be beneficial for their future career either in academia or in clinical practice. They perceived that the official teaching job experience made them more competitive at job interviews. Some of the CTFs also found the teaching experience helpful for their future clinical training. As the teaching role of CTFs was carried out as an out of training job, the experience may have allowed CTFs to have more control of their own learning as they continued with their training job. They may have known how to take charge of their own learning by delivering their own learning objectives. The teaching experience also improved the teaching portfolio on their curriculum vitae.

> *"… it's transferable skill … teaching that's part of an academic yes… but also being able to write… doing the course doing the assignment has demonstrated that I can do academic writing … it demonstrates the capacity to be organized … to do more than the average trainee … to go through procedures such as ethical approval, research and development approval … that was for education but the same process in clinical work … I have done courses in research methods and good clinical practice GCP training and they're all very applicable to … more clinical research... it's a good stepping stone for an MD."* (Richard, ACF, UK, Interview 1)

NMEs' perceptions about other motivations for better career prospects had become a concern for some participating NMEs. Other NMEs were perceived to be putting personal gain as their main priority and teaching as a lesser priority. NMEs who put themselves first, were seen to be a burden to the other NMEs because they were jeopardizing NMEs' reputation as a whole.

> *"Some of the trainee lecturers just take the course because it's easier to become a specialist especially for the clinician … when they become a specialist they don't really care about the students … they always go for their interest first … they are not serious in teaching… the HoD needs to talk personally with them so if they don't think they are serious in teaching, I think we can ask them to leave the faculty … we can give the post to another person who really wants to teach."* (Hilmi, Malaysia, Interview 3)

The third category under the extrinsic motivation theme was settling down permanently in their place of choice. Some NMEs in Malaysia decided to become medical educators so that they could settle down permanently in their hometown or in the big cities. Any doctors working for the MoH are expected to move between hospitals as instructed by the

ministry to fill vacant posts. By becoming a medical educator with one of the medical schools, NMEs could settle down in one place permanently because they would not be expected to move to other places unless they chose to do so.

> *"The truth is [I became a medical educator] because I want to stay in [a state in the east coast of Malaysia]."* (Hafizah, Malaysia, Interview 1)

As expected, this motive was prevalent among the Malaysian participants. This motive was not as prevalent in the UK. As there is less job security in the UK and job competition was more fierce, doctors and NMEs were more often willing to move to other places for new jobs or career promotions.

> *"It depends on what I want and who to talk to and this … will be a big move, I think I need to think a bit about the move really, to be honest, Oxford or Cambridge are possible, it depends, I need to kind of pick … and get to know people, so that's kind of the next step."* (Ruby, ACL, UK, Interview 3)

From my observations and experience, the tendency for NMEs to work as medical educators in their hometown could be explained by the support they receive from their immediate family members. For NMEs who opt to work as medical educators in big cities, their decision could be due to the availability of jobs for their life partner and the infrastructure needed for themselves and possibly for their families.

Finally, the last theme under extrinsic motivation was religious belief. Religious belief was categorized under extrinsic motivation because NMEs were doing it for its instrumental value, that is, the blessing of God. This theme was seen in the interviews with some NMEs in Malaysia. Muslims believe that when they perform good deeds, there will be ongoing religious rewards and a good afterlife will follow. For example, Atiqah joined University Y 6 years ago as a trainee lecturer on grade DU45 (please refer to Appendix 2 for the description of the promotion grade for medical

educators in Malaysia). She completed her postgraduate clinical training one year ago and was now a certified clinical specialist. Unfortunately, she had not yet been promoted to grade DU52 because she had not fulfilled some criteria for her job confirmation. Her other colleagues in the MoH had been promoted to a higher grade upon completion of their postgraduate clinical training. Although Atiqah was frustrated with her current academic position at University Y, she still wanted to be a medical educator because she wanted to train medical students to be good doctors. Atiqah believed that teaching and training medical students was one of the good deeds that she could do to guarantee a good afterlife.

> *"It's my investment thereafter basically … I would like to train a newer generation who's going to take care of me when I am older."* (Atiqah, Malaysia, Interview 1)

Atiqah's religious motivation to become a medical educator was similar to Hilmi's motive.

> *"… by teaching them … at least the 'pahala' [religious reward] … is continuous."* (Hilmi, Malaysia, Interview 1)

In analysing my participants' responses, I recognised similarities between my own motivations and those of my research participants. I lived in Kuala Lumpur for 10 years before I joined my current university as a trainee lecturer. I left clinical practice because I could not handle the stress and long work hours associated with the job. While working in MMC after leaving clinical practice, I wanted to progress in my career by doing a postgraduate degree. I applied for the trainee lecturer post so that I could get the scholarship. My close contact and communication with Deans of medical schools gave me the opportunity to develop interest in medical education and discuss my future plans with them. I decided to stay in Kuala Lumpur because of the infrastructure and the career opportunities. I was not surprised that some of the participants' motivations were similar to mine. However, I tried to remain open to the possibility that there were other motivations to become a medical educator, especially in the UK. The comparative and longitudinal approach provided me the opportunity to

evaluate how these motivations shaped NMEs' journey to becoming medical educators, and the choices they made for their career. These findings will be discussed further in Chapter 8.

5.5 Summary

This chapter has provided background information on participants in terms of their gender, job title, undergraduate and postgraduate training, teaching experience, exposure to teaching and learning course and teaching perceptions, as well as their motivations to become medical educators. The majority of the participants in this study were females who were married and had children. This is important to note because the findings discussed in this study may be more representative of female NMEs' views on the topic. There may also be an overrepresentation of NMEs who were attracted to an academic career due to its flexible work hours, which gave participants more opportunities to be with their young families.

The job title of the participants in Malaysia was the same throughout. However, in the UK, the job titles varied greatly. Although in the beginning of this study my aim was to compare between NMEs in Malaysia and ACLs in the UK, the difficulty in recruiting ACLs in the UK led me to recruit those with other teaching jobs as well. The recruitment of NMEs in other teaching roles enabled me to understand the variety and the complexity of UK medical teaching jobs. I was able to understand the job description of each teaching job as well as the challenges faced by the different groups of NMEs in the UK. Although the variety of the teaching jobs in the UK made the comparison between the NMEs in Malaysia and the UK more challenging, it allowed me to appreciate the contribution of each teaching job to the UK medical education system.

As participation in this study was on a voluntary basis, the participants involved in this study may not represent the wider population of NMEs in terms of gender, ethnicity and clinical disciplines. Furthermore, the snowballing technique employed as part of the recruitment strategy in this

study may have led to an over-representation of participants from certain clinical disciplines. My close relationship with and easier access to some of the participants in Malaysia may also lead to an over-representation of participants from a certain university there. Some of the NMEs in this study had the opportunity to study in a foreign country, primarily at the undergraduate level. There was a varied amount of teaching experience among the participants as well as exposure to teaching and learning courses. The perception of teaching held by the participants from both countries was fairly similar despite differences in culture. Many of the NMEs held a transmission teaching perspective, a smaller number held a developmental perspective, an even smaller number held an apprenticeship perspective and none held nurturing or social reform as their teaching perspectives. A possible explanation for this could be that the way in which medical education is delivered in both countries is fairly similar. Despite the variety in what the curriculum is called, traditional, integrated or problem-based, lectures or bedside teachings are still delivered in much the same way in the two countries.

This study has highlighted some motivations for becoming medical teachers which have not yet been reported in the literature. These motives were career prospects, religious beliefs and settling down permanently in one place. The identification of these new motivations is one of my contributions to the body of knowledge in medical education. The majority of the participants in this study had more than one motivation to become an NME. Interestingly, these motives were a combination of intrinsic and extrinsic motivations. I will discuss the implications of these motives further in the discussion chapter. In the next chapter, I will report my findings on the next overarching area of study, the learning processes of NMEs in the transition phase.

CHAPTER 6

LEARNING PROCESSES

6.1 Introduction

In this chapter, I present the learning processes of NMEs during the transition stage. In order to bring together the emerging themes in this study and demonstrate how the NMEs developed throughout the duration of the study, one case summary will be presented. Hilmi is my study participant from Malaysia and a more detailed description of his case is presented as Appendix 10. This is followed by a description of NMEs' learning processes based on changes in work routine, new job roles and responsibilities, adjustment during the transition period, learning progression, the learning needs of the NMEs, learning methods, the learning environment and the development of competencies as medical educators. The similarities and differences between the two countries are interwoven in the paragraphs to show the complexity of NMEs' learning processes.

6.2 Case study 1 Hilmi

Hilmi is a single male consultant in a medical based discipline. He graduated from his postgraduate study six months prior to the first interview appointment. Hilmi was chosen for this case summary because of his distinct learning progression. In the first interview, he expressed a belief that teaching is about transmitting information from one person to another. His motivations to become a medical educator were a passion for teaching and a belief that he is able to reap continuous religious reward from his good deeds as an educator. He started his career through the trainee lecturer scheme with one of the local medical schools. Upon obtaining his postgraduate qualification, Hilmi became more confident to teach his students and mingle with his senior colleagues. He also reported an expansion in his role as an educator from leading bedside teaching and

preparing patients for clinical examinations to teaching more formally and preparing examination questions. He admitted to needing knowledge about teaching and had been using his experience of learning as a medical student to guide him in thinking about what his students expected from him. According to Hilmi, there was not much difference between clinical teaching and his daily work as a clinician, therefore, he did not do much preparation for his clinical teaching sessions.

Hilmi looks up to two of his ex-lecturers as his role models in teaching and tries to emulate their teaching practice. Both professors were deemed very knowledgeable by Hilmi, although they approached their students differently. Professor C is patient with his students and never marginalises them. Professor D has his own way in tackling each individual student. Hilmi's teaching belief was most likely influenced by his experiences learning from Professor C and Professor D. As Hilmi perceived that a good medical educator should be knowledgeable, he cannot let his students know that he does not know. In addition, he emphasized the need to make sure that the knowledge is accurate in order to appear knowledgeable in front of his students. He is prepared to answer questions posed by his students but he will not admit to the students that he does not know if he cannot answer the question. Instead, he will ask the students to read up on the topic and they will discuss it at a later time. He is, however, more willing to admit that he does not know something if the question is not related to his field of expertise. He also reported learning how to teach by asking for tips from his senior colleagues.

When the first interview took place, Hilmi was only teaching in his clinical discipline. When the second interview was conducted, Hilmi reported an increase in his roles and responsibilities. He had been appointed the course coordinator of another discipline due to a shortage of teaching staff in that discipline. Although he did not teach in that discipline, he had to learn how to coordinate the posting, including arranging the teaching and learning activities and making sure the activities ran as scheduled. The added workload, although he found it a burden, made Hilmi improve his coordination and time management, gave him more experience and allowed him more contact with his students. Instead of seeing them

only during his discipline posting, he was able to interact with them twice in a year. The longer duration of contact allowed Hilmi to develop better rapport and trust with his students, allowing him to get students to open up to him about their problems. He was aware that getting to know each student personally was possible now because student numbers were small. He could foresee that it would be harder to do so when student numbers were bigger.

Hilmi also reported an improvement in the way he conducts his teaching and his communication skills, based on feedback he received from the students as well as his own reading and discussions with colleagues. He also claimed that he gained more confidence in teaching through the experience of becoming a medical educator. He was also comfortable in using social media to teach and communicate with the students, although he did so after his official work hours.

When the final interview was conducted, Hilmi reported that he still has learning needs especially in dealing with problematic students. As he looked back through his progression of becoming a medical educator, he acknowledged that collegial support was a factor that kept him motivated to become an educator. He was also willing to provide support to his colleagues in return. On the other hand, a barrier to his progression was a lack of trained medical educators in the faculty. Due to the shortage of academic staff, Hilmi perceived that he was unable to participate in teaching and learning courses that he believed could have helped with his teaching practice. He believes that a medical educator should put the students' need as a priority, so his advice to other new medical educators was for them to reflect on why they wanted to be a medical educator in the first place.

The above case study illustrates how Hilmi learned how to become a medical educator through various ways and how he developed throughout the study duration. These and other themes will be discussed in the remainder of this chapter.

6.3 The change in work routine

The majority of the participants in Malaysia reported some amount of change in their daily routine when they started working as NMEs. These changes could either be in their roles or their work hours. For example, Dina reported having a lesser workload compared to when she was working as a sole specialist in Internal Medicine prior to joining the university as an NME. Her priority had changed from looking after patients to teaching medical students. As her overall workload became less, she was able to enjoy more quality time with her family.

> *"The job is a bit different because here we do a lot of teaching … looking after patient has become a second priority… and the job is actually less, compared to before… last time when I was working outside… I was the only specialist for Medical in that hospital. I didn't have enough time for myself and with my family. So now … I have more quality time with my family."* (Dina, Malaysia, Interview 1)

On average, the NMEs in Malaysia spend 50% of their time teaching and 30% on clinical practice, while the other 20% is for other academic activities.

> *"We still go to the clinics… we still handle consultation … before it might be clinics and consultation … 80-90% now it's going to be teaching 50 clinics perhaps 30 and other stuff, conference, doing research … 20."* (Fatimah, Malaysia, Interview 1)

Although the clinical workload had reduced when participants became NMEs, they had more teaching responsibilities towards the students.

> *"When you become the trainee, your responsibility increases a little bit because besides your interaction with the patient you also have the time when you need*

> *to prepare stuff to teach the students."* (Hafizah, Malaysia, Interview 1)

Although some NMEs had been teaching medical students on an informal basis prior to becoming a NME, they noticed that their objectives and approach to teaching medical students were changing.

> *"As an academic lecturer your mind kind of [focussed on] objectives ... I need to cover that … I need to cover those … you kind of go into that 1 2 3 objectives … whereas when you're a doctor it's more on the practical part."* (Fatimah, Malaysia, Interview 1)

According to some NMEs, their workload increased tremendously when it was time for research grant applications. However, the fluctuation in work pattern was seasonal.

> *"It's seasonal… when it's grant season it's chaos… unpredictable, long hours. You even work on weekends … but otherwise if it's not grant season, life is good."* (Farah, Malaysia, Interview 1)

Similar findings were seen with the UK participants in terms of the changes in their work routine. Some NMEs also noted seasonal fluctuation in their work pattern.

> *"There are times when I am horribly busy and … there'll be a time when things were a bit quieter and … you can leave a bit earlier on, be a bit more flexible, so that helps."* (Ruby, ACL, UK, Interview 1)

Interestingly, some NMEs did not notice many changes in their work routine. These NMEs probably did not notice any changes because they had been teaching medical students even before they started working in a more formal teaching role.

> *"I don't think teaching has much … you know impact on that because it's usually during work hours."* (Aisha, ACL, UK, Interview 1)

Some NMEs found the changes in work routine interesting, although they were aware that some of their colleagues found the changes difficult to handle.

> *"Some people really find it quite difficult, it's a very different job and some of them have much more roles than others. I personally really enjoyed every part of it because it allows me to build my own job which I thought was quite interesting."* (Michael, CTF, UK, Interview 1)

The changes in the work routine of NMEs were dependent on their previous job roles. As I recall my own experience of transition, I noticed a drastic change in my work routine when I changed my job from working as a doctor in an Obstetrics & Gynaecology (O&G) Department to being an administrator in Malaysian Medical Council (MMC). From looking after patients and doing on-calls, I moved to handling paper work and having no on-calls. However, when I moved on from being an administrator in MMC to become a trainee lecturer in Medical Education, I did not feel the changes were as drastic. Although I began to teach students, which I had not done before, and was working at a new university which was not my alma mater; my work hours remained the same. The change was only in my job roles, not my work hours.

6.4 Job roles and responsibilities

In this study, the majority of the NMEs were expected to start teaching within a few weeks. However, the roles and responsibilities given to the NMEs depended on their job titles. In Malaysia, the NMEs mostly started their job by giving lectures and tutorials to the students. They were also expected to take bedside clinical teaching sessions. The NMEs were responsible mostly for undergraduate teaching. Although they were gradually beginning to teach the postgraduate students, they were only given the junior postgraduate students to start with.

> *"The more junior will teach more undergraduates because the senior will focus more on the postgrad … junior lecturers are usually not given as much responsibility to teach the senior postgrads year 4 year 3 but only the year 1 and 2."* (Hafizah, Malaysia, Interview 3)

As well as delivering lectures, tutorials and bedside teaching, the NMEs were also expected to supervise students' research projects. As NMEs did not have any experience in supervising medical students, the supervisory role was new to them.

> *"Apart from lecture … also supervise them on how to make a project … writing up SSM (Special study Module) is also one new thing for me."* (Maisarah, Malaysia, Interview 1)

NMEs were not expected to become primary supervisors when they were still early in their career: instead, they were appointed as a co-supervisor. They were expected to learn from the main supervisor how to supervise students. However, the NMEs were expected to develop their supervision skills quickly. For example, Rita became the main supervisor for first year postgraduate students within a year.

> *"Before we become the primary supervisor we have to be a co-supervisor … that's when we learn. So during my first year being a lecturer … we tagged in terms of that being a co-supervisor. So during any discussion with the main supervisor I'm involved in that… basically the experience is through that. So after one year then they will give first year students to be under me."* (Rita, Malaysia, Interview 3)

Besides lecturing and supervising students, NMEs were also involved in other academic activities as they progressed in their career.

> *"Now I am a course coordinator, I'm also the new quality officer for the faculty. I'm also a committee member of Academy of Medicine Malaysia and also part of the scientific committee for the Regional International Congress … a regional thing."* (Farah, Malaysia, Interview 2)

As they progressed further in their career, some NMEs were given a far greater role. For example, they were appointed to represent their universities at the national level.

> *"Basically after 2.5 years … I have to represent my university … to be involved in the central conjoint [examination] with the other universities."* (Rita, Malaysia, Interview 3)

In the UK, the job roles of the NMEs varied greatly depending on their job title. The ACLs had an equal percentage of academic work and clinical training. They were only involved in bedside teaching.

> *"My job is half clinical half research …I'm involved in some of the undergraduate teaching here but I don't kinda formally lecture … it's only the bedside teaching and clinics."* (Ruby, ACL, UK, Interview 1)

Similar to the ACLs, the ACFs were undergoing clinical training in parallel with their academic work. Therefore, they had a dual role in their teaching job.

> *"The way my post works is that I've got a dual post where my specialty training is in a surgical-based specialty and aside of that I do some academic work in medical education."* (Aaron, ACF, UK, Interview 1)

However, the ACFs had more teaching responsibilities compared to the ACLs. The academic work of an ACF involved delivering, arranging and managing the learning activities of undergraduate medical students and junior doctors.

> *"Giving lectures to the 4th years … being the lead tutor for them, writing their exams, arranging marking the OSCE and designing a lot of teaching materials for them and delivering teaching. And alongside that I have been involved in teaching the SHO (Senior House Officer) in Paediatrics for a formal programme and also started a teaching course for the 4th years. I think it's the teaching for people who were not able to pass membership exams."* (Lucy, ACF, UK, Interview 1)

Similar to the NMEs in Malaysia, the ACFs' roles in teaching increased as they progressed further in their career.

> *"When I first started it was suggested that I could pick some topics I was interested in and gradually … there were also tutoring responsibilities as well … and my involvement [has] just grown month by month."* (Richard, ACF, UK, Interview 1)

As ACFs have dual roles, sometimes, they were paying more attention to only one role. In Aaron's case, he was giving more attention to his clinical training rather than his academic work.

> *"The academic work maybe I don't give the same priority on that … so it's the case of just trying to balance the workloads in afternoons evenings weekends trying to do my academic work … and the clinical work the rest of the time."* (Aaron, ACF, UK, Interview 2)

As ACFs were also doing night shifts and on-calls, it was challenging to balance their clinical and academic role.

> *"20% of my time is for the academic work… that will include … teaching and research … with doing nights and things … the academic time is probably less than 20% overall."* (Richard, ACF, UK, Interview 1)

Aaron indicated that teaching received priority over research in his allocation of time.

> *"I am contractually obliged to do … research into education but what I find myself doing more of is teaching."* (Aaron, ACF, UK, Interview 3)

The ACTs in this study were employed purely for teaching medical students. The one-year teaching contract was carried out as an out-of-training programme.

> *"My academic post is purely focused on teaching and it's for a year so 25% of my time is with the university and focusing on teaching the undergraduate and the postgraduate in Psychiatry … so there's no research component as such."* (Najwa, ACT, UK, Interview 1)

In this study, the CTFs had the greatest amount of time allocated for teaching. Although their teaching roles varied between departments and hospitals, the CTFs were spending the majority of their work hours on delivering, arranging and managing the learning activities of undergraduate medical students.

> *"*Teaching and sort of organizing teaching really to mainly 3rd and 5th year medical students *... 80% teaching and organizing teaching and 20% clinical work."* (Michael, CTF, UK, Interview 1)

6.5 The nature of the transition

Some NMEs described their transition into academia as more demanding than others. In Chapter 5, I described that Hafizah's motivation to become a NME was because she wanted to settle down in her hometown. During the transition period, Hafizah reported that she needed more time to adjust to the new role.

> *"I don't have a room yet, all my things are all over the place … I need a stable base then only I can work properly. But at the moment I'm juggling everywhere and everything."* (Hafizah, Malaysia, Interview 1)

Rita, on the other hand, was particularly passionate about teaching and for this reason, may have been more prepared to embark on her new role.

> *"I'm prepared because I'm already prepared to be a lecturer… I have to face everything."* (Rita, Malaysia, Interview 1)

The other factor that seemed to influence how the transition was understood was whether the NME was coming back to his or her alma mater. In this study, Lucy's return to her alma mater was associated with easier transition.

> *"I know what the structure of the course [is], even though it's changing it's not a lot of difference. I know geographically where everything is in the medical school, I know of people I can get favours from if I need to, I know exactly where things are kept for resources and the library and I know how to use all the systems … I know how things work, it saves time which makes it more efficient to do things."* (Lucy, ACF, UK, Interview 1)

In contrast, Najwa was coming to a totally new environment. Her transition was more challenging and she reported needing more time to get to know her new workplace environment.

> *"I came from an NHS background and I guess I don't know how [this particular University] teaching … how that system works... I think in terms of how the system works you can't just sort of walk in and thinking that things will make sense … you need to take time to understand how things work … I like to see how things are in their context."* (Najwa, ACT, UK, Interview 1)

The above quotes illustrate the difference in how NMEs navigate their transition into the new job role. My own motivation to become a medical educator was my desire to settle down in the Klang Valley. I was also coming to a new workplace where I did not know anybody and was the only trainee in Medical Education. As I had gone through a similar transition process, I was therefore able to appreciate the difficulty experienced by some NMEs during the transition phase. What surprised me most was that not much effort had been made to ease the transition of NMEs.

6.6 Learning progression

6.6.1 Career progression

The longitudinal qualitative interviews which I chose for this study enabled me to capture the learning progression of the NMEs. The emerging themes were then further categorized into career and personal development progression. As NMEs progressed in their career, they reported that they were given more responsibilities to shoulder. The responsibilities varied from appointment to course coordinator to representing the university at national level for conjoint examinations. Some participants were noted to have an increase in their job roles as early as the second interviews. From only teaching in his clinical discipline, Hilmi was made the coordinator for a different clinical discipline. His job roles increased from teaching in his clinical discipline to coordinating teaching in another clinical discipline as well.

> *"They [now] put me in charge of the Paediatric posting."* (Hilmi, Malaysia, Interview 2)

The learning progression of the NMEs was marked by the time the third interviews were conducted, one year after the first interview. The learning progression was seen more in the NMEs in Malaysia, the ACLs and the ACFs. No learning progression was documented with the ACTs and CTFs because they were excluded from the second interviews onwards as they no longer fulfilled the inclusion criteria. The one-off short-

term temporary contract for ACTs and CTFs was not associated with a clear next step in career progression, so one could infer that opportunities for role expansion were more limited in their case.

The learning progression of the NMEs in Malaysia was related to their teaching roles.

> *"I have been given a different task for the last 6 7 8 months … previously I was assigned to the undergrad now I am assigned to the postgrad… I am just reaching to be a co-marker … observer for year 2 and co-marker for year 1 for the postgrad because we have to be gradually exposed to them… I have been assigned to the Dental school… I have also been assigned to this 'Quality and Family Case Study Group'… I have to supervise them individually, all 14 of them as well as the supervisor for their group project... I also have to be the mentor for each of 14 of them.*" (Hafizah, Malaysia, Interview 3)

Their teaching responsibilities increased in parallel with their years of experience in teaching.

> *"After about 2 years here they gave me a lot of responsibilities … now I have classes with the postgraduate students … I have learned slowly one by one … the undergraduate … the postgraduate … I learned how to teach different age groups."* (Dina, Malaysia, Interview 3)

Despite the increase in their teaching responsibilities, the NMEs were also fulfilling the other responsibilities associated with their teaching roles.

> *"I am keeping up with the requirements and I am writing, I am doing research and I am upgrading my slides upgrading my skills but it's at a slow pace but it's moving forward."* (Atiqah, Malaysia, Interview 3)

The learning progress of the ACLs was related to progress in research projects and supervision of students' research projects. I was not surprised that ACLs like Aisha only talked about how they had progressed in their research projects and supervision because the ACL roles required ongoing clinical research and clinical training.

> *"I have been able to achieve … a project which I have been waiting to launch and I have launched it… It's a national audit."* (Aisha, ACL, UK, Interview 3)

The ACFs were also noted to be paying more attention to their clinical rather than academic work. Their learning progression was more evident in relation to their clinical skills rather than their teaching skills.

> *"I have had to progress clinically … because I am now a SHO so I have a lot more responsibility … I needed to make sure I have the skills to be able to cope effectively … and I think I have progressed a long way teaching wise … become more confident … I suppose there's been less pressure to develop your (teaching) skills and plus I spend a lot less time doing it."* (Aaron, ACF, UK, Interview 3)

This section has highlighted the common expansion of NMEs' roles during the 1 year of study. It strikes me that NMEs were afforded big increases in responsibility despite their novice status, limited experience and limited support provided to them.

6.6.2 Personal development progression

In terms of personal development, the NMEs reported that they were becoming more confident and comfortable in carrying out their teaching job over time. They progressively learned how to do their job efficiently. They spent less time preparing for their teaching session. They were more focused and organised in their daily job as medical educators. Farah gave a good example of how she had developed her confidence as

an educator. She used to bring thick textbooks to her lecture session because she wanted to be prepared if students asked her questions during the lecture. But after six months teaching the students, she noticed that she was becoming more confident to teach the students so she did not need the textbook anymore. The following quote is Farah's account of being more confident and comfortable as she progressed in her career:

> *"I think that personally I feel I am more spontaneous because we're getting familiar with the topic and also more comfortable talking to students ... I'm more comfortable looking at the students…. addressing whether they have questions in the middle of the lecture ... very comfortable during tutorial as well."* (Farah, Malaysia, Interview 3)

In another example, Atiqah noted the progress in her ability to control her emotions and to come to terms with the fact that her role as an educator was only to guide the students.

> *"I used to get angry, why students didn't read the textbook and things like that and then now I come to a term that you can only guide."* (Atiqah, Malaysia, Interview 3)

By the time the third interview was conducted, I was able to appreciate the personal development progression of the participants. I noticed that they were more comfortable in terms of sharing their learning experience and they were also more confident talking about their teaching roles and responsibilities compared to when I met them in the first interview. Although it can be argued that rapport and trust could be the reasons why they were less comfortable in talking about their job in the first interview, I perceived they were yet to become comfortable because they had not yet immersed themselves in their job as NMEs.

It was also important to note that the NMEs seemed to understand that the whole process of becoming a medical educator was about learning how to become one.

> *"Some people may be born to teach but some people may need time to grow into the profession but we have to learn… we learn from the Professors we learn from the good we learn from the bad and … come up with something that works for you … being a doctor … that's lifelong learning … even more so being a teacher because being older [more senior] … you're more comfortable in your own skin during teaching and you are not afraid to address students … it was a process. The first two years is really … very shaky very bumpy … we have knowledge gaps when students ask … now you can gauge what are the usual questions that they will ask and be more prepared for that and try to make the learning fun."* (Farah, Malaysia, Interview 3)

6.7 Learning needs

The learning needs of the NMEs in this study were categorised into common career development needs and individual development needs. The themes categorised into common career development needs were carrying out the teaching job and improving teaching practice. The themes categorised under individual development needs were postgraduate qualification in education and female mentors.

6.7.1 Common career development needs

The first themes identified in this category pertained to carrying out the teaching job and were related to developing skills in student management, clinical work and research management. Many NMEs were not aware of their learning needs until they progressed further into their career. The new roles and responsibilities were learned only when they were appointed to the posts. These learning needs were more apparent in teachers with long-term contracts or permanent posts. CTFs were only given a one year contract, extendable to a maximum of two years and

carried out as an out-of-training programme (Roberts et al., 2014), and so their most pressing learning needs appeared to be in the area of student management.

Many NMEs in this study reported the need to learn how to manage underperforming students in particular. It is possible that, the NMEs were top performers in their class as medical students, and as a result, found it hard to put themselves in the students' shoes and offer the best help.

> *"I don't know what to do if you had students that were underperforming and I did have a few … I've found it very difficult because I find it hard to tell people [things] they don't want to hear and I feel like I haven't had any training in how to do that and how to speak to these students and help them."* (Lucy, ACF, UK, Interview 1)

Some NMEs also expressed their learning needs in relation to research supervision: for example learning about qualitative research methods and updating their knowledge on statistical analysis. They needed to learn these skills so that they could give the appropriate support and guidance to their research students as well as when they become the examiner for research students.

> *"I have no experience with qualitative study apart from being your subject … and validation … I might not know a lot about them but … when you become examiner you have to know."* (Fatimah, Malaysia, Interview 3)

The second career development need for the NMEs was developing clinical skills. Some of the NMEs believed that they could only become good educators when they became good clinicians.

> *"In this profession you have to be a good clinician to be a good teacher because you are teaching them what you know. If you are not a good clinician, you teach*

> *them bad things. So we have to be a good clinician to be a good teacher."* (Hafizah, Malaysia, Interview 3)

The third career development need was in terms of research management. NMEs' research management learning needs were related to their progression from being co-investigator to becoming primary investigator.

> *"Soon I hope to be a primary investigator … it will be the time for me to be a true academician."* (Atiqah, Malaysia, Interview 2)

In this study, the NMEs in both countries expressed a need for research development. NMEs in the UK, for example, expressed a need to know how to secure research grants because their career's future depended on it.

> *"So the plan is to have some focus on teaching within that as well as you know how to set up a trial, how to go to an ethics committee, how to apply for grants all the things those people need to know."* (Lucy, ACF, UK, Interview 1)

The second theme in NMEs' common career development needs was improvement of teaching practice. The majority of the NMEs said that they would like to have exposure to teaching and learning courses in the first round of interview. Some of the NMEs had the opportunity to attend the teaching and learning courses as they progressed in their career. Most of the NMEs agreed that NMEs should be exposed to teaching and learning courses so that they could learn how to improve their teaching practices.

> *"Make sure the P & P [teaching and learning course] is started much earlier. Don't let us experience teaching without any clue just for you to accommodate the timetable which has been drawn up."* (Atiqah, Malaysia, Interview 1)

The NMEs in Malaysia also articulated a need for structured supervision of their teaching practice in the transition phase. They wanted to receive affirmation that they were doing the right thing and expressed dissatisfaction if there was no one available to provide that support.

> *"There is nobody in charge of that. So if the new lecturers are not good, then probably they will be not good forever. Nobody, nobody cares."* (Dina, Malaysia, Interview 1)

It appears that the NMEs in both countries expressed similar needs for support and guidance in terms of their development in teaching skills (particularly on student management), clinical skills and research management skills. The need for support with teaching skills development was more prevalent among the NMEs in Malaysia. This was probably due to the higher teaching responsibilities they were afforded compared to the NMEs in the UK. It is also likely that the NMEs were putting more emphasis on needing to learn skills that they had no experience of. I presumed that they described fewer needs in the area of teaching development because most of them were learning how to become a medical educator by themselves and drawing on their experience of being a student.

6.7.2 Individual career development needs

The themes categorised under individual development needs were postgraduate qualifications in education and female mentors. Both of the themes were expressed more by NMEs in the UK. Acquiring a postgraduate qualification in medical education was perceived by NMEs to be beneficial for their curriculum vitae and future career. The need to acquire postgraduate qualifications in medical education appeared to boil down to the need to compete for future jobs.

> *"The studying for the postgraduate certificate then diploma then master of education which I am still studying for and that's been very interesting … the Royal Colleges want to formalise educational roles so*

> *certainly within my college there's a feeling that if you want to be a college tutor than you need formal training in education."* (Richard, ACF, UK, Interview 3)

The Malaysian NMEs did not express the need to have postgraduate qualifications in medical education at present. It is possible that the permanent nature of their teaching job made them feel secure because they did not have to compete for other teaching jobs. The NMEs in Malaysia expressed interest in pursuing PhD degrees in their clinical discipline because that was part of the requirements for job promotion (for faster promotion than the scheduled time-based promotion or higher promotion than the level at which time-based promotion is capped). But even so, not everyone intended to pursue PhD degrees because they were comfortable and felt secure with the permanence of their teaching job and the time-based promotion.

The need to have female academic mentors may have been fuelled by a perception among female NMEs that family and work life balance was difficult to achieve. The opportunity to talk to successful female academics was suggested as a way to gain confidence that the balance could be achieved and resources for achieving that balance. The female NMEs also perceived that male academic mentors would not be able to understand the sacrifices female NMEs made to their motherhood and family life because the male academic mentors either did not have children or they had a wife who looked after their children.

> *"The other professor … she's a very successful academic as a woman, 2 kids and a husband who's an anaesthetist ... she's very aware of funding schemes and she's very involved in a lot of the career … NIHR jobs and that kind of things. So she's a good person to talk to … she's quite involved in the uni [university] side and she understands the female side so she's useful for that because the other two are both men who either don't have children or have children and a wife."* (Lucy, ACF, UK, Interview 1)

The female NMEs in Malaysia did not express the need for female mentors possibly because they did not see motherhood as an impediment to their career. This could be due to the short maternity leave in Malaysia or the availability of support to look after their newborn babies. However, good time management was perceived as necessary for the NMEs so that they would not be disturbed during their maternity leave. Some Malaysian participants expected to have a complete break from their teaching roles and responsibilities during their maternity leave and described how they prepared for this break.

> *"You know when is the expected due date for your delivery … unless you need to submit something during your maternity leave then you can think of that [maternity leave] as an obstacle for you but then for me no because I worked before that… I prepared everything so that I had a complete rest."* (Rita, Malaysia, Interview 3)

Postgraduate qualification needs were cited by both males and females NMEs in this study and more so in the UK. Interest in postgraduate qualifications was most likely triggered by the need to secure a better or more permanent job and their perception that they stand better chances at job interviews when they have more qualifications. The need for female mentors was cited mostly by the female NMEs in the UK. Female NMEs seemed to have greater learning needs especially during and after periods of maternity leave. Female NMEs in Malaysia mostly did not see maternity leave as an impediment to their career although some still undertook academic work during the break. Female NMEs in the UK usually took longer breaks and therefore perceived a need to continue with their academic work so that their career progression would not be too delayed.

6.8 The way NMEs learn

6.8.1 Learning from observation

The majority of the participants in this study reported that they were learning from observation of others. Learning from observation in this study was defined as learning that was accomplished through observing the practice of mentors, seniors and colleagues. Observation could happen in two ways: NMEs observing the practice of other people or NMEs being observed by other people. In the early stages of their career, NMEs were doing most of the observations. They sat in on their senior colleagues' teaching sessions learning how to conduct teaching sessions.

> *"I had a few friends, who were already lecturers … I sat in on their lectures … their discussion."* (Sabrina, Malaysia, Interview 1)

Similar to learning a clinical skill from observing others performing it, NMEs also learned about teaching skills by observing their peers performing it. NMEs perceived that they were unable to learn teaching from reading textbooks and that they could learn fastest through observing the practice of their seniors.

> *"We do not know how to assess … I mean what is acceptable what is good enough what is bad so that's the thing that we need to tag … see or observe the more senior lecturer assess them [students]… you will learn something [by experiencing yourself] but it will take more time … if you tag with other people then you learn faster."* (Hafizah, Malaysia, Interview 3)

While observing others, the NMEs reflected on how they would do it themselves. They learned tips on how to improve their practice and they could clarify aspects of what they had observed.

In the course of my research, a time when NMEs were being observed was during a teaching and learning course offered by the university. During this course, the NMEs were observed and assessed on how they conducted their lectures. When NMEs were being observed, they were on their toes, trying to make sure that everything worked smoothly and in the process of doing that, NMEs were learning many things related to their role as educators. They were given formative feedback at the end of the session on how they could further improve the teaching session.

Although NMEs did learn many things from observing others, they also realised that this kind of learning was dangerous if it was not guided by other more knowledgeable people.

> *"We can learn from the seniors … but maybe the seniors are not doing what is expected of them either."* (Hafizah, Malaysia, Interview 1)

6.8.2 Learning from reflective practice

In order to be better educators, the NMEs perceived that they must be able to reflect on their own learning process. For NMEs, in order for them to be able to reflect on their practices, they need to be aware of what they need to reflect on. In terms of reflective practice, NMEs usually reflected on the feedback that they received from their peers, mentors, support staff as well as the students. Feedback from mentors and colleagues was usually sought to improve overall professional development as educators whereas feedback from the students was directed to the way they conducted the teaching sessions. NMEs' recognition of the value of student feedback appeared to grow over time. For example, Hilmi reported that he did not ask for feedback from the students during the first interview.

> *"I didn't ask [for] feedback… usually I just ask, any questions? Anything that you don't understand?"* (Hilmi, Malaysia, Interview 1)

However, when the third interview was conducted, Hilmi had learned that feedback was a necessary element for him to assess the success of his teaching sessions. Therefore, he began to ask for feedback from his students.

> *"To learn how to teach … you want to know if your teaching aspect is delivered properly to the students … we need to get feedback from the students. If they don't really understand whatever we teach that means the teaching or the learning is not delivered the right way."*
> (Hilmi, Malaysia, Interview 3)

The feedback NMEs received from other people made them aware of their deficiencies and therefore, they could continuously try to improve their teaching practice. However, not all medical educators looked at the feedback they received from the students positively. As Richard pointed out during the interview, he was able to look at poor feedback as an encouragement to do better as an educator. His other colleagues were not as happy with the poor feedback and they blamed the students as being ungrateful. The following is a quote from Richard on poor feedback:

> *"I feel a little disappointed but I think I differ from some of my colleagues in that … I think some other people feel …oh the students just like complaining … they're never happy … it's not my fault that they don't like it. Whereas I feel it is my fault if they don't like it … for me poor feedback is an encouragement to innovate and to try and solve problems and … some problems are insoluble."*
> (Richard, ACF, UK, Interview 3)

6.8.3 Learning from formal and informal learning opportunities

In this study, the NMEs participated in many learning opportunities as part of their roles and responsibilities. Learning opportunities in the context of this study was any learning activity, either formal or informal, that NMEs participated in to develop their knowledge and skills.

The formal learning opportunities included programmes organised by the department or any other organisations. In this study, the most common formal learning opportunity described by the NMEs in Malaysia was the teaching and learning course organised by the university. The NMEs in Malaysia perceived that they needed the teaching and learning course to learn how to improve their teaching delivery.

> *"The way that I'm giving lecture and clinical teaching… maybe we can learn a new technique … it's like we were giving a lecture but students don't get it… there might be another way. I guess we need that [teaching and learning course].* (Rita, Malaysia, Interview 1)

Most of the NMEs noticed the positive changes in their teaching practice after attending the teaching and learning course.

> *"In April this year, I attended P&P (Teaching & Learning) course which the University arranged. We were taught that students are different and because of the difference they learn differently so that's why in your teaching you have to … try to cater [to] the student preference and student interest… so when you are doing your lecture … make sure that you include at least one two aspects … students that like to see the visual mode at least they will have something to engage their attention … students that like sound… if you do PowerPoint presentation some sound at least … that engaged their attention."* (Fatimah, Malaysia, Interview 3)

As NMEs in Malaysia appreciated the value of the teaching and learning course for improving teaching delivery, they recommended that the course be introduced much earlier in their career. The need for earlier exposure to training is further evident in a quote from Atiqah on page 131.

NMEs in the UK held a similar perception regarding the importance of teaching and learning courses for their careers as medical educators. The formal learning opportunities cited by the NMEs in the UK were the

university's teaching course and postgraduate qualifications in medical education.

> *"The [university teaching course] … gives a theoretical background in terms of how to approach teaching … it's all very exciting because it's something that I wanted to do and … wanted to learn more about."* (Najwa, ACT, UK, Interview 1)

In this study, only some of the ACFs and CTFs had the opportunity to complete a postgraduate qualification in Medical Education. The opportunity to learn more about the theory of teaching and learning appeared to strengthen NMEs' understanding of teaching and learning in medical education.

> *"I started teaching without any formal teaching qualification … when I did the Masters [in Clinical Education] that has cemented the theory behind that sort of approach and of approaches … and kind of understand more about why it is or how it is that I teach."* (Aaron, ACF, UK, Interview 2)

In the course of my study, I managed to analyse the content of the university teaching and learning course and postgraduate qualification in medical education in the UK. Although both courses provided the theory behind teaching and learning in medical education, from my perspective, the content of the postgraduate qualification in medical education was more relevant, specific and it provided more depth and breadth to NMEs' understanding of teaching and learning. The longer duration of exposure for the postgraduate qualification in medical education provided the medium for medical educators to reflect on their practice, learn new knowledge, implement it in their practice and receive feedback from fellow medical educators. Therefore, I believe it is more suitable for medical educators. However, I do realise that not all medical educators were interested in postgraduate qualifications in medical education or had time in their busy

schedule to attend the course. Hence, the longer duration, could be an obstacle to some NMEs.

NMEs were also learning informally during the transition phase. Informal learning opportunities occurred more commonly in the hospital settings.

> *"So informally like in clinics … we work as a team … there will be times they're going to consult you either by phone or show you a patient and you're going to … advise them on what you know … that's informal because it's not being scheduled it's not planned and it happened because of the needs."* (Fatimah, Malaysia, Interview 1)

Similarly, in the university setting, informal learning opportunities could appear when NMEs were collaborating with senior colleagues. For example, when invigilating clinical examinations, NMEs could learn how to ask questions to the students.

> *"One of the reasons for pairing up is so that the juniors can learn from the seniors in terms of asking questions … when you hear a senior lecturer who had been an examiner for a very long time ask a question … oh that's how you asked the question."* (Hafizah, Malaysia, Interview 3)

From my experience and observation, there were many learning opportunities, either formal or informal, that NMEs could participate in to improve their teaching practice. However, due to very demanding academic commitments, NMEs tended to attend courses that they perceived were more essential for their career.

> *"I try to attend courses which I think may help me... not just ... as a lecturer but as a clinician because I need firstly information before I can teach my Master students."* (Hafizah, Malaysia, Interview 1)

6.8.4 Learning from experience

6.8.4.1 Experiences as a learner

Interviewees indicated that experiences as a learner played a significant role in influencing their learning in the workplace and the preparation they made for teaching sessions. The themes under the influence of learning experiences were categorized into undergraduate experience and postgraduate experience.

In terms of undergraduate learning experiences, the practice of NMEs' undergraduate teachers had a strong influence on NMEs' preparation for their teaching sessions. I considered that NMEs may have relied more on their undergraduate learning experiences when they were preparing to teach the undergraduate students because during their postgraduate training, they saw themselves as learning on their own. In addition, the postgraduate learning experiences may not suit the undergraduate medical curriculum in terms of the breadth and depth of the subject. Most commonly, NMEs emulated the good teaching practices of their previous educators because they experienced which teaching approaches worked and which did not.

> *"You have some sort of ideas what kind of teacher or lecturer that's memorable or … boring … you probably sat for hundreds and thousands hours of lectures … you have some sort of opinion in terms of what is a teaching session and what's not."* (Najwa, ACT, UK, Interview 1)

Some NMEs were also relying on their experience to know what the students' expectations of their educators were and they tried to meet these expectations while preparing for their teaching sessions. For example, Najwa always asked her students what they wanted to learn. Although she was aware of the learning outcomes set by the university, she did not want to teach the students what they already knew.

> *"This is preceded by me asking them whether they have formal teaching in terms of seeing patients ...*

> *how they assess risk … my informal survey suggested that people just ... get on with their job not having properly trained … so the feedback was they found the topic useful and … very practical."* (Najwa, ACT, UK, Interview 1)

Some NMEs also wanted to demonstrate good role modelling because they expected that good role modelling would have positive impacts on the students. Therefore, they emulated the good practice of their own educators.

> *"I try to be a good role model so I try to do what I want them to do because they follow what the seniors do and if you're an aspiring teacher or clinicians … they tend to want to emulate you."* (Marlene, Malaysia, Interview 1)

They were also using their learning experiences to pass on helpful study skills and tips to their students.

> *"I reminisce [on] the way I study as a postgraduate and then I try to teach them tips … you don't have to follow … but if you have problems in this area, try to do this… give them options."* (Farah, Malaysia, Interview 1)

The experience of learning in another discipline during undergraduate studies was also helpful for NMEs' preparation to teach in medical education. Aaron for example gained an opportunity to intercalate during his undergraduate studies in another discipline. The intercalation had helped him look at teaching in a different way to what he had normally experienced as a medical student. He was also, upon completing his bachelor degree, appointed to be a tutor in that discipline. The learning and teaching experiences during his intercalation year were influential in his current career as NME. As he had no formal teaching qualifications or exposure to teaching courses in medical education, he used his intercalation experience to prepare for his teaching sessions.

> *"I started teaching without any formal teaching qualification so I kind of vouch my first sink or swim experience of teaching but I think I used the background of [social science discipline] in this … the ways in which arguments are structured … the way in which discussion are structured. I think that is very much influential in how I teach and how I coach others*." (Aaron, ACF, UK, Interview 1)

In terms of postgraduate learning experience, NMEs were commonly using their postgraduate experiences to guide the students in their supervisory role. When there was no guidance given by the university on how to supervise students, especially the postgraduate students, NMEs were relying on their own learning experience as a postgraduate. For example, a recent experience in doing a PhD degree was very helpful to Ruby when she was appointed as a co-supervisor for an MD student. In her view, she could understand the needs of her postgraduate student better, as she had just finished her own PhD.

> *"I am co-supervisor with other existing supervisors … of another person in the department who's doing an MD degree… I'm helping to support her in her research projects and trying to help her to get her thesis and things on track… you have been in that situation not that long ago and you remember what people appreciated, what you appreciated from your supervisors so … I think that's really useful."* (Ruby, ACL, UK, Interview 2)

Reliance on past experience also came up when participants expressed feelings of uncertainty. For example, Kamal used the word gambling because he was uncertain that he was teaching the right way by preparing based on his own learning experiences. He welcomed guidelines, so that he was not relying solely on his past experiences of learning.

> *"At least I have a guideline… on how to prepare a lecture, a tutorial and differentiate from tutorial and*

> *lecture… So that I can differentiate between all those rather than gambling myself … just preparing based on experience."* (Kamal, Malaysia, Interview 1)

Some NMEs also thought that learning experiences were their best preparation when students approached them for impromptu teaching sessions in the wards or in clinics. As they had no time to prepare, NMEs were relying on their past learning experiences to carry on with the impromptu teaching sessions.

> *"This morning someone ask me to discuss with her what to write in terms of case presentation … that's impromptu because you don't have time to get ready or to prepare for that but then your preparation is your experience."* (Hafizah, Malaysia, Interview 1)

Almost all of the NMEs interviewed in this study reported preparing for their formal teaching sessions especially for lectures and tutorials. Preparation involved reading reference textbooks, looking at current knowledge on the topic in the literature and finding relevant clinical scenarios to illustrate the importance of knowing the topic to the students. The NMEs were willing to spend time preparing for their lectures and tutorials because they wanted to be able to answer students' questions. NMEs were worried that with the advancement in digital technology, students would be able to find the information by themselves with their mobile devices. NMEs perceived that they needed preparation to ensure that they knew more than the students, especially on evidence-based medicine. They believed that their reputation would be in jeopardy if they could not answer students' questions. They were willing to accept that they could not answer students' questions regarding another clinical specialty. However, when it came to their own clinical specialty, they did not want to appear that they did not know the answer to the students' questions.

> *"If they ask about Surgery questions to the Physicians … I think it's fair to say that we are not sure. But if they*

> *ask about the basic thing … it's not possible to say that we didn't know."* (Hilmi, Malaysia, Interview 1)

On the contrary, most NMEs did not prepare for bedside clinical teaching sessions. History taking, physical examination and patient management were regarded as the bread and butter of their daily work and therefore they perceived that there was no need for them to prepare for it.

> *"If I was giving a lecture that's obviously quite a lot of preparation… If I am doing a small seminar … probably less preparation and then if you're doing ad hoc teaching or small group … I probably don't spend huge amount preparing."* (Lucy, ACF, UK, Interview 1)

The difference in terms of preparation for formal teaching sessions and bedside teaching was likely due to the teaching perspective taken by the NMEs. During classroom teaching sessions, only a limited amount of time is allocated for NMEs to transfer the knowledge as indicated by the learning objectives. Therefore, they need to prepare to make sure they have enough time to transfer the knowledge to the students. During clinical bedside teaching, NMEs knew they had more time over several teaching sessions to show students how to develop the clinical skills. Therefore, they did not prepare as well as for their lecture sessions.

To conclude this section, NMEs tended to rely on their own learning experiences in the absence of teaching guidance or support. This was particularly the case for informal teaching encounters or when time for preparation was limited.

6.8.4.2 Prior teaching experience

The themes under the influence of teaching experiences to NMEs' preparation for their teaching sessions were categorized into undergraduate and postgraduate teaching experience. The themes under the undergraduate teaching experience category were peer teaching and high school teaching. The themes under postgraduate teaching experience

were teaching experiences in medical education and teaching experience in another discipline.

Some of the NMEs in the UK had some peer teaching experience when they were undergraduates. The peer teaching experiences were in the form of a university tutor role in another discipline, personal tutoring of junior medical students and informal peer or near peer teaching on the wards. For example, Richard took up a personal tutoring job when he was an undergraduate.

> *"When I was a medical student, I was a personal tutor so I'd earn money trying to make ends meet doing some tutoring, students at school or university."* (Richard, ACF, UK, Interview 1)

One of the NMEs in the UK had experience in teaching high school students. Lucy was awarded a summer teaching job with one of the medical schools in the UK to teach secondary students who were interested in pursuing a career in medicine. She reported that she applied for the job because she was passionate about teaching and she wanted to earn extra income. Although it was a one-off teaching experience, the preparation that she needed to do for the summer school was very useful in her post as a NME. She needed to prepare learning objectives for the summer school, learning outcomes for each teaching session and decide how she would evaluate the whole programme.

> *"When I finished medical school as a 5th year, I got a job teaching at a summer school ... So I wrote a 4-week programme for 15 and 16 years old from all around the world who's going to come to this summer school to learn medicine. And I ran the course that I've written myself for the 4-week period. So I've done quite a lot of teaching I suppose alongside what my other interests are."* (Lucy, ACF, UK, Interview 1)

Only one of the Malaysian participants had prior undergraduate teaching experience. Fatimah had experience of teaching school children when she was in the UK for her undergraduate medical education.

> *"When I was in my undergraduate year in the UK, the summer holidays I actually had a temporary job as a teacher in secondary and primary schools."* (Fatimah, Malaysia, Interview 1)

Although Fatimah's experience of teaching was not directly related to medical education, her teaching experience helped her in becoming a NME because she knew what to expect from a teaching job.

In terms of postgraduate teaching experience, the majority of the participants were involved in teaching medical students informally during their postgraduate training. The NMEs were mostly involved in bedside clinical teaching. Most of the NMEs in the UK were involved in teaching junior doctors on the wards on an informal basis when they were senior house officers. There was no designated teaching role for these NMEs during their postgraduate training because teaching was assumed to be a professional responsibility of all doctors. Some of the NMEs had a more official teaching role when they were doing their PhD degree.

> *"I wasn't an official academic before but I had a lot of teaching responsibilities prior to … even when I was doing my PhD and even prior to that when I was senior house officer like a junior surgical trainee."* (Aisha, ACL, UK, Interview 1)

The majority of the Malaysian participants were also involved in teaching medical students when they were undergoing postgraduate training. Similar to the NMEs in the UK, the NMEs in Malaysia were involved in bedside clinical teaching.

> *"The experience of teaching has been there since I was a Masters student … mostly bedside teachings."* (Hafizah, Malaysia, Interview 1&3)

Some of the NMEs were also involved in exit examinations for medical students.

> *"Past experience in the Masters program. Since first year I'm already involved in the exam of the end posting or the professional exam."* (Hilmi, Malaysia, Interview 2)

Some NMEs found teaching experience very helpful during the transition phase as it allowed them to be more independent when they were carrying on with similar tasks.

> *"When you have experience during the trainee lecturer period, when you become a lecturer it would be quite easy. We knew already, we don't need to attach to our senior lecturer anymore… Once we've become a lecturer, we'll know how to do it."* (Rita, Malaysia, Interview 1)

Some of the NMEs in this study also had postgraduate teaching experience in medical education in another country and in another discipline. Marlene, Aisha and Jeremy had the advantage of experiencing teaching in another country and another discipline. They were able to compare their teaching experiences from a different country and disciplinary context. Marlene had the most teaching experience among the Malaysian participants because she was trained in the UK before coming back to teach in Malaysia. Teaching was one of the components that Marlene was assessed on during her postgraduate training.

> *"I train in [one] college [in the UK] … they make us attend teaching certificates, teaching courses… that sort of stuff is mandatory … every year we are marked on clinical skills competency, research and teaching and then relationship with patients and other colleagues, several other things. Teaching is one component and after each teaching session you each give a feedback form for the students to say how you were doing and so you can improve so that's what we*

do … it's a continuous learning process." (Marlene, Malaysia, Interview 1)

Aisha was a demonstrator in a basic science subject in her home country after her graduation and before she came to work in the UK. According to Aisha, there was a difference in the approach to teaching medical students in her home country and the UK.

"In my country … everything is very bookish. If anyone wants to question you … it would be from some obsolete textbook, which they must be reading and you haven't read… whereas here it's more knowledge based and trying to understand skills, processes and things… which I think is easier to tackle in a way." (Aisha, ACL, UK, Interview 1)

Aisha found that medical students' engagement during teaching sessions in the UK and her country of origin were similar.

"I don't think there's any difference because there's an equal number of switch off students in my country and what I get here." (Aisha, ACL, UK, Interview 1)

The teaching experience gained by NMEs in another country seemed to help ease their transition into academia. In terms of teaching experience in another discipline, Jeremy was a primary school teacher in Eastern Europe prior to pursuing his studies in Medicine in the UK. Jeremy compared his experience in teaching in a school to teaching Medicine.

"I think teaching [language] … is a lot simpler … because you're only teaching one thing and that's to talk about the language but teaching medicine you're teaching ... total thing such as … developing ethical behaviour within the people, promoting professionalism." (Jeremy, CTF, UK, Interview 1)

The teaching role that Jeremy held while teaching medicine was also different compared to when he was teaching a language.

> *"I suppose there was an element of trying to behave as a role model ... that was very different to how I teach [language]."* (Jeremy, CTF, UK, Interview 1)

Interestingly, Jeremy also perceived similarities between teaching a language and teaching medicine.

> *"I discovered that Medicine is very much a language that you speak and you have to vary the language that you use. While talking to other doctors you use a set kind of language, you're talking to other health professionals, you use a different language again and then when you're talking to patients you use a set of language trying to translate that."* (Jeremy, CTF, UK, Interview 1)

Compared to the other CTFs, Jeremy had the advantage of attending a teaching and learning course while he was a primary school teacher. It could be argued that Jeremy's prior teaching experience and attendance of a teaching and learning course helped him in adapting to his new teaching role as a CTF. He was able to use his experiences, which he had gained over several years to prepare for his teaching sessions.

> *"I prioritise what their learning needs are … or something that's quite clear in what needs to be done … I planned very carefully. I try to be creative about how I go about teaching … to try to stimulate interest."* (Jeremy, CTF, UK, Interview 1)

Learning from experience also included learning that was accomplished through the sharing of experience with other people for example from colleagues, senior colleagues and mentors. The influence of experience was more evident when NMEs need to make decisions. Not only NMEs learned from their experience, they also taught medical students based on what they had learned from similar experiences. For example, Hafizah had to sit for her Masters examination a few times before she qualified as a clinical consultant. The experience of failing had influenced her when she needed to decide which topics to cover and how

she delivered teaching sessions with her students. She incorporated what she learned from her failure to her teaching sessions so that her students could benefit from her experience.

> *"I failed a couple of times. So … I used my experience to teach my Master students, my junior who had not passed their examination."* (Hafizah, Malaysia, Interview 1)

6.8.5 Self-directed learning

In the context of this study, self-directed learning was defined as any learning that was accomplished through the initiative of each individual NME. Only a small number of NMEs in this study reported that they undertook self-directed learning to improve their teaching practice. These NMEs were undertaking self-directed learning to supplement the learning in their workplace and to satisfy their learning needs. For example, Dina felt that she did not receive enough guidance on how to improve her teaching skills. She therefore looked at online resources; for example, medical education journals, to look for suggestions on how to improve her teaching.

> *"I also read some of them … they have this medical education kind of thing. So you just read a few things about how to make the student more focussed … more interactive in the classes."* (Dina, Malaysia, Interview 1)

NMEs also learned to teach through practical experience.

> *"Experience … try this with this batch doesn't really work try the next batch work a bit … may be this is good and this is not … so it's just by experience because … the teaching and learning course will tell you this and this … but you go and experience it."* (Atiqah, Malaysia, Interview 3)

6.9 Learning about the work environment

The majority of the NMEs in this study were learning in two workplace settings; the university and the clinical setting. Only the CTFs were learning in one workplace setting, which was the clinical setting. For most NMEs, learning about the work environment was a key task in adapting to their new role. The themes that emerged in terms of NMEs' learning about the work environment were learning to adjust and learning the office politics. The first theme was learning how to adjust to the new work environment. Some NMEs found it easier while some other NMEs found it harder to adjust and needed a longer time to do so. For example, Dina found it hard to adjust in the beginning because the university as a learning environment was different to when it was a working environment. On top of that, the working environment in the university teaching hospital (where she was currently working) and the government's hospital (where she used to work) was also different.

> *"I was here for the Masters Programme ... not as a lecturer. So, when I went outside, the working experience there was very different. So when I came here, there's some problem with adjustment because the university environment is very different from outside."* (Dina, Malaysia, Interview 1)

The second theme was learning about office politics through day-to-day communication in the workplace. Unfortunately, some NMEs were learning about difficult office politics. For example, Ruby had to work with two supervisors who were not on good terms with each other. She had to be very careful dealing with both supervisors so that she would not be caught in the middle. She had to learn how to have a good working relationship with both supervisors.

> *"The two supervisors that I worked for most, actually roughly get on ... as long as they're aware of what's going on and consulted about the right thing and they feel that they've not been slighted or ignored or pushed*

> *out or not included … I think that's manageable but that's taken some practice."* (Ruby, ACL, UK, Interview 3)

The stiff competition to secure jobs and research grants, as well as limited opportunities for job promotion, were possible explanations why her supervisors and her senior colleagues were fighting over authorship for publications. The professors were pushing her to make a difficult decision in deciding the rank of authorship in the final publication.

> *"There's gonna be a massive fight over authorship on a paper shortly. They are fighting over second to last authorships … I know which one I'd vote for but it's not my fight to have but the Professors are very good at making it my fight."* (Ruby, ACL, UK, Interview 3)

Ruby's experience of difficult office politics had affected the way she learned about her job as an ACL. She was not happy with the way things worked.

> *"It makes me wish that we lived in a department where people get along better."* (Ruby, ACL, UK, Interview 3)

Although she was not happy with how things were, she could also foresee herself fighting for authorship with her senior colleagues when she was more senior in her academic post, to secure her job. This was something that she did not look forward to but believed she had to deal with.

> *"There's going to be a time that I need to start being senior author on things … because I am a junior person still to them so I can't be senior author."* (Ruby, ACL, UK, Interview 3)

The transition phase was the time when NMEs had to learn about their new roles, how to cope with these new demands and how to adjust working in a new work environment. Most of the time, no formal job induction was given to these NMEs to learn about their new roles and work environment. They had to rely on their seniors to learn what they needed to know and what the expectations towards them were. Some NMEs wanted

to find out from the start what they needed to do in their career because they wanted to plan their future. They wanted to know how their life would change and how much research was required for career promotion, for example. Most of the time, NMEs had to be proactive in finding the information they needed.

6.10 Developing competencies as a medical educator

The NMEs were found to be learning how to develop their competencies in three domains during the transition phase. These domains were learning how to develop competency as teachers in the university and hospital environments (bedside teaching); as clinical consultants in the hospital environment; and as researchers in the university and hospital environments (usually clinical research involving patients). Although not all NMEs in this study were involved in research, all of the participants were managing multiple identities and roles. As teachers, the NMEs were learning how to teach students, how to conduct examinations, how to evaluate their teaching performance and how to become supervisors as well as how to manage underperforming students. As clinical consultants, the NMEs were learning how to develop their clinical skills. As researchers, the NMEs were learning how to conduct clinical research in their specialised areas. The following sections include quotations to show how NMEs in this study were developing various forms of competence.

6.10.1 Developing teaching competence

Two themes emerged with regard to NMEs' learning processes in developing their teaching competence; they learned in collaboration with others and they learned by themselves. In terms of learning how to be competent in their teaching roles, the NMEs were learning from their colleagues and mentors on how to conduct teaching sessions, how to assess students and how to organize examinations for example. As they progressed in their teaching role, they were given more responsibilities. For example, the NMEs were given the first year postgraduate students to

supervise and they supervised these students until the students graduated. So, as the students progressed in their studies, the NMEs also progressed in their supervisory role.

> *"… based on seniority I only get 1st and 2nd year students … so the seniority increases with the students … the flow of the students."* (Rita, Malaysia, Interview 3)

The majority of the NMEs did not receive any training to become supervisors. They were depending on their past learning experience as postgraduate students in how to carry out their supervisory role.

> *"I used my previous knowledge because we don't have a specific teaching or specific training on how to be a supervisor."* (Rita, Malaysia, Interview 3)

Most of the time, NMEs were paired with senior colleagues or mentors as supervisors. While working alongside their senior colleagues or mentors, NMEs were learning how to provide effective supervision to students. There were NMEs who were not paired with any senior colleagues or mentors to supervise students' research projects because students chose their supervisors based on their field of expertise. When there was no senior colleague with the same expertise, NMEs were supervising students on their own.

> *"Most of the students they pick the supervisor based on the topic. So sometimes … there's one senior one junior, sometimes it's easy for us to discuss but sometimes both are juniors … the way they do it is probably not that proper compared to the ones who have a senior lecturer."* (Dina, Malaysia, Interview 3)

Some NMEs were also learning to develop their teaching competence through self-directed learning. For example, Atiqah learned from her reading that appraising the students could increase their effort to learn. She implemented what she had read to her teaching sessions and she could see the difference in the students' own learning effort.

> *"I found appraising them makes them feel happy … they would try to impress you … so with the process of impressing me they would have to read and learn and they would try to do their best."* (Atiqah, Malaysia, Interview 3)

There was also a tendency to let NMEs carry out new teaching roles when the department was understaffed. Although it can be argued that carrying out a new teacher role in the transition phase was an indication that the department trusted the NME's capability in carrying out the role, NMEs were concerned that they were not given guidance or support to carry out the role.

> *"We don't have enough lecturers … they put my name to do all those things. But then, nobody said this is how you do this, this is how you do this. They just put my name there." (Dina, Malaysia, Interview 1)*

The limited support for teaching competence was a concern to the NMEs in this study. When support was unavailable, the NMEs either relied on their past experience, learned on their own or experimented with new teaching practices without guidance from senior medical educators.

6.10.2 Developing clinical competence

Two themes emerged in terms of how NMEs developed clinical competence: the acknowledgement NMEs received as qualified clinical specialists and the conflict of roles. The first theme was the acknowledgement NMEs in Malaysia received as qualified clinical specialists. The NMEs in Malaysia were developing clinical competence as a specialist in their clinical discipline. From being postgraduate medical students where they had their mentors to ask for opinions before making any decisions about patient management, they were now qualified clinical specialists with greater responsibilities, who were expected to make decisions independently. Their opinion now mattered and the other staff now referred to them before deciding on a patient's management.

> *"People appreciate your presence … they feel safe … your judgement call … your report to further manage the patient … so I became a bit engrossed in that."* (Farah, Malaysia, Interview 1)

Some of the NMEs in Malaysia appeared to be losing focus on developing teaching competence and instead were focussing more on developing clinical competence. They were spending more time in the hospital where it is likely that their clinician identity was valued more than their teacher identity.

> *"Because I was so engrossed in becoming a specialist in my trade in my field … I became a bit lost."* (Farah, Malaysia, Interview 1)

The second theme that emerged was conflict of roles. The multiple identities that NMEs carry with them were at times in conflict with each other. To some NMEs, developing clinical competence was more important to them than developing teaching or research competence.

> *"I'm a [clinician] first and academic afterwards. There's nothing that can make me compromise my [clinical] work, not even academia."* (Aisha, ACL, UK, Interview 1)

They also gave more attention to their clinician identity because they believed that they needed to be good clinicians so that they could be better educators as illustrated by Hafizah on page 125.

In Sabrina's case, her university had increased its intake of medical students recently. Her problem of increased student intake was made worse when one of her colleagues left the university. She needed to teach more often and see more patients in the clinic. She was sacrificing her research commitment although she knew very well that research was one of the criteria for her career promotion. Sabrina could not handle all three roles together.

> *"It's very time consuming. We have to really juggle. The reason why it's not so bad is because I completely ignore research … but it's not fair … because it's supposed to be research, teaching and clinical. At the moment I'm just concentrating on clinical and teaching."* (Sabrina, Malaysia, Interview 1)

It seemed that choosing clinical work over academia (teaching or research) was not solely the doctor's choice. Richard believed that the NMEs had to prioritise clinical work because that was what the NHS Trust paid their salary for. However, Richard also believed that the NMEs should know how to manage and optimise their time between the roles of teacher, clinician and researcher.

> *"The majority of junior people … like myself are full time NHS employee or they are working in the NHS trust but paid for by the Deaneries who need to provide service in the NHS … the Trust will in turn will give them training … I think often the research … can be carried out during teaching … some of the surveys … have been given out and collected in during teaching sessions. So, they go hand in hand as well … of course there's always conflict and clinical pressures are heavy but I wouldn't like to say well you can't do all 3 things."* (Richard, ACF, UK, Interview 3)

NMEs perceived a conflict between teaching and clinical service, and when faced with this conflict, some prioritised clinical service, possibly because they believed that they needed to be a good clinician before they could be a good educator. The recognition that they received for their clinical competence could be another motivating factor that led them to prioritise clinical work over teaching.

6.10.3 Developing research competence

Three themes emerged in terms of developing research competence among the NMEs: proving their competence as a researcher; finding their position in the department; and finding time to do research. In this study, the themes on developing research competence emerged mainly from the ACLs and ACFs in the UK and a small number of NMEs in Malaysia. This theme was less dominant in my interviews with CTFs and ACTs, probably because the main job role of CTFs and ACTs was as teachers to medical students. The short teaching contract could also be an explanation why CTFs and ACTs were concentrating of their teacher's role rather than the researcher role.

The first theme was proving one's worth in the clinical department as a researcher. Although the NMEs were receiving good support from their supervisors and senior colleagues, they still had to prove themselves to them. The experiences of NMEs in developing research competence were varied. Some NMEs found it harder than others to develop research competence. For example, Aisha reported a difficult experience in developing her research competence in the Department of Surgery, which she perceived as an experience of prejudice because of her gender and ethnicity.

> *"You do walk into any sort of set up with a set of prejudices attached to you. So for instance you're a woman … you're an overseas medical graduate so that's enough for people to think that she doesn't know her stuff."* (Aisha, ACL, UK, Interview 3)

According to Aisha, the experience of prejudice was also experienced by the other ACLs due to their lack of experience in the department.

> *"Even if it was a white male trainee, he would still be around with this prejudice that he's only a trainee and he doesn't know what he's doing or don't know what he's saying."* (Aisha, ACL, UK, Interview 3)

Aisha was reluctant to seek support from her senior colleagues or mentors because she was worried she would appear incompetent and it would compound the prejudice against her.

> *"If you go around saying to people 'What do you think I should be doing?' or 'I really like this, do you think this is the right way to go?' Then you are only compounding that prejudice against you."* (Aisha, ACL, UK, Interview 3)

In order to demonstrate her competence in the department, Aisha was willing to accept the research project assigned to her because she wanted to prove that she was a competent researcher.

> *"It may be the last thing on earth you wanted to do or it will be the most stupid thing one can ever do but you have to start up saying that 'Well this is what I want to do' and that gives you the ability to set your feet and to demonstrate your competence."* (Aisha, ACL, UK, Interview 3)

The second theme was finding one's place in the department. For Aisha, demonstrating her competence and accepting the project given to her was very important because she wanted to be accepted in the academic profession and be able to participate as a team member in the department.

> *"Now I could have said I was given a choice I could have said no I don't care I want to pursue my own expertise and I want to find my own way but I would have just being isolated and that wouldn't have helped me gel in with the team."* (Aisha, ACL, UK, Interview 3)

It took Aisha two years to progress in her career in terms of developing her identity and proving her competence as a researcher. Because Aisha chose not to exercise the autonomy to carry out her own research, she

could only find the connection between the research projects she was given and her research interest after two years.

> *"And it took me 2 years to actually get something reasonable out of it you know and get people's confidence into me."* (Aisha, ACL, UK, Interview 3)

Although Aisha was disappointed that she had not managed to conduct her own research from the beginning, some other NMEs argued that their career progression could have been much faster if they had been given projects to work with from the beginning. Aaron reported his observation of a colleague who he perceived as being lucky because he walked into a research project that was almost ready. As a result of that, his colleague managed to achieve more in terms of developing his research identity and also proving his competence as a researcher within a shorter duration.

> *"He went into a job same time as I did and he met with his supervisor who had several papers ready to go. All he had to do was get it finalized and this chap got his name on them and there's a research project which the department is already starting to run which they use as his PhD proposal … he already had papers, a PhD proposal backed by a Professor who has lots of experience of both PhDs and funding and so kind of walked into almost a whole set up … With medical education... at the same time with getting your project together, you need to prove yourself as a researcher which involves getting papers and things published and if you don't … walk into those ready … that takes a little bit of time."* (Aaron, ACF, UK, Interview 3)

Aaron assumed that the need for NMEs to prove their capabilities as researchers was more critical in clinical research compared to medical education research. Clinical sciences were more established than medical education as a discipline so they were very protective of their research

niche. Medical education researchers were more open to collaboration and were therefore more welcoming of ideas from other people and disciplines.

> *"I supposed with clinical … they tend to specialize in something particular and they've got their own ideas for their department … I supposed clinical is more of a closed-off system … I think it's harder for new people to break through. I don't get that in medical education. I think medical education is more than happy to share their ideas between people … get different opinions and value that more than the clinical scientists."* (Aaron, ACF, UK, Interview 3)

The third theme was finding time to do research. The timescale to accomplish what NMEs needed to do to prove themselves as researchers was very important. The quotes from Aisha and Aaron above indicated that they were concerned with the time they spent trying to build up their research profile because it affected their curriculum vitae. With job security at stake, some NMEs felt that the earlier they proved themselves as researchers, the better their opportunities for securing future jobs would become. However, for some NMEs, finding the time to do research while juggling a teaching role and providing clinical services proved to be difficult.

> "… since I am becoming Registrar as well, I am very busy clinically so it (conducting research) has been a struggle." (Aaron, ACF, UK, Interview 3)

It was not until the final interview that the NMEs in the UK talked about the need to prove themselves as researchers. The rapport that I had developed with my participants over the one-year period of data collection may have made them feel comfortable to share their experience in terms of developing research competence. Except for the competing demands between teaching, clinical work and research, the NMEs in Malaysia did not raise other issues with regard to developing research competence during the transition phase. There were two possible explanations for this. They either did not experience any difficulty in developing research competence

or they did not see the importance of developing their research competence. Job security could also account for the lack of need for the NMEs in Malaysia to prove themselves as researchers. As job security was better in Malaysia, the NMEs were not pressured to carry out research in the transition phase. I was unable to get the opinion of the Malaysian NMEs on the issue of difficulty in developing research competence because I had completed my data collection in Malaysia before I started my final data collection in the UK. The experience of prejudice by NMEs in Malaysia is an area of study I may explore further upon completion of my PhD, as it seemed that in some cases, gender, ethnicity, and trainee status limited NMEs' tendency to seek guidance and support.

6.11 Summary

In this study, the NMEs were found to be learning with many people and in many ways, through formal and informal learning opportunities. In essence, the learning processes of the NMEs in the transition phase were essential for the NMEs to develop their competence in three domains: as a teacher, as a clinician and as a researcher. Learning in the transition phase was crucial for NMEs to ensure their survival and successful career as medical educators. The NMEs were learning in collaboration with other significant people in their career and by self-directed learning. The adaptation to changes in work routine as well as roles and responsibilities were different among NMEs. In terms of coping with the transition, NMEs' motivation to teach and coming back to their alma mater were identified as positive factors in easing NMEs' transition into their new role. The learning progression of the NMEs was marked over the short period when this study was conducted. From beginning as a novice medical educator, some of the NMEs progressed quickly into becoming supervisors to postgraduate students or representing their university for meetings at the national level. Despite being afforded increased responsibilities and dealing with multiple roles and new work environments, NMEs were receiving limited guidance and support and relying mostly on previous experience as learners and teachers. The limited support in developing teaching competence and lack

of teaching competence recognition were identified as negative factors in the NMEs' transition into academia. The learning needs of the NMEs were dependent on the roles and responsibilities given to them as they progressed in their career, with female NMEs expressing greater needs compared to the male NMEs. In the next chapter, I will describe the factors influencing the learning processes of the NMEs in this study.

CHAPTER 7

FACTORS INFLUENCING THE LEARNING OF NOVICE MEDICAL EDUCATORS

7.1 Introduction

This chapter explores how my data analysis helped to address my research question regarding what factors were perceived by NMEs as influencing their transitional learning processes. In order to bring together the emerging themes in this study and demonstrate how these factors affected NMEs' learning progression, the case of Aisha will be presented. Aisha was one of the UK participants and a more detailed account of her learning is presented as Appendix 11. During interviews, participants referred to a range of factors that influenced their learning. The emerging themes from data analysis were categorised into four overarching themes, which were organisational, support network, personal factors and support needed. Organisational factors include colleagues, mentors, workplace environment and job security. Support networks include life partners, immediate family members and alma mater. Personal factors include factors related to NMEs' personal agency and finally, a range of support needed by the NMEs will be presented. Each factor is described in detail to elucidate how it supported or hindered the learning processes of NMEs in both countries.

7.2 Case study 2 Aisha

Aisha is a female academic clinical lecturer in a surgical based discipline. She was chosen for this case summary because she was an example of how gender and ethnicity emerged as significant in this study. Aisha obtained her bachelor degree in Medicine outside of the UK and a PhD in the UK. At the time of the first interview, Aisha expressed a belief that teaching is about transferring knowledge from someone who knows to someone who does not know in a way that the other person understands

and can take a step further with the knowledge. In her opinion, teaching should be a combination of self-directed learning and didactic teaching.

As an ACL, Aisha's job was divided into 50% clinical and 50% academic time. Although her job responsibility involves doing more research than teaching, she admitted to having more interest in teaching. Although Aisha expressed an interest in teaching, she professed that she is a clinician first and an academic afterwards. To her, being a good teacher is a natural side effect of being a good clinician. Aisha's transition into academia involved relocating to a new place that served her clinical interest. She claimed that the transition did not have much impact on her daily routine with her family because she did not take work home.

Although moving to a completely new workplace, she did not find settling into academia difficult as she has had prior teaching experience while she was in her home country and in the UK. Aisha was able to appreciate the similarities and differences between medical students in the two countries. Despite the differences in the approach to teaching in her home country and in the UK, she did not find the transition as difficult as she might have expected possibly because some aspects of her prior teaching experience were useful to the new environment.

In terms of the transition of roles and responsibilities as an academic, Aisha believed that it was more of a dual role rather than a transition. She claimed that the difference between her role as an ACL and an NHS staff member in teaching medical students was the accountability of teaching attached to her role, not in the way the students were taught. She claimed that she learned how to teach just by natural instinct, learning from her experience and developing on it. Although she had attended staff teacher training in her previous workplace, she claimed that there was no difference in the way she taught before and after the course. What matters to Aisha during a teaching session is the interaction that she generates with the students to ensure that the students understand what she has taught them.

As Aisha progressed in her role as an ACL, she perceived that the biggest change was her increased knowledge and experience, which contributed hugely to her teaching practice. While she only taught

knowledge in the beginning of her career, she can now share knowledge and experience. She believes that teaching by relating content to life experience is an easier way of learning and it works for her in making her teaching sessions more interactive. She also learned from her children's Arabic teacher to improve her teaching practice by making a teaching plan.

As a clinician, Aisha felt that lack of time was the biggest hindrance to her development as an educator. She believes that she learned more when she taught more but her busy clinical schedule was an obstacle to allocating time for teaching. Similar to Hilmi, Aisha did not do much preparation for clinical bedside teaching but she would do preparation for other sessions, for example tutorials. As she updates her clinical knowledge and experience, she believes that she could transfer the same knowledge across during her teaching.

When the second interview was conducted, Aisha was on her maternity leave. She was willing to be interviewed despite being on leave because she was interested in this research. Since the first interview, Aisha had progressed in her role as an ACL by becoming a supervisor for the undergraduates. She enjoyed her new role and was guided and supported by her supervisor and a senior colleague along the way. Aisha did not think that maternity leave was affecting her career progression because she was maintaining academic work while on leave. She also received help from her junior to supervise the undergraduates and a research technician to continue with her work while she was on leave. She also submitted a research grant application prior to going on leave and she had two papers accepted for publications.

Most of Aisha's accomplishments and the challenges that she faced in the course of her career were reported during the third interview. Even on maternity leave, Aisha reported that she managed to accomplish several milestones in her career. Both of the undergraduate students that she supervised were doing well with their project and she had been able to launch a national audit on an acute surgical condition. Most of the challenges that Aisha narrated during the third interview were related to the national audit that she launched at national level. She was discouraged from doing it in the beginning but she persisted after receiving some

positive feedback and the audit became a very significant impetus in her career as an ACL. Aisha had spent a significant amount of her time studying the topic of her national audit. Through her review of the literature, she found that previous researchers had differing approaches and opinions on the topic and the methods used were difficult for the researchers to achieve their goals. Aisha was able to find a way to tackle the problem by finding common terms from previous research and getting everyone involved onto the same platform. She succeeded in her strategy and the national audit went well as planned.

As an ACL, the academic component of Aisha's job was integrated with her clinical training. Aisha's interest had always been the gastrointestinal area. There were several factors that led her to finally agree to do a PhD in a vascular topic, including the support and encouragement she received from her supervisor who had known her clinically. Her supervisor managed to instil confidence in Aisha to pursue her PhD and Aisha aimed to do the same for the undergraduate students that she supervised. Aisha also dedicated the success of her audit to the technician who had been helping her with her audit.

Aisha thought that she had wasted her first ACL year by not knowing what she wanted to achieve until there were more ACLs in her workplace that she could compare herself with. Aisha had a perception that, as a novice, she needed to restrict her interactions with others in order to avoid being perceived as incompetent. She decided to do a literature search on her own and go with her instinct. She believed that there were prejudices based on gender, ethnicity, and novice status in her field. In order to avoid this prejudice, she believed that she needed to create a track record by accepting the project given to her, familiarising herself with the discipline, and demonstrating her competence. According to Aisha, it took her two years to be able to link her own research interests to the project given to her as well as gain people's confidence and interest in her. The experience gave Aisha a greater understanding of what she wanted to do in the future. The track record that she had set for herself allowed her to gain her supervisor's trust, the confidence to talk to professors in her discipline

and the ability to develop a network of people who she could speak to in order to gain their ideas on her project.

Aisha was grateful that her supervisor had supported her beyond her expectations and felt that the institution she worked for was interested in nurturing their trainees. Aisha perceived that institutional support was crucial because she believed that academia is about developing the future generation. She replicated the way her supervisor had supported her in the way she supported her students. According to Aisha, her involvement in projects while she was a senior house officer, her teaching experience and her family's background in education had contributed to the development of her academic side. Aisha believed that having parents who are in education had helped her in her teaching career. However, she assumed that her parents were not the best people to consult with because they had different approaches to teaching. According to Aisha, her husband, who is also a doctor, was her better half as he contributed to her decision making when needed. She perceived that having a spouse in the same profession had helped her in her career, it brought harmony to their house and they were able to not compromise on family life. She assumed that a spouse from a different profession may not be able to appreciate and understand the commitment required of her profession. Aisha admitted that being in the same profession also had its drawbacks. There were times when she and her husband were both busy and needed to make time for family commitments. They would do their best in their career but for Aisha and her husband, their priority was their children, their home and their life.

Besides her supervisor and institutional support, Aisha also described how an early career support group and her colleagues had supported her. She claimed that she would be lost without the mentoring from her supervisor. Aisha's advice to new ACLs was for them to be very clear what they want to achieve out of it, to always keep their options open and to get students to help with the research as soon as possible. According to Aisha, there was nothing in particular that had helped her in preparing for her ACL job. One thing that Aisha thought would be useful to academia was to look for students who have academic potential and nurture them early. She believed that if these students were guided and

mentored in the right way, they would grow to their best potential and be very beneficial to academia. Reflecting on her journey to become an ACL, Aisha believed that she would have been able to save 6 years in terms of career progression if she had met a good mentor, who would have guided her into academia, earlier.

The above case study illustrates how Aisha's journey in becoming a medical educator was affected by a multitude of personal, social, and workplace factors. I was surprised by the lack of value Aisha attributed to her teaching course as it contradicts some other participants' and my own views about courses. This finding led me to suspect that personal biography may have a significant role in the learning of NMEs and this observation reinforced the interplay of factors outlined in my conceptual framework. The workplace, social and personal factors which emerged in this study are elaborated on in the following sections.

7.3 Workplace affordances

7.3.1 Colleagues

Collegial support was expressed by the majority of the participants as an important factor which supported their learning processes. Colleagues included in this category were colleagues who were NMEs' near peers or senior peers. Professors, Associate Professors and Supervisors were excluded from this category as they were assigned to the mentor category. Collegial support came in many forms during the transition phase. The commonest form of support that NMEs received from their colleagues can be broadly categorised into role and emotional support. As participants in Malaysia were working in departments where there were other near peers or senior peers already working in the departments, the collegial support system was already established when they joined the department. In the UK, some NMEs, for example CTFs and ACFs, were the only ones working in a designated educational role. Therefore, the collegial support system was less established or there was none available.

The opportunity and ability to work together with colleagues and superiors emerged as a key feature in supporting the learning process of NMEs during the transition phase.

> *"If you don't have support from your colleagues from your superiors your career will be halted ... this is speaking from my experience … your career pathway should be supported by all your colleagues and also obviously by your superiors."* (Atiqah, Malaysia, Interview 3)

The small age gap between NMEs and senior colleagues may have made it easier for Malaysian educators to understand expectations.

> *"I am fortunate because most of them are my friends, they are at my age so they tell me what is expected out of me and so that's kind of informal teaching … informal guidance that they gave me."* (Fatimah, Malaysia, Interview 1)

The good relationship between NMEs and their colleagues may have facilitated transitions to new job responsibilities because NMEs knew that the colleagues from whom they took over would be there to guide and support them when needed.

> *"I think I'm more confident now. Basically because of the previous experience, and from the sharing with the previous lecturers who have been coordinator for other blocks." (Rita, Malaysia, Interview 2)*

Rita earlier described how a particular colleague had supported her in her role as a teacher.

> *"She [more experienced teacher] said we could attach to her, follow ward rounds … [observe] how she teaches medical students."* (Rita, Malaysia, Interview 1)

Besides guidance on how to teach medical students, NMEs also received guidance on how to prepare examination questions.

> *"The other girl that was writing them with me had done it a few times before and above all we were supervised by our consultant… the more senior registrar had done it a few times before. She knew how to do it … she showed me how to do that… there was a nice format on how to set the question that had to be very specific. We had a book, which we referred to, and so I used the book and I used her guidance and I wrote those [questions]."* (Lucy, UK, ACF, Interview 1)

Team teaching also worked well for NMEs both in Malaysia and the UK. A team teaching system enabled NMEs to learn from their seniors regarding how to carry out their teaching session compared to other disciplines where one teacher teaches one subject by themselves. Working alongside supportive colleagues helped NMEs in many ways during the transition phase, including increased availability of replacement staff when absences occurred.

> *"The problem that commonly arises is dealing with lecturers who cannot take the class because of something urgent … what I'll do is I will contact my colleagues … usually we will help each other [as replacement lecturers]."* (Rita, Malaysia, Interview 2)

The NMEs were also willing to support their colleagues in return if they were needed to replace their colleague for other teaching sessions.

> *"Whenever they have something else to do … then I take the classes … in my department … [we] help each other." (Rita, Malaysia, Interview 2)*

In the UK, supportive colleagues were very helpful to NMEs who were working on a less than full time basis. Ruby, for example, was unable to work full time due to having a young family. She found good support

through a colleague who was able to share the job with her. The opportunity to share her job with a trusted colleague who was supportive had helped her tremendously in managing academic and family life balance.

> *"So at the moment … I job share with another less than full time trainee… we have a good working relationship, which helps if you are job sharing. So we would just ring each other if there's anything to hand over … and let each other know of any problems… because we're working with somebody we get on well within Trust, it works fine. We just ring each other in the evening because neither of us have problem with it."* (Ruby, UK, ACL, Interview 1)

NMEs in the UK also formed support groups in order to help other new NMEs in the department.

> *"We try to have this support group that we get together and the more senior researcher supports the more junior people… so they're not as lost when they come in and first start."* (Ruby, UK, ACL, Interview 1)

NMEs also valued the collegial support available to them online. In terms of online collegial support, CTFs described having a regional CTF network as important and stated that it supported their learning processes. For example, Jeremy was the only CTF in his department and in the hospital he worked at. When he needed someone to talk about the problems he had at work, he preferred to communicate with his other colleagues in the regional CTF network.

> *"The clinical teaching fellow network was quite useful. We have similar problems, we have solved each other's problems."* (Jeremy, UK, CTF, Interview 1)

The NMEs also used social media platforms such as Twitter, WhatsApp and Facebook to consult their colleagues when they had

problems managing patients or students or simply to unwind after a stressful day at work. The social media applications also seem to be used by NMEs for emotional support. The emotional support was evident through their informal exchanges when they were having difficulties at work. They were also sharing information about work, informing each other about opportunities for further training as well as discussing research collaboration as opportunities for face to face meetings were rare.

> *"We talk about it mostly on WhatsApp because people are having different commitments."* (Atiqah, Malaysia, Interview 2)

Although collegial support was perceived as a main support factor for the NMEs, there were also occasions where colleagues could be a hindering factor to NMEs' learning processes. Collegial conflict as a hindering factor was seen more commonly in NMEs in Malaysia who were working for universities without their own teaching hospitals. Atiqah reported experiencing conflicts with her colleagues from the MoH with regard to her clinical work and teaching commitments. Her colleagues from the MoH expected her to do the same amount of clinical work and on-calls, without realising that she was working at the hospital to complement the clinical services of that hospital in exchange for the hospital allowing the university to use the hospital for teaching purposes.

> *"Whatever the academic job the administrative job and the clinical part of it cannot be equal to our MoH colleagues because that's not our official duties. The on calls especially cannot be equal because if it's equal then I can't really travel to [the branch campus]… the [branch campus] people [students] need to be taught anyway."* (Atiqah, Malaysia, Interview 1)

The tension that arose from the conflict could affect the teaching and learning of medical students in Malaysia because some clinicians who worked with the MoH were also employed to teach the students as part-time teachers. In my experience, some clinicians in the hospital refuse to

teach medical students when they are unhappy with the arrangement between the university and the hospital. The conflict with colleagues in the MoH could also affect NMEs' learning processes because they were learning from and together with their colleagues in the hospital to develop clinical competence.

The NMEs in the UK reported less collegial conflict in their workplace. The collegial conflict that some NMEs in the UK faced was in terms of finding suitable times to carry out their academic activities and attend academic courses because they were on the same rota with their colleagues who had no academic obligations.

> *"So I have submitted those dates to my new hospital and they said, 'Oh you can have them all except 2 dates in September because the rota can't do it'. So I haven't got any choice in the matter … they've said no we can't release you … it will be unprofessional to say well I am not coming in these dates I am teaching at the university. Sorry… you know that's wrong."* (Richard, UK, ACF, Interview 3)

7.3.2 Mentors

Mentors were also found to have a strong influence on NMEs' learning processes and they were very much needed in the early stages of NMEs' careers. Mentors, who were normally senior professors, were crucial in helping NMEs transition into their new roles and responsibilities. In Malaysia, the NMEs who participated in this study were all qualified clinicians. Therefore, they did not have any formal mentor or supervisor who supervised their learning progress in the transition phase of becoming a medical educator. In the UK, all of the NMEs were still in clinical training and some of them were taking time off from their clinical training to become medical educators. Therefore, the NMEs in the UK had their academic and clinical mentors to refer to when they needed help and guidance in carrying out their teaching roles and responsibilities.

The NMEs found that their learning processes were very much supported by having mentors who were approachable and supportive.

> *"The people I have sought advice from has been very helpful very supportive … my clinical education supervisor… has been very supportive… couple of consultants I know well they are very supportive."* (Aaron, UK, ACF, Interview 1)

Some of the NMEs in the UK were also supported by NHS consultants who had no objection to them going to the university for teaching sessions. Having understanding NHS consultants meant that it was easier for NMEs to get some time free from clinical commitments to teach students.

> *"My consultant is supportive … as long as they know what's your timetable, when to expect you, they are fine with it."* (Najwa, UK, ACT, Interview 1)

Mentors could make a massive difference to the learning processes of NMEs because they could introduce them to the right people in their clinical discipline. Ruby gave a very good example of how her supervisor had supported her transition into academia during the interview. Her supervisor had encouraged her to join the scholarly activities in her workplace and had shown her how to kick-start her academic career.

> *"So my PhD supervisor … got me involved in lots of things… told me I should come along to meetings … that I should be involved in writing these papers, introduce me to the right people and kind of really help my career established and that make a big difference. You have to have the right support, somebody who has enough time for you, somebody who cares about you and can organize your initial training because whenever you start an academic post you don't know what you're doing, be it research or teaching."* (Ruby, UK, ACL, Interview 1)

The good working relationship between Ruby and her supervisor was also a good example of how NMEs and mentors can work together for mutual benefit. Ruby and her supervisor had worked on a project together and their paper had been accepted for a presentation in a European Meeting. Unfortunately, Ruby, as the first author, could not attend the meeting because she was on her maternity leave. Her supervisor had agreed to go and presented the paper on Ruby's behalf. The willingness of her supervisor to present the paper meant that Ruby's scholarly activity continued despite her being on maternity leave.

> *"Things [academic work] don't stop… there will be those that I don't go to… we've got an abstract done for European Meetings next year which I won't go to but my boss will present them."* (Ruby, UK, ACL, Interview 2)

Mentors were also needed by the NMEs to pave their academic career pathway. Mentors were needed by the NMEs in setting and achieving career goals.

> *"I had quite a demanding educational clinical supervisor who helped me set aims and objectives for my year and helps me towards achieving them."* (Jeremy, UK, CTF, Interview 1)

Although there was no formal mentor or supervisor to supervise the progress of NMEs in Malaysia, some of them were fortunate to have the senior professors in their department guiding them in how to carry out their teaching roles and responsibilities. Farah for example was very fortunate that the senior professors in her department were enthusiastic in training the NMEs. The senior professors provided her with a knowledge base, on which she could build in order to develop in her roles and responsibilities. The mentors were also very caring in terms of helping her in charting her career pathways and making sure that she was not getting side-tracked by her non-core jobs.

> "*On the first day you just don't know what to do. So our founding Dean at that time, Dato' R pave the way to*

> *ease you into the role that you undertake. Then for my unit, thank God we have Prof Z. Prof Z give a lot of direction and ease us into teaching process, to the tutorials process, conducting effective laboratory sessions so that was very helpful … … so the direction that they give, they pave the way… then they gave freedom on how to make it better."* (Farah, Malaysia, Interview 1)

The dependence of NMEs on their mentors for guidance in the early stages was striking. Due to a recent management reshuffle at Farah's university, the founding Dean was not reappointed as the Dean of the faculty. Farah was worried that her mentors, whom she looked up to, would leave the department and the young lecturers would be left on their own.

> *"I am afraid … if the Dean leaves, all the three prominent professors will leave too … the young lecturers do not have [career] direction … no planning."* (Farah, Malaysia, Interview 1)

It is important to note that mentors could also be a hindering factor to NMEs' learning processes. The NMEs in Malaysia held the perception that their mentors expected the NMEs to show respect towards them and it is the NMEs' job to go and approach their mentors when they have problems. The NMEs in Malaysia were not allocated any formal mentors because they had completed their clinical training. Therefore, they had to find and approach their selected mentors when they had problems.

> *"Probably they expect us to go and tell them or discuss with them on our own … probably they feel like you have to go and get them … but then … a bit difficult because they are all very busy."* (Dina, Malaysia, Interview 1)

The wide age gap between Malaysian NMEs and their mentors may have further limited informal interaction between NMEs and their mentors. This situation was made worse in departments where they were understaffed and there were not many mentors who were willing to

supervise the NMEs because everyone was busy trying to carry out their academic responsibilities and achieve their own career advancement.

In the UK, while clinical supervisors could be supportive of NMEs' teaching commitments, there were times when the supervisors did not see the importance of teaching over clinical work.

> *"I no longer have the time to get involved ... I had to do that a lot more on my own time so that's after hours ... to sort of develop the teacher if you like and also to re-look at some of my bosses to allow me the time and to get involved because they don't see the value of it unfortunately."* (Michael, CTF, UK, Interview 1)

7.3.3 Workplace environment

The NMEs believed that a job induction should be given by the Head of Department (HoD). The briefing and induction given by the HoD made NMEs feel welcomed and it relieved some of their anxiety walking into a new workplace environment.

> *"The Dean or Deputy Dean can give ... because they are our boss ... if they do not guide how [do] we know what to do, right? … so the best person to give is actually the [Head of] school ... or the university."* (Hafizah, Malaysia, Interview 1)

However, most of the NMEs in this study did not receive any induction or introduction to the department. Some of the NMEs were given course outlines to guide them for teaching preparation. Unfortunately, most of the NMEs had to be proactive and had to ask their senior colleagues what was expected and how they needed to prepare for their teaching sessions.

> *"You just learn from your seniors in terms of ... how you handle this, what is expected ... like in terms of changing*

> *your status from being a Masters [student] to being a lecturer. There are things that need to be done but there is no proper guideline, you just have to ask what should I do with this? You need to ask otherwise people don't tell you."* (Hafizah, Malaysia, Interview 1)

Reflecting on their experience of transition, the NMEs believed that some introduction course in the beginning would ease their transition into their teaching career.

> *"It could be much nicer if we had a proper kind of introduction course for us, 2 weeks or a month … alongside [teaching] … that's perhaps better and if we were given a kind of small briefing beforehand on how to handle things properly, giving some course books … that will be much better."* (Fatimah, Malaysia, Interview 1)

The NMEs also felt appreciated when they knew they got an equal opportunity to voice out their opinions at departmental meetings and knowing that their voices were being heard.

> *"In the department … if there's some issues, we have [the] same opportunity to voice out our opinion."* (Fatimah, Malaysia, Interview 1)

The NMEs needed a conducive work environment to support their learning. The personal conflicts between senior colleagues were making the workplace a stressful environment for some NMEs.

> *"I've worked with the people that I most want to work with so that's been ok and I think we could've done more if we got on nicer. We could've accomplished more and been more efficient I guess in terms of how much research we do … it just makes it a slightly more stressful working environment."* (Ruby, ACL, UK, Interview 3)

Some NMEs in Malaysia were not given proper workstations when they first started. They had to share rooms with the other NMEs before they were given their own office. Some NMEs believed that having proper workstations were important for them to settle down before they started teaching the students, as indicated by Hafizah in the quotation on page 118. Although sharing rooms with the other NMEs may not be favourable to some NMEs, it is also possible that sharing allowed NMEs to get to know each other and to establish working relationships including research collaborations.

One Malaysian NME also highlighted how a lack of infrastructure may hinder the learning process of NMEs. Marlene recounted how a lack of good infrastructure had made her resort to using her own computer (despite it being the department's responsibility to provide her with the equipment she needed to carry out her job as a medical educator). The inefficiency of this particular department had hindered her learning process.

> *"So all I got was a key to [an] office where it looks more like a store room than an office no computer nothing, full of dust. I actually got my maid to clean it … brought in my own laptop and printer because I phone up IT they do have a computer there but it doesn't work and they say it takes months depending on when the stock's coming … I just thought... bring my own laptop rather than wait because it's too inefficient."* (Marlene, Malaysia, Interview 1)

None of the UK NMEs cited a lack of office facilities as a hindrance to their learning.

Another issue raised was a lack of even work distribution between NMEs and their colleagues in the department. The lack of lecturers in some departments was forcing NMEs to take up new job roles and responsibilities even when they were not experienced enough to do so. Some of the NMEs were not even given any guide on how they should

carry out their new role or responsibility This issue was highlighted in Chapter 6 and evidenced by the quote given by Dina in page 149.

The high workloads and the competing demands between academia and clinical service experienced by some of the NMEs, were stopping them from looking at other sources to improve their teaching practices and conducting research.

> *"Very stressful … increase number of students, driving me up the wall … and infectious disease it's just me by myself, and then also I'm helping out with medical because medical department was understaffed … they have to take the ID [infectious disease] doctors to help as well. So, it's a lot."* (Sabrina, Malaysia, Interview 1)

The provision of time-based promotion to Medical and Dental NMEs in Malaysia was therefore, very much welcomed by the NMEs. With high clinical and academic workloads, NMEs found it difficult to fulfil the criteria for career promotion, which included doing research and writing articles for publication. Some NMEs felt that if they were at the same stage long enough, they would lose interest in their job.

> *"When you are at the same stage long enough you kind of lose your interest."* (Atiqah, Malaysia, Interview 3)

Some NMEs also cited having an efficient research assistant as supporting their learning process because these research assistants helped them to complete their research on time.

> *"I'm very thankful that I have one or two RAs who recap on my projects so that even though I'm not in office, I'm in hospital, my research is running."* (Farah, Malaysia, Interview 2)

The designation of an academic day also seemed crucial for NMEs' development in academia. As NMEs were practising in hospitals and providing clinical services to patients just like their other clinical colleagues, having an academic day was very helpful for them to concentrate on their

scholarly activities such as research and writing articles for publication. In Malaysia, this support was particularly helpful for NMEs who were working for universities without their own teaching hospitals. When NMEs were given an academic day, they had one full day a week to be at the university and the hospital would relieve them from any daytime clinical commitments.

> *"The official duty is basically teaching but yes I do understand that as a clinician I have to practice and I love my clinical job. But to give us the given time which the faculty has done … to allocate this day you can't be disturbed, you're in the faculty, you will be doing whatever the academic job the administrative job and the clinical part of it … cannot be equal to our MOH colleague because that's not our official duties."* (Atiqah, Malaysia, Interview 1)

Most NMEs in the UK were also given an academic day. However, they might miss their academic day because they were working on shifts. The NMEs in Malaysia were more likely to gain the benefit of their academic day because they were not working on shifts.

> *"If I am on nights I missed it … if I am on long days on-call I missed it."* (Aaron, ACF, UK, Interview 3)

7.3.4 Job security

> *"People are doing more postgraduate certificates to get more certification in medical education. It's not something that most of them routinely do and it's hard to do it as well as your research. One of the girls who's doing an MD here is doing a certificate in medical education but when I was doing my PhD I was also doing a diploma in epidemiology. When we moved house last time, I didn't know if I was going to get this job. I couldn't sign up for a 5-year mortgage because I didn't know if I was going to get this job or whether I*

have to move somewhere else. I am a year into a 5 year block so at the moment I am quite calm but in another 3 years I will be a bit more panicky. Everything revolves around the funding opportunity. One of my colleagues who's a few years ahead of me, who's just got her academic consultant position based on her bringing in her own fellowship, bringing her own funding for 5 years was being told that there won't be any job for her at the end of it. She's brought in a million pounds in funding." (Ruby, UK, ACL, Interview 1 to 3)

Job security was an unexpected theme arising from my study. Job security seemed to influence the learning of NMEs in terms of how they looked for learning opportunities in the workplace. As highlighted in the above vignette, some of the NMEs in the UK had more than one postgraduate qualification. Although job insecurity could be the driving factor for NMEs to continuously learn and improve themselves, it could also be a hindering factor to their learning processes. Job insecurity meant that NMEs were not able to settle down in one place. It was difficult for NMEs to plan ahead because they did not know when and where they would work next. The career pathway for NMEs in the UK also meant that there was a possibility that they would have to move to a new workplace and a new house. Ruby was worried about her future as an academic because her job was not secure. Recently, her senior colleague was told that there would be no permanent job for her at the end of her contract even though she had brought in a huge amount of research funding as an ACL. Ruby's experience indicated that it was a significant concern for NMEs in the UK to find job security.

The influence of job security could also be seen in the decision made by another NME about his future career. Richard decided not to pursue a career in academia due to the lack of job security offered by the job.

"At the moment I would think that job security is slightly more secure in the NHS because I have talked about

> *substantive position like senior lecturers, chairs but of course the reality is now that after you do your lectureship then you're working from grant to grant probably without being a senior lecturer, that's a very tough life and something I have been disinclined to do probably."* (Richard, ACF, UK, Interview 3)

In the UK, NMEs need to compete with the other doctors at every job opening for career promotion. The competition gets stiffer the higher they climb up the ladder in their career, whether it is in academia or clinical work. NMEs in the UK therefore perceived that they needed to continually upgrade their knowledge and skills so that they had better chances at job interviews. The UK participants were seen to be more proactive compared to those in Malaysia in finding learning opportunities that would improve their curriculum vitae.

> *"I think having protected research time helps. I think that [the] European working time directive is very protective so you have off days after weekends or nights and so I come in and do other activities on those days … in my own time but I don't mind that because … research improves your clinical attractiveness … improves your CV … it makes you more employable … particularly if its related to a specialty."* (Richard, UK, ACF, Interview 3)

In contrast to the UK NMEs, all of the Malaysian NMEs were employed in a permanent educational role. As I have explained in the background chapter, in Malaysia, there is a time-based promotion for NMEs from grade DU51(p) to grade DU54. It means that NMEs will be promoted from grade DU51(p) to Grade DU52 and then to grade DU54 after completing the prescribed years of service without having to do research or publish any papers in scholarly journals. If they do conduct research and publish papers in scholarly journals, NMEs may be promoted to a higher grade faster than the time needed for time-based promotion.

As the transition phase can be very difficult for NMEs and they were burdened with high teaching and clinical workloads, some of the NMEs in Malaysia appeared to be ignoring research responsibilities. For example, Sabrina perceived she could not do any research because she could only concentrate on her clinical work and clinical training.

> *"It will be clinical work … and my training obviously and completely no research. Nobody talks about research."* (Sabrina, Malaysia, Interview 1)

This quote shows that whilst the time-based promotion can be a form of support from the Ministry of Higher Education to the career progression of NMEs in Malaysia, it can also be a hindering factor for their learning because it has the potential to make them complacent.

7.4 Social Factors and Support Networks

Social factors and support networks were found to have significant impacts on the learning of the NMEs in this study, particularly from life partners and family members. The return of some NMEs to their alma mater also meant that these NMEs had support networks that were already established.

7.4.1 Life Partner

> *"People from other professions may not be able to appreciate and understand the commitment of your profession. Whereas if it's somebody from the same profession who appreciates and understands where you're coming from I think it makes a big difference to the harmony of the house if anything … I feel that if my husband was not a medic, I don't think I would have been able to progress in my career as much as I have."* (Aisha, ACL, UK, Interview 3)

Some of the NMEs in this study found that having a life partner with a similar profession was an added advantage because the life partner was more understanding of what NMEs' job was like. A life partner with a similar career was helpful to NMEs in discussing their professional development and career progression. NMEs were also able to collaborate with their life partner in terms of research and publications when the two of them worked within the same clinical discipline.

In a seminar on the reality of being an academic I attended, organised by one of the faculties in Leeds University, the speaker shared her experience of having a life partner who was also an academic in the same discipline. She illustrated how they had problems looking after their children when they both had to attend the same courses or conferences. When family demand was high, one of the NMEs had to sacrifice their academic career to look after the family. Having a life partner in the same discipline could also be very challenging to some NMEs because although they can work together as collaborators, they have to stay away from each other's shadows and shine in their own limelight.

Having a life partner from a different career could be both advantageous and disadvantageous to NMEs. When their life partner was working in a different career, it was easier to plan family times together provided their life partner was not working on shifts like the NMEs. However, a life partner from a different career background may not be able to understand the workload of NMEs and this could lead to potential marital conflict. Lucy for example was not ready to have a child because she was still in clinical training and she did not want her career progression to be delayed compared to her colleagues as she would be taking some time off from training to raise her child. Although her life partner had been supportive of her idea of not having children at the moment, she was also worried that she would have more complications if she was going to have babies at a later age. She had also been sacrificing her family time with her life partner to meet the requirements of her job and she knew that this was not good for her marriage in the long run. The following quote illustrates Lucy's concern about trying to balance her career and her family life with her life partner:

> *"It takes a certain person to motivate themselves to spend all the extra time and you're willing to make a massive sacrifice … Obviously I am a woman so I am thinking about children … well I do my PhD … it's quite hard to balance all these things. So I think sacrificing is hard on your personal relationship at home because you spent a lot of time doing the work … It's really hard to balance everything and you only got a finite amount of time but I think it's definitely possible but I think you have to really want to do it from within."* (Lucy, UK, ACF, Interview 1)

Although Lucy thought that maternity leave would delay her career progression, other NMEs who had had taken maternity leave during their academic career had thought otherwise. The other NMEs believed that maternity leave only hindered their learning processes when they were not prepared for it. For NMEs who were taking maternity leave during their academic career, they had made preparation for their academic work to continue when they were on leave, as in Rita's case on page 128. As the NMEs in Malaysia were only taking two to three months of maternity leave, some of them took a complete break from academic work to rest and bond with their newborn baby.

For the NMEs in the UK, most of them took one year of maternity leave. During their maternity leave, the NMEs were only taking a break from their clinical work. They were still very much involved with their other academic work: for example, writing articles for publication, attending scientific meetings and presenting at conferences.

> *"I'm involved in quite a big international treatment guidelines work and papers I have to send in by the end of June so all of that ended up happening on maternity leave and revising papers in the evening and stuff like that. The [professional society] asked me to serve as a kind of liaison member to a committee that are writing guidelines for the UK. So I have been on teleconference*

> *for that guidelines group… I have been doing a few talks, which is really for my personal thing because I get paid for doing it by the drug companies… I was at the conference on Wednesday in Glasgow … that was like a little expert workshop … and then we got this other conference, which is related to the international treatment guidelines in [the USA] next week."* (Ruby, ACL, UK, Interview 3)

7.4.2 Immediate family

> "*My mother-in-law takes care of my children. I fetched them at dusk … So that one is a relief that I don't have to rely on any baby sitter. I have my own family taking care of my kids. So at least my mind is at ease … whether they ate … bathed … pray...*" (Farah, Malaysia, Interview 3)

Immediate family support was also an important factor influencing the learning of NMEs. Immediate family support for the NMEs in this study came from parents-in-laws and parents. For some NMEs in Malaysia, their retired parents-in-law were willing to look after their children when they went to work. Farah for example left her children at her parents-in law's house during the daytime. She felt that she was able to work more productively because she knew her children were taken care of by someone she could trust rather than leaving her children at home with her maid or at the nursery.

In the UK, Ruby also received support from her mother. Her mother accompanied her and her newborn baby to attend a conference during her maternity leave because her husband was unable to take leave from work. Ruby would not have been able to attend the conference if her mother had not supported her and gone along, because her baby was still breast-feeding.

> *"My little baby was going to conferences … with my mum."* (Ruby, ACL, UK, Interview 3)

NMEs who were parents felt more at ease when their immediate family members were around. This was because they knew that family who they trusted were around in case they needed to ask for help with childcare.

7.4.3 Alma Mater

> *"I was in [this] university here as well … I was also here as an FY2… in the same department and came back here later with a training post. With medical education stuff I won't say it particularly helps because I have not needed to see a lot of people on medical education side of it before... well within the clinical training I knew the ward, I knew people on the ward… I catch on well with them … it makes that part of my job easier."* (Aaron, ACF, UK, Interview 1)

NMEs who came back to their alma mater to teach felt that it added several advantages to their teaching career. Coming back to the alma mater meant that NMEs already knew the staff in the department and that therefore it was easier to foster a good working relationship with their mentors. Getting around the department and preparing for teaching sessions was also easier because the NMEs already knew where the laboratories and lecture halls were, for example. The NMEs also already knew about the medical school curriculum so they knew how to tailor their teaching to the need of the students.

As I illustrated in Chapter 6, Lucy found that coming back to her alma mater had made her transition into academia easier and thus, was a supportive factor to her learning as an NME. She believed that the students were showing more interest in her teaching when they knew that she had personal experience of learning at the same university. She felt more connection with the students she was teaching. As the transition into academia was stressful and required many adjustments, coming back to

familiar surroundings greatly reduced the stress level and the amount of adjustment needed.

Dina was the only NME in Malaysia who worked at the same university where she underwent undergraduate and postgraduate training. She had worked in a government service hospital before coming back to her alma mater to become a medical educator. In contrast to Lucy, Dina highlighted differences between learning and working in a teaching hospital (see page 138). Although she was coming back to familiar surroundings, she realised that the university as a learning environment was different as a working environment. Her lecturers were now her colleagues and her role had changed from a student to an educator. She therefore, had to adapt to these changes.

None of the NMEs referred to coming back to alma mater as hindering their learning processes. Although it can be argued that being a student and being a teacher at the same university is a different experience altogether, this study had shown that coming back to the alma mater generally eased NMEs' transition into academia. When I reflect on my own transition, I was also coming to a new workplace where I did not know anybody. To make things worse, I was the only trainee in Medical Education. As I had gone through a similar transition process, I was able to appreciate the difficulty experienced by some NMEs during the transition phase. It now surprises me that not much effort is done to introduce NMEs to an unfamiliar environment.

7.5 Personal factors

Personal factors also appeared to have a strong influence on the learning of NMEs in the transition phase. In the context of this study, personal factors refer to a person's intentions, actions and beliefs in dealing with challenges in their lives. As evidenced in this study, the majority of the NMEs were left on their own most of the time at the beginning of their career. Self-motivation was therefore important to the NMEs during the

transition stage. A strong self-motivation was important for NMEs so that they had the drive to continue learning on their own.

> *"I think I've got a personal passionate drive in my area and I think that fills me."* (Lucy, ACF, UK, Interview 1)

Unfortunately, personal factors could also hinder the learning processes of NMEs. In Malaysia, a lack of self-confidence and low self-esteem seemed to be hindering NMEs in socialising in the workplace with their seniors. The lack of self-confidence and low self-esteem for some NMEs in Malaysia could be attributed to poor command of English when teaching in English was required.

> *"I felt lack of confidence … in terms of my English … when you are teaching … all facts [are] in English so it's not difficult [but when] you want to give example [in] laymans' terms I think it's quite difficult … I think I need to improve on that."* (Rita, Malaysia, Interview 1)

Some NMEs also had difficulty communicating in English with their colleagues and this similarly led to a feeling of low self-esteem.

> *You have colleagues, you have seniors and you have professors … [when] you want to mix together with upper level people Professor and all this … I [have] low self-esteem… Who I am to them? They are Professors [they] have this and that so on... but me?"* (Rita, Malaysia, Interview 1)

Besides lack of self-confidence and low self-esteem, poor time management was also identified as a factor that was hindering the learning progression of NMEs. Poor time management could lead to increased emotional pressure which subsequently may lead to burnout. NMEs needed to learn how to prioritise their tasks so that they could work efficiently and with less emotional stress.

> *"I am stressed out … so many things to do with so little time… non efficient time management… I strived on*

checklist. So last night I kind of made a check list and look at the priority … Checklist and then I put the deadline and I label which one is high priority, which one is medium priority, which one can wait. So, I strived on that."
(Farah, Malaysia, Interview 2)

7.6 Support needed

The participants expressed that they needed more support in several areas. These areas can be categorised into professional and personal support. In terms of professional support, NMEs expressed the need for more support in terms of developing their professional role as medical educators: especially from their mentors. Some of the NMEs needed reassurance that they were doing the right thing in their teaching sessions, as illustrated by Dina on page 130, so structured supervision or a proper guideline from the department was crucial.

NMEs also needed more support in developing their teaching skills in terms of managing underperforming students, as illustrated by Lucy on page 128. As medical educators were usually the top performers when they were medical students, they found it difficult to understand the underperforming students. Therefore, they needed more support from the departments to manage the underperforming students so that they would be able to help them more.

NMEs also needed support in developing their role as supervisors for their students. Although some of the NMEs had teaching experience prior to becoming medical educators, none of them had experience in supervising medical students, and especially the postgraduate students. Most of the NMEs were relying on their past experience as learners in preparing for their supervision roles. However, there were some supervision tasks that they were unable to prepare for based on their experience. For example, in the quotation on page 117, Fatimah expressed her need for learning about qualitative research. Other participants in the study had also never been taught how to conduct qualitative or mixed

methods research. Therefore, when the students they supervised decided to conduct mixed methods or qualitative research, they felt inadequate because they did not have the capability to supervise and guide their students.

In terms of personal support, some female NMEs expressed the need for female mentors to talk to regarding the challenges of raising a family for young academics. They wanted to know what were the challenges which they needed to expect and how they could handle those challenges. They wanted to make an informed choice if they were planning to have babies in their academic career, especially in the transition stage. For female NMEs, raising a family would involve taking time out for maternity leave and therefore, possible delays in their career progression.

> *"It's really hard for women in academia … because … if you are going to have a child you're gonna have to have a period of time out and your peers are gonna progress in that time and when you come back you're gonna have different responsibilities and I don't think I can sacrifice the thing I am sacrificing if I have a child".* (Lucy, ACF, UK, Interview 1)

As raising a family was a big decision to make, female NMEs wanted to learn from female academics who were successful both in raising a family and their academic career.

> *"I'd really like for someone to come along and say to me you know I am an academic, I am in your position, I worried about the children thing and when to have them and the timing and how it affected my career and this is what happened and … it worked out."* (Lucy, ACF, UK, Interview 1)

The dilemma that Lucy faced was also possibly the dilemma of other female NMEs around the world. Although not all female NMEs thought that maternity leave was stopping their career progression, for

those who did, they wanted female role models to talk to so that they could be certain about the choices they made about their career.

7.7 Summary

Colleagues, mentors and job security were major factors identified by NMEs as supporting their learning processes in the transition phase. Interestingly, these same factors could also hinder the learning processes of the NMEs in certain circumstances. Workplace environment factors such as infrastructure and learning opportunities also played a significant role in supporting the learning of NMEs. In terms of support networks, life partner and immediate family member support were important to the NMEs' learning processes as they supported NMEs in looking after their children. Coming back to one's alma mater was also associated with easier transition as NMEs were coming back to familiar surroundings and working with people and course materials they already knew. A lack of self-motivation was seen as hindering the learning processes of some NMEs as it limited their interaction with other people in the workplace. In the next chapter, I will bring key findings together and discuss implications for the future.

CHAPTER 8

DISCUSSION

8.1 Introduction

In this chapter, I discuss the significance of my research findings in relation to the body of existing literature concerning the learning of NMEs during the transition phase. As a recapitulation, in Chapter 5, I outlined the background of the NMEs in Malaysia and the UK, as well as their teaching perspectives. In Chapter 6, I presented the learning processes of NMEs in transition. In Chapter 7, I analysed the supporting and hindering factors influencing the learning processes of NMEs, including workplace, social and personal factors. This chapter synthesises the findings from the three chapters in order to address the research questions underpinning this research project. These questions were; What are the transitional learning processes of NMEs in Malaysia and the United Kingdom at the outset of their career? What are the roles of prior learning and personal biography in preparing NMEs for their transition into academia? and What factors are perceived by NMEs as supporting or hindering their transitional learning processes? Before I go further into the discussion, I would like to highlight again that the NMEs in Malaysia had more or less the same job roles. The NMEs in the UK, on the other hand, had different job titles, roles and contractual appointment duration. Therefore, it is more complicated to explain and discuss their learning processes as a group (please refer to Chapter 2 for descriptions of each job title).

8.2 The transition from practitioner to educator

This study found that NMEs experienced several changes in their work routine in the transition phase. This included changes in the workplace environment, work routine and job scope. The transition in the work environment was more marked for NMEs in Malaysia because it involved changing from working only in a clinical environment to working in

both clinical and university environments. NMEs in the UK are still working mainly in clinical settings despite their formal teaching role as medical educators. In both countries, an increase in teaching responsibility resulted in a decreased clinical role. From their role as practising clinicians, the NMEs were now teachers, clinicians and researchers.

The NMEs in this study not only needed to learn how to adapt to these changes, they also needed to learn how to develop competence in the three distinct roles of being teachers, clinicians and researchers. In Malaysia, as there are only 3 university teaching hospitals at the moment, most of the NMEs were learning how to be teachers and researchers in both university and clinical environments and clinicians in the clinical environments only (government health facilities with clinical service priority). In the UK, the ACLs, ACFs and ACTs were also learning in university and clinical environments, similar to the participants in Malaysia. The CTFs were learning only in the clinical environment. Figure 11 below illustrates the workplace learning environments where NMEs in Malaysia were working and learning. In the university environment, there are two categories of educators; clinical educators and basic science educators. Basic science educators are educators who are not medical doctors, and doctors who are anatomists, physiologists, biochemists, pharmacologists etcetera. In the clinical environment, there are also two categories of clinicians; NMEs and the other clinicians whose priority is to deliver clinical service to patients.

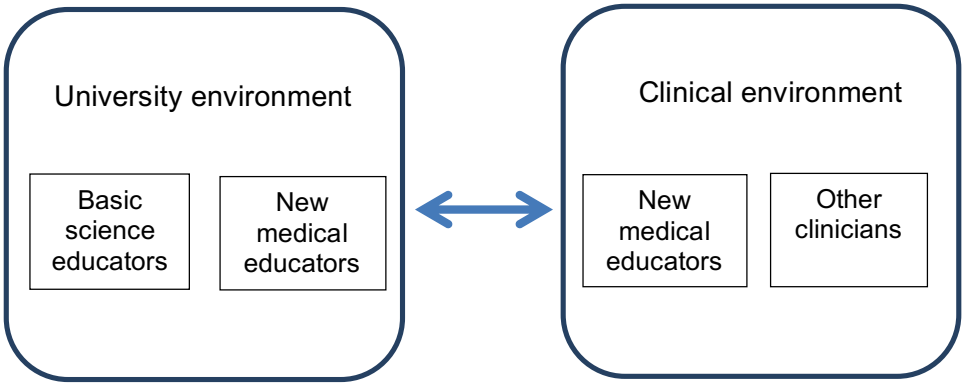

Figure 11: The workplaces of NMEs in Malaysia

Looking closely at each workplace environment in Figure 11, in the university environment in Malaysia, the NMEs were learning together with basic science educators to be good teachers and researchers. They learned together how to give good lectures, facilitate good tutorials or mark students' essay submissions, for example. However, when it comes to learning how to do bedside teaching or setting up objective structured clinical examination (OSCE) stations for clinical examinations, NMEs cannot learn this together with their basic science colleagues. The workplace environments for NMEs in the UK were more complex. Besides basic sciences educators and clinical educators, the teaching and learning activities in medical schools in the UK were also conducted by educators from social sciences disciplines and in some schools, by patients who were trained to teach.

In the hospital environment, the learning of the NMEs was slightly different between Malaysia and the UK. In Malaysia, there is a clear distinction between NMEs and other clinicians because the latter hardly do any teaching for medical students. In the hospital environment in Malaysia, the NMEs were learning together with clinical colleagues: for example, on how to master laparoscopy of the gastrointestinal tract in developing clinical expertise. However, NMEs cannot learn how to improve their bedside teaching skills with clinicians because the other clinicians in the hospital are not medical educators. In the UK, other clinicians also taught medical students as part of their professional responsibility and therefore, the NMEs in the UK could learn together with other clinicians how to improve their bedside teaching skills.

In the course of this study, I noticed that there were not many NMEs working in any one clinical discipline at the same time. Although there is a trainee lecturer scheme in Malaysia, NMEs rarely work with another NME from the same clinical discipline because each discipline can only offer one or two job posts for NMEs at one particular time. Even for new medical faculties such as USIM's medical faculty, where there were several job posts for each discipline, the newly established department had to have a mixture of expert and novice educators, led by a senior educator. The increase in NMEs' responsibilities was swift, ongoing and ever expanding.

In order to learn how to be competent in the three domains, NMEs needed to learn with many people, through many approaches and in a variety of workplace environments.

8.3 Personal and Professional Development

During the transition period, while learning how to teach and mastering other roles and responsibilities, NMEs were also developing their professional identity. In case study 1, Hilmi explained how his professional identity development was shaped by the identity of his role models. He learned from Professor C that he had to be knowledgeable in his field and from Professor D that he had to know his students well. During the third interview with Hilmi, I could see that he had adopted aspects of his role models' identity. As Hilmi's conception of a professional medical educator was someone who is knowledgeable and knows the students very well, he perceived that appearing not to be knowledgeable to the students and not getting to know his students would be a threat to his professional identity.

In this section of the thesis, the development of professional identity for medical educators is described using Ibarra's (1999) conceptual framework of the adaptation process. According to Ibarra (1999), during the transition period into a new role, individuals adapt through three basic tasks; 'observing role models, experimenting with provisional selves, and evaluating results against internal and external standards' (p 773). Through interaction with colleagues, NMEs were learning how to become medical educators by validating their newly formed professional identity (Ibarra, 1999; Pratt et al., 2006). As NMEs might develop multiple professional identities due to their role as teachers, researchers and clinicians, it was inevitable that some NMEs had difficulty associating themselves with their new professional identity as medical educators. Instead, they appeared to be holding onto their professional identity from their previous work as clinicians.

In case study 2, I reported that Aisha stated that she was a clinician first and that academia came second. I believe Aisha chose to be a

clinician first because she was more comfortable in her clinician's role, which she had developed, refined and perfected since she graduated from medical school. This finding was unsurprising, as other researchers, as for example Roberts et al. (2014), have quoted their participants as saying, 'first you are a doctor, then a teacher' (p 522). From my observation in this study, NMEs who had intrinsic motivation to become medical educators were more comfortable in their new identity as teachers because it was an identity which they wanted to develop. As NMEs tried to become a teacher, a practitioner and a researcher at the same time, there were times when they were unsure about who they were. When NMEs were unsure of their identity, it was understandable that they would revert to their previous identity (Pratt et al., 2006), which they were more comfortable with (Little et al., 2014). As NMEs have been practising as clinicians for many years before they take up teaching roles (especially in Malaysia), they are more likely to be comfortable in their identity as practitioners. They have perfected their clinical skills through deliberate practice over a long period of time. They know what they need to do when they see patients and what is expected of them. Thus, they are likely to be uncomfortable in their new identity as teachers because there are things which they do not know. They need to learn new things associated with a job which is unfamiliar to them (Roberts et al., 2014).

> *"So the knowledge, the experience actually can come when you are attached to the seniors … learn from seniors. You need to be open [minded] … you want to learn because you don't know. Sometimes the seniors scold you or teach you the way that you do not want to be taught … you have to accept that. Don't be too emotional when receiving any advice from senior lecturers."* (Rita, Malaysia, Interview 3)

The lack of knowledge and confidence of NMEs in carrying out their job was more likely to make them feel inadequate and helpless because they had not developed and perfected the skills required of them to be educators. This confusion of identities was probably seen more often in medical educators who had joined academia after a long period of clinical

practice (Smith & Boyd, 2012). As the amount of clinical practice for the participants in my study was almost the same, I could not determine whether the more experienced clinicians were feeling more confused.

In daily practice, confusion of identity or conflicting interests could potentially arise between patient care (practitioner) and teaching medical students (teacher). During emergency situations, there was no doubt that NMEs needed to place patient care as a top priority. In this kind of situation, they could perform comfortably in their practitioner role. However, in a non-threatening situation, for example in clinics, clinicians may have to choose between their practitioner or teacher role. They have patients to see and they have medical students to teach. When they were uncomfortable in their teacher identity, it was likely that they would avoid teaching the students and give more attention to patients. If they were comfortable in their teaching role, they could teach the students while consulting with the patient. The identity conflict experienced by some NMEs could have a big impact on medical education. A lack of confidence in NMEs when conducting teaching sessions could lead to substandard quality of the teaching. Inevitably, this could potentially lead to production of medical graduates with poor clinical skills and knowledge and this could affect the quality of care which they provide to patients. The professional identity conflict was likely to be greatest for the CTFs in the UK because they could not associate themselves with teachers and researchers in a university environment. The CTFs were employed by the NHS Trust purely to teach at hospitals. It was possible that the CTFs might find it more difficult to develop a strong teacher identity in a clinical environment, where the main priority is clinical service rather than teaching medical students.

The researcher identity did not appear to be as strong as the teacher or practitioner identity among any of the NMEs in this study. There were two possible explanations for this. First, the ACTs and the CTFs in the UK were not expected to do research during their short teaching contract. Research was the reason why some NMEs, such as Zainab, did not want to pursue a career in academia, because being a researcher was not something they wanted to do. Second, although the UK ACFs, UK ACLs and NMEs in Malaysia were expected to carry out research, the competing

demands between teaching, clinical work and research always resulted in the research component being given the least priority by the NMEs. In Chapter 6, I described how in Malaysia, Sabrina decided to completely ignore the research requirement because she could not manage the three roles of being a teacher, a clinician and a researcher at the same time. Being an ACF, Richard perceived that NMEs in the UK paid less attention to research because they needed to prioritise teaching and clinical work, as their salaries were paid by the NHS Trust. In Malaysia, although NMEs could still be promoted in their career through time-based promotion, the current culture in most higher education institutions in Malaysia places stronger emphasis on research excellence. In the UK, research excellence was one of the criteria for securing a job in academia. Research and publication excellence define the achievement of an academic as this sets the higher institution in good standing, as well as generating revenue through research grants. Therefore, to ensure survival in academia, NMEs need to ensure that they develop research competence in parallel with teaching and clinical competences.

8.4 The influence of prior learning and personal biography

The second research question was formulated to investigate the roles of prior learning and personal biography in preparing NMEs for their transition into academia. In this study, some NMEs were found to rely on their previous learning experience in teaching sessions. For example, Aaron's teaching perception and teaching methodology were strongly influenced by his learning experience during his intercalation and tutoring in a social science discipline. The findings concerning the influence of prior learning experiences on the transitional learning processes of NMEs seemed to concur with the findings of MacDougall and Drummond (2005). They concluded that future teaching style was influenced by prior learning experiences, rather than the teacher's learning style. They found striking consistency across medical educators in terms of teaching styles and preferences, despite their different gender, age, clinical specialties or medical schools which they had graduated from.

The influence of past teaching experience on the learning processes of NMEs was also evident in this study. NMEs who had gained formal teaching experience during their undergraduate studies and on graduation seemed to have an easier transition into their teaching role. Their previous teaching experience gave them an advantage because they were able to use and compare past teaching experiences to help them with the new teaching role. This study provides further evidence to support the importance of teaching experience in easing NMEs' transition into academia. The findings here seem to concur with those reported by Ten Cate (2007), Dandavino et al. (2007), and Erlich and Shaughnessy (2014).

The comparisons made by some NMEs with their experiences teaching in different countries and different disciplines was a novel finding because no other studies have looked at the usefulness of teaching experience in another discipline or the influence of teaching medicine in another country in easing NMEs' transitions into academia. This study has provided evidence to suggest that teaching experience in another country or another discipline is useful to NMEs in the transition phase. In case study 2, I provided Aisha's account of her comparison between teaching medical students in her home country and in the UK. Aisha noted that there were some similarities in the way students learn between the two countries. Hence, she found that she could use the teaching experience from her country and apply it to her teaching in the UK. Similarly, Jeremy found his experience working as a teacher abroad gave him an advantage in terms of exposure to a teaching course prior to teaching medical students. He also found similarities between teaching English and Medicine in terms of the way in which teaching should be conducted. Aaron's teaching experience in a social science subject also made his transition into academia far easier.

> *"I am more aware of how students learn and methods I could employ."* (Aaron, ACF, UK, Interview 1)

From these three examples, it could be concluded that it was the teaching experience rather than the content which they taught that made NMEs' transition into academia far easier. The teaching experience made them

more aware of how to tailor and deliver the content according to the needs of the students.

This study has indicated that NMEs were relying on past learning experience in conducting their teaching sessions. Some NMEs, who had some amount of teaching experience, were also relying on that teaching experience in conducting teaching sessions. Most NMEs appreciated the exposure to the teaching and learning course which they participated in as part of their job confirmation process (in Malaysia) or as part of the requirements of a higher education authority (in the UK). They indicated that their teaching practice improved as a result of attending the course. This supports the findings of Seidel (2015), who reports that from a one year learning to teach course, novice teachers reported positive learning developments. The novice teachers were reported to have gained more confidence in their teaching and to have become more student-focused. The NMEs in this study were found to be developing along the same progression pathway as the novice teachers reported by Seidel, although the teaching courses attended by the NMEs were of shorter duration. Therefore, I recommend that NMEs be exposed as early as possible to a teaching course during the transition phase.

8.5 Supporting and Hindering Factors

The third research question aimed to explore those factors which were perceived by NMEs as supporting or hindering their transitional learning processes. As I illustrated in Chapter 7, many factors have been identified as affecting the learning of NMEs in the transition phase. Some of these factors have been reported in previous literature and some others (job security, life partner, immediate family and religious belief) are my contribution to the body of literature. Interestingly, some of these factors (colleagues, mentors, job security, life partner, motivation and self-drive) have the potential to either support or hinder the learning of NMEs in different contexts. To my knowledge, no researchers have studied in detail the factors affecting the learning processes of NMEs as a comparative study between two countries. My study findings, therefore, add to the

literature by establishing factors which were perceived by NMEs in both countries as influencing their learning processes and how these factors either supported or hindered their learning processes. The implication of these factors to the learning of the NMEs will be presented in Chapter 9.

8.5.1 Workplace affordances

8.5.1.1 Job security

Job security was an important factor which emerged as influencing the learning processes of NMEs. No studies have previously reported on how job security influences the learning behaviour of NMEs. Research on job (in)security in the past was mainly conducted among company workers, while only one study was conducted on the perception of job insecurity among teachers out of seventy two studies selected for meta-analysis by Sverke et al. (2002). Surprisingly, the meta-analysis did not find any significant association between job insecurity and job performance. In explaining this non-significant association, Sverke et al. postulated that job insecurity can lead to better performance when performance management strategies are in place. When other indicators were used for making decisions about employees' contracts, job performance was worse.

My study findings seem to corroborate the explanation offered by Sverke et al. in terms of the association between job security and job performance. In my study, work in academia was noted to be less secure in the UK compared to Malaysia. In Malaysia, the NMEs' job status was permanent and there was a time-based promotion scheme. The job security of the NMEs in the UK could only be guaranteed through excellent job performance. I noted that when jobs were less secure, the NMEs were more motivated to improve their knowledge and skills continuously. This is evident through the postgraduate qualifications held by some of the NMEs in the UK. In my study, most of the NMEs in the UK already held another postgraduate qualification. Ruby had a diploma in Epidemiology, while Aaron and Richard were pursuing Masters in Clinical Education. These postgraduate qualifications were perceived by the NMEs to be useful in

their career as academics and to make them more competitive in securing future jobs. It is understandable that the NMEs in this study were worried about their job security because they were at the age where they needed to rely on a steady monthly income. They were likely to have started a family and therefore were probably dependent on their income to pay for a house, a car and possibly study loans (NMEs in Malaysia). Reduced job security could also challenge personal relationships if NMEs concentrated too much on career development, leading to an imbalance between work and family life.

Although greater job security could make the NMEs in Malaysia complacent about improving their knowledge and skills, they were probably less prone to burnout because they knew they could still be promoted to a certain grade in their career without having to fulfil promotion requirements such as undertaking research and publishing articles in high impact journals. Despite the benefits and disadvantages of job security to the learning of NMEs in transition, it is beyond the universities' control to improve job security. Changes in job security involve changing national educational policies and are, therefore, harder to implement. In Malaysia, the university's top management should work on improving the work scheme and culture for medical educators so that the NMEs are motivated to continuously improve their teaching practice despite the availability of time-based promotion. According to the ex-Chairman of Council of Deans of Malaysian Medical Schools, a proposal has been sent to the Public Service Department to reward medical educators who excel academically with better monetary incentives. If the proposal is accepted, although extrinsically motivated, I believe that NMEs in Malaysia would be more motivated to strive for excellence in their teaching career. In the UK, increasing job security for NMEs would be very challenging because academic competition is already very stiff and NMEs have to prove their worth to compete for job security. However, workforce planning is within the control of individual higher education institutions. Careful planning of workforce projection could possibly create more permanent jobs for excellent medical educators in order to increase job security.

8.5.1.2 Collegial support

In this study, the NMEs also emphasized the importance of collegial support to their learning process. In chapter 7, I provided evidence to illustrate that the small age gap between NMEs and their colleagues led to a good working relationship. This was further evidenced by NMEs forming support groups in the workplace with face-to-face meetings and online support groups, for example the CTF regional network and social media groups. The importance of collegial support to the learning of novice teachers has been widely reported in the literature: for example by Burke et al. (2013), Pogodzinski (2014), Westerman et al. (2013) and Zwart et al.(2009). This study adds further evidence that a small age gap and close relationship between NMEs and their colleagues can support NMEs' learning in the transition phase.

8.5.1.3 Mentor support

In Chapter 7 of this thesis, Ruby described how her transition into academia was easier because her mentor provided forms of legitimate peripheral participation which facilitated her entry into the CoP. This took the form of inviting her to attend meetings and be involved in writing papers as well as introducing her to the right people for her career progression. An interesting theme that emerged in this study was the need for female academic mentors as reported by female NMEs. Female academic mentors were needed by female NMEs in this study to act as an advisor who could guide them as to how to manage their family, while at the same time be successful in an academic career. The need for female academic role models has been reported in the literature for many years (Lease, 1999; Valantine & Sandborg, 2013). The need for female academic role models expressed by some female NMEs in my study suggests that this long-standing issue remains unresolved.

The lack of female academic role models in medical education can be attributed to a perceived delay in career progression compared to male colleagues due to maternity leave or other family commitments. Although more women are holding higher posts in academia, there is still a lack of

potential female academic role models because not all senior female academics are suitable to become role models. Jessica Lober Newsome reported for the UK Resource Centre for Women in SET (Science, Engineering and Technology) and the Royal Society of Chemistry in 2008 that female academics wanted female academic role models who do not have male characteristics, must still be married and must have children (Newsome, 2008, pp 18-19). This suggests that academics may require role models who they can identify with more easily.

The findings from this study also indicate that NMEs need different mentors for different reasons. Thus, a group of mentors rather than a single mentor might be better for NMEs as they develop their professional identity and progress in their career. Mentor support was also needed as mentors could potentially guide and train NMEs into the right career pathway.

8.5.1.4 Management support

Besides colleagues and mentors, the faculty's top management (Deans, Deputy Deans and Heads of Department) had their own role in easing the transition of NMEs into their new career. The provision of academic days to NMEs was evidence to suggest that the faculty's top management supported NMEs' learning processes. During the academic days, NMEs were given protected time to concentrate on the development of their teaching and research competencies. Pogodzinski et al. (2012) found that a novice teacher's desire to remain teaching is reduced when the relationship between teachers and administrators are poor. The administrators reported in Pogodzinski et al (2012) is equivalent to the faculty's top management in this study. In order to encourage NMEs to remain in academia, the faculty's top management could help NMEs in their transition by making sure that they are not overloaded with job responsibilities which they are not prepared to handle. If such situations are unavoidable, the faculty's top management should ensure that NMEs are given enough guidance to carry out the responsibilities.

The NMEs also stated that the senior educators were always busy and rarely had time to give them feedback. The provision of structured

supervision and regular feedback from mentors could increase NMEs' confidence in their learning process with teaching medical students. Therefore, efforts should be made by the faculty's top management to provide several mentors who could provide guidance and support to the NMEs so that NMEs could consult different mentors for different reasons. In the UK, as the ACFs, ACTs and ACLs are still undergoing clinical training, they have their clinical and academic supervisor whom they can refer to for support and guidance. No supervisors are allocated to the CTFs because the teaching post is an out-of-training post. Similarly, there are no supervisors allocated to the NMEs in Malaysia because they have completed their clinical training.

NMEs were also learning about their roles and responsibilities outside work hours. The definition of work hours can be quite blurred for clinicians because their nights and weekends can also be considered as work hours when they are working shifts or doing on-calls. Formal learning opportunities outside work hours were commonly in the form of attending seminars or conferences over the weekend or presenting scholarly work during maternity leave. The informal learning opportunities outside work hours commonly occurred during social gatherings with colleagues. The top management of the learning environments (both university and hospital) need to acknowledge the role of formal and informal learning opportunities in the learning of NMEs during transition. More learning opportunities, either formal or informal, should be created to support NMEs in developing their teaching competence and professional identity.

8.5.2 Personal factors

This study found that personal factors were important factors which could either support or hinder the learning processes of NMEs. These factors will be discussed based on agency and the biography of the NMEs.

8.5.2.1 Agency

Personal agency was an important element in the learning processes of NMEs in this study. According to Bandura (2001), agency

refers to an act done intentionally (p. 6) and there are three modes of human agency: personal, proxy and collective (p. 13). Personal agency refers to personal control over an act, proxy agency refers to obtaining control over an act through a proxy and collective agency refers to a shared belief in a group's collective power to have control over the act or desired outcome (p.13-14). In this study, the NMEs were exercising personal agency to establish control over their learning process and future career. Some of the NMEs wanted to plan ahead for their career progression so that they could use their time and resources efficiently. According to Bandura (2001), by exercising forethought (planning ahead), people are able to guide their actions and motivate themselves towards achieving their target goal. The importance of planning ahead for NMEs has also been elucidated in Roberts' et al. (2014) study, who found that 'planning for the year' was the third most highly cited theme among top tips provided by the teaching fellows.

From my own working experience of being an NME, in carrying out teaching roles and responsibilities, some of my NME colleagues were less competent in using information technology for example in managing a virtual learning environment website. While they were still learning, they had to rely on the information technology technician to help them in managing and controlling the website. The NMEs therefore exercised control over the website through proxy agency. The NMEs were exercising collective agency through research collaboration. When conducting a national audit for her research project, Aisha was unable to do this by herself. She had to rely on her research collaborators from other hospitals to collect data and to enter that data onto the online system which she had developed. Aisha and her research collaborators therefore exercised collective agency in getting the results of the national audit.

8.5.2.2 Biography

The NMEs in this study had varied reasons for pursuing a career in academia. These reasons were passion for teaching, experience of poor teaching as an undergraduate, variety in teaching job roles, inspiration from other people significant to them, better career prospects, religious beliefs

and settling down permanently in one place. My novel contributions to the body of literature are finding that religious belief and the desire to settle down permanently in one place have a significant role in the motivation of NMEs to become medical educators, and particularly so in Malaysia. To date, no studies have ever reported any influence of religious belief on the motivation of NMEs to become medical educators or explored how religious beliefs influence the teaching behaviour of educators. Atiqah's and Hilmi's religious motivation to become medical educators could be explained by the following hadith narrated by Abu Hurairah:

> *"When a man dies, his acts come to an end, but three, recurring charity, or knowledge (by which people) benefit, or a pious son, who prays for him (the deceased)."* ("Sahih Muslim, Book 13: Bequest (wills) (Kitab Al-Wasiyya)," 2015)

As Muslims, both Atiqah and Hilmi believed that by disseminating knowledge through teaching, they would gain continuous religious reward from their good deeds. The act of seeking and disseminating knowledge were also deemed as important efforts that make Muslims closer to their creator (Abuarqub, 2009).

Another explanation for this is that, Atiqah and Hilmi were working in a medical faculty where religious values were integrated into the medical curriculum. They could have been acculturated to religious values as part of their work and, therefore, these manifested in their beliefs about teaching.

The desire to settle down permanently in one place, cited exclusively by the Malaysian NMEs, was likely due to the availability of immediate family support. This factor will be discussed later, in the following section on other support networks. The other motivations reported by the NMEs in this study were found to be similar to what has been reported in the literature, by Kwok-wai (2006), Duvivier et al. (2009) and Yaakub (1990), for example.

8.5.3 Other support networks

In this study, I noted that NMEs also found support from their life partners, immediate families and alma maters.

8.5.3.1 Life partner and immediate family support

As I illustrated in Chapter 7, some of the NMEs were worried about raising a young family because they were not willing to sacrifice their career. A supportive life partner (either from the same or different career) was deemed able to support NMEs in this dilemma in terms of supporting their decision to delay starting a family, or through sharing the responsibility of childcare. The support of immediate family members was also important to the learning process of NMEs. In this study, the willingness of NME's parents to look after NME's children was important to the learning of the NMEs. NMEs were able to negotiate their transitions into academia and achieve more in their careers when their life partners or immediate family members supported them emotionally and with childcare. To date, no studies have reported on the influence of support networks such as life partner and immediate family members to the learning of NMEs, although these are the important people in their lives. The majority of the NMEs in this study were female and of childbearing age, and therefore it was unsurprising that they talked mostly about family issues and trying to find a work-life balance. Previous studies of support networks or stress have concentrated on the influence of support networks or strains on health and wellbeing (Walen & Lachman, 2000). Although previous researchers postulated that supports and strains were inversely correlated, interestingly, there was no correlation between supports and strains except for the people who were close to the person: for example, the spouse, life partner or family members (Abbey et al., 1985; Okun & Keith, 1998). When life partners or immediate family members are not supportive to the NMEs, it is possible that they could become a strain to NMEs' emotions. Hence, they could potentially hinder the learning processes of NMEs.

In this study, the female NMEs in the UK, who were on longer maternity leaves, were found to be involved in academic activities during

their maternity leave. Aisha was able to launch her clinical audit online while Ruby was attending conferences and writing guidelines for her clinical society. In Malaysia, the NMEs were on shorter duration of maternity leave. The two NMEs from Malaysia, Rita and Atiqah, reported that they were not involved in any academic activities. The involvement of NMEs in academic activities during maternity leave was found to be similar to what was reported by Blair et al. (2015) in the recent online publication of Academic Medicine. Although the median parental leave duration taken by the graduate medical education trainees (GME) in Blair's study was only five to eight weeks, compared to one year in the UK and 3 months in Malaysia, the GMEs were found to be involved in research, writing scholarly papers, pursuing advanced degree or other training, mentoring students, attending conferences and studying for examination. Blair et al. (2015) argued that the female GMEs were still involved in academic activities during parental leave to ensure that their career advancement would not be halted. The concern of the female GMEs about their career advancement in Blair et al. (2015) study is similar to the concern of Lucy, who appeared to be delaying pregnancy until after completion of postgraduate training.

The impact of parental leave was seen to affect women more than men although male GMEs were likely to be taking parental leave of shorter duration (ibid). It was also possible that lack of job security was the main motivating factor for these female GMEs and NMEs to continue with academic work even during their parental leave. The findings from Blair et al. (2015) and my study indicated that studies on the full impact of parental leave on female postgraduate trainees' and NMEs' career progression are timely and very much needed. The findings from such studies could help policy makers to draft policies that could improve the progression of female trainees and NMEs in their career.

8.5.3.2 Alma Mater

This study has shown that coming back to an alma mater helped ease the transition of NMEs into academia. However, little is known about the extent of the benefit which coming back to an alma mater has in the transition of NMEs into academia or whether the period of leaving and

coming back to alma mater may result in different degrees of ease. The influence of the alma mater in the transition of NMEs into academia could be explained by the findings of Duvivier et al. (2009). Ease of transition was associated with being familiar with the workplace, as NMEs knew the staff and the whereabouts of resources that they needed. The NMEs were also familiar with the medical curriculum of their alma mater, so they could use their experiences as medical students to guide their preparation to teach. Arguably, the degree of ease should be lower with increased time since graduation, because curriculum, facilities and human resources may have changed. Therefore, the part played by coming back to the alma mater in easing the strain of transition merits further empirical exploration.

This study found that in general, factors perceived as supporting or hindering the learning processes of NMEs were largely similar between Malaysia and the UK, except for religious belief as a motivation to teach (reported by only some NMEs in Malaysia). The different workplace environments and cultures between the two countries were expected to pose different challenges to the NMEs. The NMEs in Malaysia had completed their postgraduate clinical training, while the NMEs in the UK were still undergoing postgraduate clinical training when this study was conducted. This difference in training status may lead to different stressors and different coping mechanisms among NMEs. Therefore, their perceptions of the same factors which influence their learning processes were expected to be different. A possible explanation for this surprising finding is that during transition, all NMEs were learning how to teach and how to develop as educators. They were not yet actively involved in and influenced by the stiff academic competition that differentiates Malaysia and the UK. Therefore, the NMEs in Malaysia and the UK were undergoing similar learning processes during the transition phase to become medical educators. Additionally, NMEs' learning processes may have been similar because the medical education systems in Malaysia mainly follow the medical education systems in the UK.

8.6 Understanding the learning of NMEs from theoretical perspectives

As NMEs were learning in various workplace environments, I was interested to know whether and how their learning could be explained using the theory of Communities of Practice (CoP) (Lave & Wenger, 1991). Before I discuss this further, I will summarise the learning of the NMEs as found in this study. During the transition phase, the NMEs in this study were learning how to develop competence in three domains; teaching, clinical practice and research. They were learning in multiple workplaces, namely the clinical environment and the university environment, and the NMEs could be considered members of multiple CoPs. The learning of the NMEs in the transition phase occurred through formal and informal interactions, mainly through apprenticeship as well as self-directed learning efforts. The study also found that prior learning, personal biography and motivation played a significant role in the learning of NMEs during the transition into academia. At the end of the study, the NMEs were showing evidence of personal and professional development. I will now move on to discuss how the learning of the NMEs can be understood using the learning theories which I presented in Chapter 3.

8.6.1 The Community of Practice Theory

The CoP theory proposes that adults learn in the workplace through participation in a CoP. Through the process of apprenticeship, novices' learning towards expertise is described as a move from the periphery towards the centre of participation. In the process of developing expertise and moving towards central participation, novices learn through mutual engagement, joint enterprise and a shared repertoire. Full participation in the CoP, what needs to be learned and how novices are introduced into the CoP are decided by members of the CoP (Wenger, 1998). I was aware of the limitations of this theory in describing the learning of adults in clinical workplaces, such as the inability of certain members of a CoP to move towards full participation (Goodwin et al., 2005) and the lack of legitimate peripheral participation in a CoP to treat cancer for example, since the

members of that CoP are specialists in their own clinical discipline (Oborn & Dawson, 2010). However, as NMEs were also learning through the process of apprenticeship, I wanted to know if the theory could be used to describe the learning of NMEs in the transition phase.

In this study, the CoP theory was useful to describe the learning of NMEs in multiple workplace settings. An example of this learning is when NMEs attended a teaching course and had shared learning goals and direction. In Malaysia, the NMEs described how the teaching course was also attended by novice teachers from other disciplines, including novice basic sciences teachers. In the UK, the NMEs who attended the Masters in Clinical Education course were also learning from other clinicians who were not NMEs. The CoP theory is concerned with what is learned as a group rather than the composition of the CoP. Thus, the heterogeneous membership of these communities may not have been an obstacle to learning because each member could provide complementary contributions to achieving the learning goals of the CoP.

There was also evidence to suggest that NMEs were learning through legitimate peripheral participation in a CoP. In Chapter 7 of this thesis, I described how Ruby felt supported when her mentor invited her to attend meetings and introduced her to the right people in her CoP. Her description of her learning progression from being a novice author to becoming a senior author in writing articles for publication also fits the legitimate peripheral participation of the CoP theory. Similarly, while developing competence as supervisors, the NMEs described how they had become a co-supervisor first before they were allowed to become the primary supervisor. Progression in a supervisory role was a further example of legitimate peripheral participation in this study.

The CTF regional network described by Jeremy in Chapter 7 could be considered as another example of a CoP for NMEs and is similar to the CTF network reported by Little et al. (2014). Although there was no legitimate peripheral participation in this CoP of NMEs, the group provided an opportunity for the sharing of resources and support to its members: especially to those in solo practice. The regular interactions of this CoP

were mainly through online communications because the teaching and clinical commitments as well as the distance between the clinical settings made it hard for the CTFs to meet face-to-face regularly. In the CTF network reported by Little et al. (2014), mutual engagement was established through the process of learning ‘about, from and with each other’, the joint enterprise involved working together towards an agreed goal while the shared repertoire was developed by making use of the skills of members in the CoP for communal resources in ensuring the continuity of CTF posts. Thus, the CoP for the NMEs was more a group which provided support for each other rather than about developing legitimate peripheral participation.

This study found evidence, however, to suggest that the theory of CoP was inadequate to provide a comprehensive explanation of the learning of NMEs. There are a number of reasons for this. First, the NMEs were undertaking important self-directed learning to tackle their learning needs which were not achieved through participation in the CoPs. Earlier, I quoted Dina, who said that she had to read medical education journals to learn by herself how to encourage students' active participation in her teaching session. There was no provision in CoP theory which could explain the role of an individual learner's self-directed learning, because individual learning was not taken into consideration. Shared learning is the main emphasis within CoP learning theory.

Second, the theory did not explain the personal and professional development of the learner except for a general change in the identity of the learner from being a peripheral to a central participant. My study has shown that the personal and professional development of the NMEs had more complex dimensions than this and was related to their prior learning, personal biography and motivation. For example, the professional development of the CTFs Jeremy and Michael following exposure to a teaching course was different, because Jeremy had been exposed to a similar course when he was working as a teacher. Michael found the exposure to the course useful but Jeremy did not find the course useful because the content of the course was nothing new to him. The personal and professional development of the NMEs also appeared to be influenced

by membership in multiple CoPs and self-directed learning which, again, is not explained by the theory. As NMEs progressed in their career, they identified different learning needs that were personal to them. Although Aaron and Richard were working in the same department, Aaron was thinking of pursuing a PhD, while Richard was thinking of continuing clinical training at the end of his teaching contract.

Third, the theory did not explain what happens to any individual learner after achieving full participation in a community of practice. For example, in a CoP in Anatomy, full participation could be defined as obtaining full professorial status. However, the NME's learning does not stop after achieving professorial status and the ability to undertake lifelong learning is inherent to the medical profession. The transition phase into academia is just the beginning of an NME's long journey in academia. Therefore, any learning theory should be able to explain the learning of any individual from the cradle to the grave.

There are also other reasons why the CoP theory is unable to provide a complete understanding of how NMEs learned. First, not all CoPs in academia would allow NMEs to become a legitimate participant. For example, membership in research groups is usually limited to a small number of members who form the group. There may be no legitimate peripheral participation in these research groups, because participation is only afforded to those with the necessary expertise, as alluded to by Aisha. Besides, any NME can apply for research grants by being the lead researcher. Second, the theory does not provide any explanation of the lateral moves of senior medical educators to different CoPs. In a new medical faculty such as USIM, there may be a number of senior medical educators from other universities who joined the faculty and automatically became full participants in the new CoP. Finally, the theory did not explain how legitimate peripheral participation occurs when senior medical educators and NMEs have to learn together or how senior medical educators may learn from NME. For example, the introduction of new simulation technology in medical education could place NMEs and their senior colleagues on a par in terms of knowledge about the simulation technology. NMEs therefore were not able to learn from their senior

colleagues about the technology. On top of that, as the younger generation has more knowledge on the use of technology, the senior colleagues may have to learn from NMEs how to use simulation technology for teaching and learning. Similarly, many clinical researchers now use innovative technologies for data collection and analysis, which senior colleagues may not necessarily have knowledge of. The invention of new diagnostic equipment or new treatment interventions, for example, put the NMEs and senior colleagues at the same level in terms of knowledge about the diagnostic equipment or treatment intervention. Instead of learning from senior colleagues, the NMEs were learning together with them.

One of the roles of medical educators is to prepare medical students for future practice. There are occasions where NMEs may not be fully prepared for this role but their senior colleagues may not always be the best person to turn to for help. For example, the use of IPad for teaching and learning in Medicine is a recent educational advancement that even some experienced medical educators may not be familiar with. In this instance, senior colleagues might not be the best resources for NMEs' to learn from. Therefore, the concept of moving from peripheral towards central participation is not sufficient to explain NMEs' workplace learning processes in these situations. The inability of the theory to provide explanations for some aspects of NMEs' learning in this study supports the critique presented by Goodwin et al. (2005) and Oborn and Dawson (2010). Since the CoP theory was unable to provide comprehensive explanation of the learning of the NMEs in this study, I then decided to examine the applicability of another theory, which is the transformative learning theory.

8.6.2 Transformative learning theory

In this study, the participants from both countries have demonstrated that their teaching perspectives, teaching practice and motivations to become an academic are influenced by many factors including their past experience of learning, the cultural context of their workplace and their personal biographies. Earlier, I described the ways in which the CoP theory was useful in explaining how NMEs learned with

people from different professional backgrounds and from legitimate peripheral participation in developing clinical skills. Through careful examination of TL theory as proposed by Illeris, I found that this theory offered a more convincing explanation of the learning of NMEs in this study. TL theory's emphasis on the incentive for learning and the content learned helped to explain why NMEs learned from and with people from different professional backgrounds. The interaction with people from similar or different professional backgrounds provides the medium for learning to occur, which could lead to a transformation, although there were also instances where the NMEs were learning on their own.

The individual learning effort undertaken by Dina was prompted by her own motivation to fulfil her learning needs (see page 137-138). Dina identified her learning needs through interaction with both colleagues and students. Although the learning which Dina undertook to fulfil her learning needs was an individual effort, the success of her learning seems to have depended on the interaction she had with both her colleagues and students. In this case, content, intent and interaction were all important for Dina's learning. This aspect of Dina's learning is better explained by the transformative learning theory. The three elements of content, intent and interaction are all important in explaining the learning trajectories of novices as well as senior medical educators.

TL theory posits that the content learned is integrated and inseparable from the intention for learning (Illeris, 2015a), which helps to explain why medical educators need to carry out life-long learning throughout their career although they have reached central participation in a CoP. Medical educators must be willing to undertake self-directed and life-long learning to update their knowledge on a regular basis, to remain respected in their profession as medical knowledge grows exponentially.

TL theory could also explain the different content learned from the same learning experience. The result of transformative learning is a change in the individual learner identity, commonly in the personality and the preference layer. In this study, Aaron and Richard took different career pathways at the end of their academic clinical fellowship. Aaron decided to

pursue a PhD in Medical Education, while Richard decided to pursue an MD in a clinical discipline. The CoP theory implies that both Aaron and Richard would likely opt for a PhD degree, since they were moving from the periphery towards the centre of participation in a community of medical educators. However, Aaron and Richard were working towards different goals s. Aaron's learning has led him to a transformation towards becoming an academic (Illeris, 2014a). However, the learning that Richard underwent as an NME made him want to develop his competence more in the clinical domain. Richard's transformation, was more towards becoming a clinician. The personality layer of Aaron's and Richard's identity could be considered to be transforming. Although Richard would still be teaching medical students, his identity may have transformed from being an ACF to becoming a specialist trainee.

Earlier, I discussed the different opinions that Jeremy and Michael held on the benefits of a teaching course for their personal and professional development. The CoP theory was unable to explain this difference because the theory did not take into consideration Jeremy's and Michael's personal biography and preconditions. According to TL theory, the individual learner's personal biography and preconditions would affect the content and incentive of the learning (Illeris, 2015a). As Jeremy had been exposed to a teaching course previously, he did not see the course as useful because the content of the course was not new to him. Therefore, his incentive for learning the content was lower and his personality identity layer might not change significantly. In contrast, Michael found the teaching course useful because he had never attended a teaching course. He had the incentive to learn the content of the course because the content was something new to him and he might need it to improve his teaching practice. The learning might have led to more of a transformation in his identity as he had more knowledge of how to teach compared to before he attended the course.

Although it appears that TL theory is able to provide a better theoretical framework in explaining the learning of NMEs in their transition into academia, through elaborating existing meaning schemes, learning new meaning schemes, transforming meaning schemes and transforming

meaning perspectives, the theory was unable to fully explain the role of support networks in the transformative learning process either. The theory does not provide any explanation of how the interaction with other people in the workplace could provide NMEs with the support they need from their support network. Compared to the CoP theory which described how members of a CoP could find support through the sharing of joint enterprise, mutual engagement and shared repertoire, TL theory does not describe how the interaction element in the theory supported NMEs' learning. The theory also does not describe how power distribution between NMEs and their colleagues or mentors could promote positive transformation or vice versa. Similarly, the self-directed learning undertaken by some participants in this study had shown that some aspects of NMEs' learning could be explained without the interaction element of TL theory.

The applicability of the refined TL theory in medical education is yet to be tested. More studies should be conducted to see whether the refined TL theory could explain the aspects of learning not covered in this study, for example the learning of more experienced medical educators in the workplace.

8.7 Strengths and Limitations of the study

The strengths and limitations of this study were related to the methods which I chose in order to understand the learning processes of NMEs during their transition phase into academia. For example, the emerging themes may have been influenced by the composition of the participants in this study, who were mostly female, married, and had young families. The snowballing technique during data collection resulted in the recruitment of more female participants, thus female related themes predominated my research findings. This study had indicated that male and female NMEs had different priorities. I suspected that I would probably have a different set of emerging themes if I had a different composition of participants in this study.

8.7.1 Comparative study

One strength of this study lies in it being a comparative study, seeking to understand how NMEs learn during the transition phase into academia in two countries. I was therefore able to compare the learning of NMEs who were different in terms of their medical training, ethnicity and workplace cultures. As this study was conducted as a PhD project, with only one researcher conducting the longitudinal qualitative interviews, the study was conducted only in two countries which I selected as the most convenient. Therefore, the research findings only report what NMEs went through in the early stages of their career in Malaysia and the United Kingdom. With a bigger research group and collaboration, this research could be extended to other countries so that the findings would paint a bigger and better picture of what is happening to NMEs during their transition into academia. With a bigger research group, more exhaustive and uniform coding could be developed to overcome coding bias from a single researcher (Ibarra, 1999). Although this issue was addressed through the cross coding exercise which I and Dr Ledger undertook, a larger research group might provide more codes which we may have missed.

My study is the first comparative study looking at the learning processes of NMEs in their transition into academia. Future studies which aim to compare learning processes should consider comparing similar job roles so that it will be easier to study NMEs' learning processes in further depth. Other longitudinal research methods could also be employed to capture the learning of NMEs which otherwise may not have been found in this study, such as learning diaries. Ideally, a study on the learning processes of NMEs should be accompanied by observation of practice. As observation of practice in the hospital was complicated by the requirement for ethical approval from both Malaysian MoH and the NHS, this method was excluded due to the pressure of completing the current research on time. Future research should include practice observation in order to capture how medical educators learn how to teach, and in order to validate interview findings.

8.7.2 Longitudinal qualitative approach

The longitudinal qualitative approach which I employed in this study enabled me to find themes which I would not have been able to find if I had chosen to carry out this study using a different approach. For example, the findings on NMEs' learning progression and professional identity development only emerged during the second and third interviews. Although arguably data on learning progression and professional identity development could be collected retrospectively, it would be more limited to the participants' perspectives. With a longitudinal qualitative approach, I was able to appreciate the learning progression and professional identity development of the NMEs from the NMEs' perspective, on top of my own perspective. It also enabled me to appreciate the importance of personal factors in the decision NMEs made about their career progression.

The prolonged contact through longitudinal data collection also allowed me to develop good rapport and trust with the participants. As the NMEs in this study were mostly female and of child bearing age, they were able to share with me their concerns about balancing career and family life. I believe the willingness of the NMEs to share their worries with me was because I am female, they felt they could trust me and they were aware that I had also once been an NME. This leads me to wonder whether the same findings would emerge if this study were conducted by a male or more senior academic researcher or even someone who is not a medical educator.

This study also faced a similar challenge of participant attrition as reported by Ledger & Baker (2005). In this study, the attrition could be attributed to the short teaching contract of some of the NMEs in the UK and a loss of interest from the participants to be further involved in the study. As I was interviewing NMEs who were also busy with clinical practice, the scheduling of some of the interviews had to be extended to a period of more than six months. Therefore, although the planned longitudinal contact was one year, this study took a longer time to be completed and was conducted for a duration of one and a half years in total.

8.7.3 Face to face interview

In the face-to-face interviews, I was able to meet my participants in their workplace. While waiting for some of the NMEs, I managed to look around the office to see their workplace environment. Before the interview started, I managed to have an introductory chat with each NME to establish rapport. As the interview progressed, I paid careful attention to the body language given by the participants. For example, when a participant reached out for their mug, I knew that they were going to stop talking. In the face-to-face interviews, I perceived that I had obtained genuine answers to the questions I posed to the participants. They did not take a long time to think of appropriate answers, unlike the answers they would have given in self-administered questionnaires, when there would have been an opportunity to edit their answers until they were happy with them (Opdenakker, 2006).

I conducted 2 pilot interviews in the UK before I started my data collection in Malaysia. As I had never previously conducted a qualitative interview, pilot interviews were absolutely necessary for me to practise my interviewing skills. The time spent on conducting the pilot interviews could have been used for other work on the study but I needed that practice to make sure that I conducted the best qualitative interviews I possibly could. It was worthwhile practice.

Having a good command of English is very important in face-to-face qualitative research. There were times when I had problems understanding what my participants in the UK said because they were using colloquial language. I did not have the same problem in Malaysia because if I did not understand what the participants said, I could always use Bahasa Melayu to verify it. In some ways, it would have been easier if I had used an email interview because I could have looked at a dictionary while reading the answers, but then I would have lost the natural encounter and response to the questions. I was aware that my participants might give me a different answer if the interview was conducted via email because they would have more time to think and reflect before they answered the questions. At the

same time however, I would have lost the natural response to the questions I asked. In a face-to-face interview, a last minute cancellation of the appointment also meant a waste of travel time and travelling costs. For example, Aisha had to cancel our interview appointment at the very last minute because she had to attend an emergency in the hospital. I had reached the place where we were supposed to meet by that time. The possibility of last minute cancellations and rescheduling of appointments was expected however, because I was interviewing busy clinicians.

As my mother tongue is not English, I may have missed some soft cues given by the participants during the interviews, which I could have explored further. Only six out of the nine participants in the UK were native speakers of English, while in Malaysia, none of the participants were native speakers of English. However, the non-native speakers all had very good command of English as they taught medical students in English. Other researchers may consider interviewing in participants' mother tongues so that they are more comfortable in expressing their thoughts. The use of English during interviews may have restricted participants who were not native speakers in expressing themselves fully due to a lack of vocabulary. However, in this study, due to the lack of funds to hire a professional translator, I decided to conduct the interviews in English to save time and money on translation.

8.7.4 Telephone interview

The advantages of using telephone interviews in my study included savings in research costs, travelling costs and travelling time. The costs incurred for phone calls were far less compared to the costs I would have accrued if I had travelled to Malaysia and around the UK to conduct interviews. I saved money during follow up interviews with my participants in Malaysia. It was also cheaper and more convenient to use my mobile phone than having to use my fixed line telephone in the office to conduct interviews. I was able to bring my mobile into a meeting room, put it on loudspeaker and conduct the interview without disturbing other people in the office, and having the privacy that I needed. For the face-to-face

interviews, I needed to spend one day for each NME if they worked far away from Leeds. It was difficult for me to conduct face-to-face interviews with two NMEs who worked far away from Leeds on the same day, but it was possible to conduct two telephone interviews on the same day.

Telephone interviews also brought the advantage of allowing me to conduct an interview while one participant was on the move. However, I would not encourage other researchers to repeat this. Jeremy was driving when I conducted the telephone interview with him. I had offered to call him back when he had arrived at his destination but he insisted that I proceed with the interview as he had an appointment to go to when he arrived at his destination. Telephone interviews were also conducted outside office hours as long as this was at the request of the participant. I conducted my telephone interviews with Fatimah during a public holiday, and with Hafizah at 18.30 hours in the evening because that was the timing and date proposed by those participants. The other advantage of conducting telephone interviews, as similar to face-to-face interviews, was that I obtained a natural response to the questions which I posed to my participants. They did not take a lot of time to think thoroughly before they answered my questions.

There were many factors which affected the quality of the data I gathered during the telephone interviews. I realised that I needed to speak more slowly to make sure that the participant could hear my questions clearly before he/she started to answer them. I could not lip read to make out what the participant was saying if I could not hear it properly, and nor could I see the participant's body language to ascertain when the participant was going to start or stop talking. The participants also could not see my body language in making them feel listened to or encouraging them to speak further. The lack of facial expressions in telephone interviews also made it impossible for me to tell if the participant was unhappy or uncomfortable with the topics discussed.

Some words said by the participants were also inaudible during playback. This could be due to the poor mobile signal of the participant or even my own mobile phone. Mobile coverage can be poor during bad

weather, travelling and network congestion. I did not ask for a fixed line number with some of my participants, and this is one factor which I would improve if I were going to conduct a telephone interview in the future. Other factors which affected telephone interviews were the clarity of the participant's voice, the speed of participant's speech, the quality of my audio recording and the environment in which the participant and I were located. Both the interviewer and the participant must be in a quiet place to minimise noise interruption during the interview.

8.7.5 Teaching Perspective Inventory

The TPI was intended to be a tool to assess the teaching perspective of the NMEs in this study due to its established validity and reliability. As some of the participants did not return their TPI results and due to several other challenges that I have mentioned in Chapter 4, the complete TPI results were not available. As a result, NMEs' awareness of their teaching perspectives and whether their teaching perspectives would change as they progressed in their careers could not be established conclusively. The evidence of a mismatch between perspectives and practice as reported by Taylor (2007) was also not available. I was also unable to explore the influence of culture on NME's teaching perspectives as planned.

Despite the challenges I experienced, I believe that the TPI could still be used in future studies which aim to establish the teaching perspectives of novice medical educators and how these perspectives affect their teaching practice. Future studies intending to use TPI with busy clinicians should ask the clinicians to fill in the TPI before starting semi-structured interviews. A printed copy of the TPI should also be carried by the researchers to the interview appointments as an alternative in case there are problems with internet connectivity or the laptop.

8.8 Recommendations for future research

Although my study has contributed an in-depth understanding of the learning processes of NMEs in the transition phase in Malaysia and the UK,

there are still some areas which need to be explored further. Future studies are warranted to bridge the knowledge gaps which have emerged during this study. As the findings from this study cannot be extrapolated to other countries, this study needs to be replicated in other countries to investigate the local work factors which affect the learning processes of NMEs in those places. In this era of globalisation, the identification of local work factors which influence the learning processes of NMEs is important for doctors who wish to cross the border and work in another country. The availability of such information will be useful for doctors to make informed decisions before they decide to migrate and work in that country.

A follow up interview with the participants should be carried out to explore the later career progression of the ACTs, ACFs and CTFs. It would be very useful for medical education in general to know if a short teaching experience during postgraduate training improves trainees' academic and clinical performance increases motivation to pursue a career in academia.

Future research should also be conducted to compare the outcomes for medical graduates who were taught by NMEs and senior academics. The outcome of such research has the potential to explain whether heavy reliance on NMEs to teach medical students can have a negative impact on medical students' learning. The outcome of such research can also help to justify relief of senior academics from administrative and research responsibilities to coach NMEs to be good medical educators. .

Although some female NMEs in this study stated that they wanted more female academic mentors so that they could ask for guidance and support, the readiness of the female academic mentors to provide guidance and support has never been assessed. Future research is needed to ascertain whether female academics are willing to provide guidance and support to female NMEs specifically and to examine how ready these female academic mentors are to share their personal experience in navigating academic career with the NMEs.

The influence of support networks such as life partners and immediate family members on the learning of medical educators merits further in-depth exploration. The support from life partners and immediate family members is necessary in order to achieve balance between family and work and to some extent, support in terms of looking after medical educators' children. The degree to which this type of support influences the learning of medical educators needs to be explored so that appropriate measures to help medical educators may be developed.

Conducting a comparative longitudinal qualitative study alone is very challenging especially when the two countries are thousands of miles apart. Researchers who are interested in conducting a comparative longitudinal qualitative study should do it in groups, preferably one group in one country selected. Comparative longitudinal qualitative methods can also be used to compare between several institutions within the same country. The data analysis in this study was very challenging because the data collected needed to be analysed continuously within participant, across participants, and across the countries at every round of data collection. Working within a group of researchers could therefore be very helpful. Similar with other longitudinal approaches, time is a key factor in conducting longitudinal qualitative study. Future research employing a comparative longitudinal qualitative approach should allocate ample time for the study to be completed, taking into consideration the amount of time needed for data collection and data analysis.

CHAPTER 9

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

9.1 Introduction

This chapter highlights the conclusions which I have drawn from the findings of this longitudinal comparative study, as well as the implications for practice for NMEs and other stakeholders of medical education. The significant findings from this study will be summarised before the implications for practice are presented. The implications for practice are presented separately for Malaysia and the UK, due to the differences in the systems and governance of medical education in both countries. However, some implications are applicable to both countries and these will also be highlighted in this chapter.

9.2 Study Conclusions

The learning processes of NMEs in the transition phase were socially constructed, predominantly in collaboration with other people in the workplace (colleagues, senior colleagues, mentors, students), and to some extent, developed on their own. The NMEs were learning to develop competences in three domains of academia; teaching, clinical practice and research. There were times when the three domains were in conflict with each other. Through social interaction in the workplace, the NMEs were learning the circumstances and processes involved in becoming medical educators, including identifying their learning needs as they progressed further into their career. Empowering NMEs with knowledge and skills regarding how to develop into good educators, for example through exposure to teaching and learning pedagogies, philosophies and methodologies, is therefore crucial during the transition phase.

This study has shown that medical schools are relying heavily on NMEs to teach medical students. Unfortunately, NMEs themselves were not sure

that they were teaching the right way and were relying on their own learning experience as medical students since they were lacking in terms of exposure to teaching and learning philosophies, pedagogies and methodologies, and appropriate senior support. Although some of these NMEs are qualified clinical specialists in their clinical disciplines, they have very limited knowledge and experience of how to teach medical students. They still need guidance during their transition into academia and cannot be assumed to know how to teach just because they are qualified clinical specialists or have accumulated years of clinical practice. The NMEs' personal biography was also found to have a significant influence on their transition into academia. Previous learning and teaching experiences influenced NMEs' perceptions of teaching and subsequently, their teaching practice. Although exposure to poor role models could possibly lead to poor teaching practice, some participants in this study have shown that their exposure to unsatisfactory learning experiences had triggered them to become better teachers (as illustrated by Richard on page 104). NMEs' motivation, gender and religious belief were also found to affect their learning processes.

Due to the multifaceted learning process and multiple workplace learning environments for the NMEs, the concept of learning by participating in a CoP does not fully explain the complexity of NMEs' learning in the workplace. The theory of CoP is useful in describing some elements of NMEs' learning process as well as the collegial and mentoral support received by NMEs through their social interaction in the workplace. However, as the unit of analysis in this study is the learning processes of the individual NME, the refined TL theory was found to be more capable of explaining the learning processes of the NMEs. The refined TL theory was more able to explain the learning undertaken by NMEs at an individual level as well as through group learning in a community of practice.

Although the delivery of medical education has many similarities around the world, this study has shown that local governance factors such as job description and job permanency, culture, and religion, which affected NMEs' working conditions, were different. A lack of job security was found to be an impetus for learning in the UK. Several other factors have also

been identified as influencing the learning processes of NMEs in their transition into academia. Some of these factors had the potential to either support or hinder the learning processes of NMEs in different contexts. Factors identified as supporting the learning processes of NMEs should be enhanced and made accessible to them, while factors identified as hindering the learning processes should be dealt with where possible.

9.3 Implications for practice

9.3.1 Malaysia

Five implications for medical education in Malaysia have been identified in this study. Firstly, structured supervision should be provided to NMEs at the beginning of their career. Although NMEs had completed postgraduate clinical training and qualified as clinical specialists, they had very little knowledge of how to teach the students. They still needed support and guidance in the transition phase to develop their career as medical educators. The lack of structured supervision, as highlighted by Dina, needs the medical school administration's attention. Structured supervision does not mean that each NME should be assigned to one mentor, although this would be the ideal. Acknowledging the constraint of limited manpower at the senior level in most medical schools, having a team of senior academics supervising a group of NMEs may be more appropriate than resorting to one-to-one supervision. Each NME should be made aware of the supervision and support available to them. Several mentors should be made available so that NMEs could consult different mentors for different reasons. The mentors who supervise NMEs should be trained and they must be interested in investing their time and effort to supervise and train NMEs.

Secondly, the trainee lecturers who will become NMEs after completing postgraduate training should be exposed to teaching and learning courses before their postgraduate training. The teaching and learning course could be run during their induction course in the first few weeks of starting their trainee lecturer job. The exposure will benefit trainee

lecturers in terms of improving their teaching skills during postgraduate training. They will also be able to evaluate and appreciate the teaching practices of the universities which they attended for postgraduate training and bring back the good practices to their own medical school.

Thirdly, the Dean of each Medical School needs to arrange an induction programme for NMEs as early as possible. The induction programme could help ease the transition of NMEs into their new career and make them feel welcomed. The induction for their teaching roles and responsibilities should be given by the Dean, Deputy Dean or Head of the Department concerned, to make NMEs feel that their presence is important to the medical school. The induction programme for their service requirements: for example, leave entitlement and job confirmation; should be given by the Human Resource Department. If a face-to-face induction programme is not possible, NMEs should be given comprehensive guidelines, either printed or online, detailing how they can carry out their job, how they can gain access to support from the department and how they can fulfil service requirements for their job confirmation and promotion. The university should also provide platforms for NMEs to support each other within the same university as well as nationwide.

Fourthly, medical schools should look at introducing clinical teaching experience to medical students or junior doctors as one of its elective postings. The exposure gives the potential for identifying future medical educators who could be nurtured as early as possible. Early exposure to teaching experience is also important for junior doctors so that they can assess whether a medical teaching career may suit them or not.

Finally, this study has highlighted that in Malaysia, conflicts between NMEs and their clinical colleagues are common in universities without teaching hospitals. The difference in job description between NMEs and their colleagues from the MoH could be reduced in university hospitals, where the atmosphere of teaching is more valued. This issue is apparent in Malaysia because the MMC does not emphasise teaching as a professional responsibility for all doctors. The current regular meetings between medical educators, representatives of the universities and hospital clinicians should

be continued with the aim of strengthening ties and resolving conflicts. The MMC should also encourage the culture of teaching as a professional responsibility of all doctors in Malaysia, as this could encourage more doctors to teach medical students in clinical settings and reduce the reliance of medical schools on part time educators.

9.3.2 The United Kingdom

In the UK, four implications for medical education have been identified in this study. Firstly, NMEs in the UK need to know how to chart their own career path. They need to be proactive in seeking opportunities for personal and professional development so that they are more competitive in getting jobs which will secure their future. The implementation of the recommendations in The Shape of Training document will see a great change in the medical education system in the UK. NMEs, who will then be the senior medical educators, are the ones who will need to implement the changes to the training system. They need to know how to cope with the changes and prepare for the changes, as it will significantly affect their career as medical educators.

Secondly, medical schools in the UK need to invest more in the training of medical educators, in parallel with its investment in training medical researchers. In order to attract more doctors to become medical educators, the DoE for the UK needs to provide more funds to medical schools so that more permanent posts can be offered. Compared to Malaysia, there was less conflict between NMEs and NHS doctors in the UK because teaching was regarded as every doctor's professional responsibility. However, teaching medical students was still not regarded as having the same merit as conducting research or providing clinical service. This could be problematic and needs to be addressed as some medical educators might neglect their teaching responsibility, might feel burdened by the responsibility, or might lack motivation when their teaching effort is not acknowledged. These outcomes could negatively affect teaching quality, which could further lead to the university being unattractive to medical students. This problem could be addressed by

promoting separate career pathways for teaching, research and clinical service. Not all medical educators are good teachers. They should be given the opportunity to choose their career pathway so that they can excel in their pathway of choice.

Thirdly, the NHS should make teaching posts more attractive by embedding these into clinical training. Embedded teaching posts can potentially attract good educators, who otherwise might be discouraged from applying for a teaching job because it will prolong the duration of their clinical training. Studies into teaching and learning have suggested that good educators are more likely to produce students with better academic achievement (Young et al, 2009). Therefore, efforts should be made to attract good educators to come and teach medical students. This study has also found that the job description for the CTF is not standardised. This lack of a standardised job description adds to the confusion of roles in CTFs during the transition phase. It was also difficult for CTFs to relate to other CTFs on sharing problems and solutions because of their different job descriptions and practice isolation. Therefore, the standardisation of job descriptions, although challenging and perhaps not wholly possible due to local requirements of teaching posts, has the potential for making CTF posts more attractive. More importantly, doctors who are applying for these jobs will know what is expected from the role as well as how it will affect their clinical training and monthly income.

Finally, the NHS should also provide more support to NMEs in their teaching posts. Teaching posts which were offered as out-of-programme-experience posts were seen as unattractive by some doctors who were otherwise interested in becoming medical educators, because of the lack of value given to teaching. The out-of-programme-experience 9 to 5 job for CTF for example, was also seen as delaying their training to become clinical consultants and decreasing their monthly income because there were no on-call commitments attached to the post. In order to encourage more doctors to become interested in teaching jobs, the NHS needs to offer the flexibility of embedding teaching jobs into clinical training to NMEs who wish to do so. When teaching jobs can be embedded in postgraduate clinical training, more doctors are likely to be interested in applying for

teaching jobs because it can boost their curriculum vitae. Therefore, the NHS should offer more ACF posts. Even if these ACFs do not pursue a career in academia, they will be high quality education providers for the NHS because they have the teaching knowledge and skills for them to teach medical students and postgraduate trainees.

9.3.3 Both countries

This study has seven important implications for NMEs' development in both countries. Firstly, medical schools in Malaysia and the United Kingdom need to look at the current teaching system for medical students. At the moment, medical schools in both countries seem to be relying heavily on NMEs to teach medical students, while senior educators and professors are busy doing research to achieve the institution's key performance indicators, or to reach research university status, and are burdened with administrative jobs such as chairing the Ethics Committee. This study has shown that NMEs were not sure whether they were doing the right thing, and that they needed more guidance. Medical schools therefore, need to look at balancing teaching and research excellence. The quest to pursue excellence in research must not be done at the expense of teaching activities and producing quality graduates. After all, these graduates will be looking after our family and us in the future. If we do not produce good medical graduates, will we trust and allow them to treat us later? It is also important for the top management of the faculty to ensure that NMEs' teaching perceptions are in line with the good practices in medical education, in order to provide high quality learning to the students.

Secondly, medical schools in Malaysia and the UK should also look at having a separate promotion track for medical educators who are not interested in clinical research. At present, medical educators are required to conduct research in their clinical or pre-clinical discipline for job promotion. As this study has shown, there are medical educators who are passionate about teaching medical students but who do not have the same passion for conducting clinical or pre-clinical research. For educators who are not interested in conducting clinical or pre-clinical research, this requirement

could be a deterrent for them in pursuing an academic career. With a teaching track promotion, medical educators would need to undertake scholarly research activities. However, they would only need to do research on their teaching practice so that they can create evidence-based teaching practice improvements. The impact of the teaching practice research should be equivalent in merit to that of clinical and pre-clinical research for the purpose of job promotion. In November 2015, the MoHE introduced new promotion tracks for medical educators. In each of the three promotion tracks; teaching, clinical practice or research; different weight is given to the contribution of teaching, clinical practice and research in each track. For example, a teaching track will give more weighting to teaching components and less to clinical practice and research respectively. Similarly, in the UK, the introduction of the Teaching Excellence Framework (TEF) by the Department for Business Innovation and Skills in November 2015 will encourage educational institutions to promote teaching excellence. The TEF will assess every educational institution based on four criteria; 'setting and maintaining academic standards, provision of learning opportunities, provision of information about learning opportunities and enhancement of quality of students' learning opportunities' (p 24). In the second year of TEF implementation, institutions with higher TEF level will be able to access more financial incentives. The introduction of the ASPIRE-to-Excellence Award by the Association for Medical Education in Europe (AMEE) is also an effort to place teaching excellence in parallel with research excellence (http://www.aspire-to-excellence.org/). This award recognises institutions that are excellent in the categories of student assessment, student engagement, social responsibility and accountability or faculty development. Institutions can apply for the award in any of the categories or several categories at the same time. It is hoped that with continuous improvement of the medical educators' working scheme in Malaysia, the introduction of TEF in the UK and the ASPIRE-to-Excellence award, the quality of education provided to medical students will also improve.

Thirdly, NMEs need to be proactive, despite the support and guidance available to them from their colleagues, mentors and department. They need to be proactive in seeking knowledge which could improve their

practice in academia. In developing web-based learning for example, their mentors might not be the best person whom they could learn from. The NMEs need to be able to identify other learning resources other than their colleagues and mentors, such as online resources and attending appropriate training courses.

Fourthly, the NMEs should also be given more opportunities to develop a good network of support among themselves. The clinical teaching fellow network and the TASME's (Trainees in the Association for the Study of Medical Education), for example, are good platforms for support and networking for NMEs in the UK. These platforms of support should be initiated and developed in Malaysia as well. Most importantly, the NMEs should be made aware of the supports available to them and how they can gain access to the support system.

Fifthly, this study has highlighted that some NMEs had more than one motivation to become medical educators. Their motivations were a combination of intrinsic and extrinsic motivation or predominantly extrinsic. It has been shown in the literature that an individual's motivation plays a significant role in their workplace learning, intrinsic motivation being the driving factor for continuous improvement and lifelong learning effort. Therefore, efforts should be made to make teaching jobs more attractive and competitive in order to attract more doctors who are motivated to become medical educators.

Sixthly, the findings from this study are important to medical graduates who are interested in teaching careers. Many medical graduates are unaware of the factors which could influence their career before they decide to work as NMEs, either in Malaysia or the UK. The findings from this study will be beneficial to these doctors when they want to decide if a teaching career suits them and where to work after their graduation. For Malaysian medical students graduating from UK medical schools, they need to weigh up the pros and cons of working in both countries in terms of the obstacles and available support, as it will have significant effect on their career in medical education.

Finally, the findings from this study are useful to foreign medical schools with a branch campus in Malaysia. They will also be useful for other international medical schools looking at opening branches in Malaysia. These universities need to be aware of the job security which they need to offer to medical educators in Malaysia if they decide to employ them. If job permanency is not possible, competitive remuneration needs to be offered to attract local medical educators. The conditions of service for local medical educators were not available in the foreign medical schools' website in Malaysia. It is difficult and expensive to run a branch campus without local medical educators to teach the students or with over-reliance on part time medical educators. A lack of job security may discourage local medical educators from working there.

9.3.4 Implications for female NMEs

Medical education providers in both countries should take the need for female role models by female NMEs seriously. These NMEs should be given the support they need so that female educators are retained within academia. With the lack of suitable female academic mentors in medical education, it is impossible to provide one-to-one support for female NMEs. The female academic role modelling may therefore be better carried out as a seminar or a forum. The seminar or forum would have an added advantage for the female NMEs because they would get to meet other NMEs who share their concerns about raising a family. The environment of a seminar or a forum is also less intimidating compared to a one-to-one session. However, if some NMEs still need a one-to-one session with a female academic mentor, the department should try their best to facilitate this. For female NMEs who are worried that raising a family will hinder their learning progression, talking to other female academics who did not find raising family an obstacle would alleviate their worry. They could still carry on with their academic work during maternity leave, but that is entirely up to them to decide after weighing up the pros and cons of their decision.

In the UK, higher education institutions are committed to supporting women in sciences in their career, and especially academics, through the

Athena SWAN charter. Through membership of the Athena SWAN charter, the institutions are committed to addressing gender inequalities and the underrepresentation of women in science, technology, engineering, maths and medicine (ECU, 2015). The female NMEs in the UK therefore, should be aware of the charter and how their institution is committed to supporting them in their academic career. Recently, the Malaysian Ministry of Women's Affairs has revealed plans to offer flexible working hours for those officers who receive an annual appraisal mark of more than eighty five percent (Utusan, 2015). This effort is being introduced to help female officers to have a better work-life balance. The academic institution in Malaysia should also provide a similar support to female NMEs in an effort to reduce the numbers of female academics leaving academia due to work-life imbalance.

To conclude, this study has shown that NMEs are struggling in their transition from clinical practice into academia. On top of that struggle, NMEs are developing competencies in three domains; teaching, clinical practice and research. The NMEs were found to be teaching medical students without knowing the best way to carry out their teaching roles and responsibilities and were mostly relying on their past experience of learning in medical schools. Factors which supported or hindered the learning processes of the NMEs have been identified and it was found that some of these factors were localised to a country's context. The findings from this study have provided evidence to justify the need for medical education to pay more attention to NMEs, and particularly so in the transition phase. When NMEs are given the attention and support which they rightly deserve, they are likely to develop into competent medical educators who will improve the delivery of medical education.

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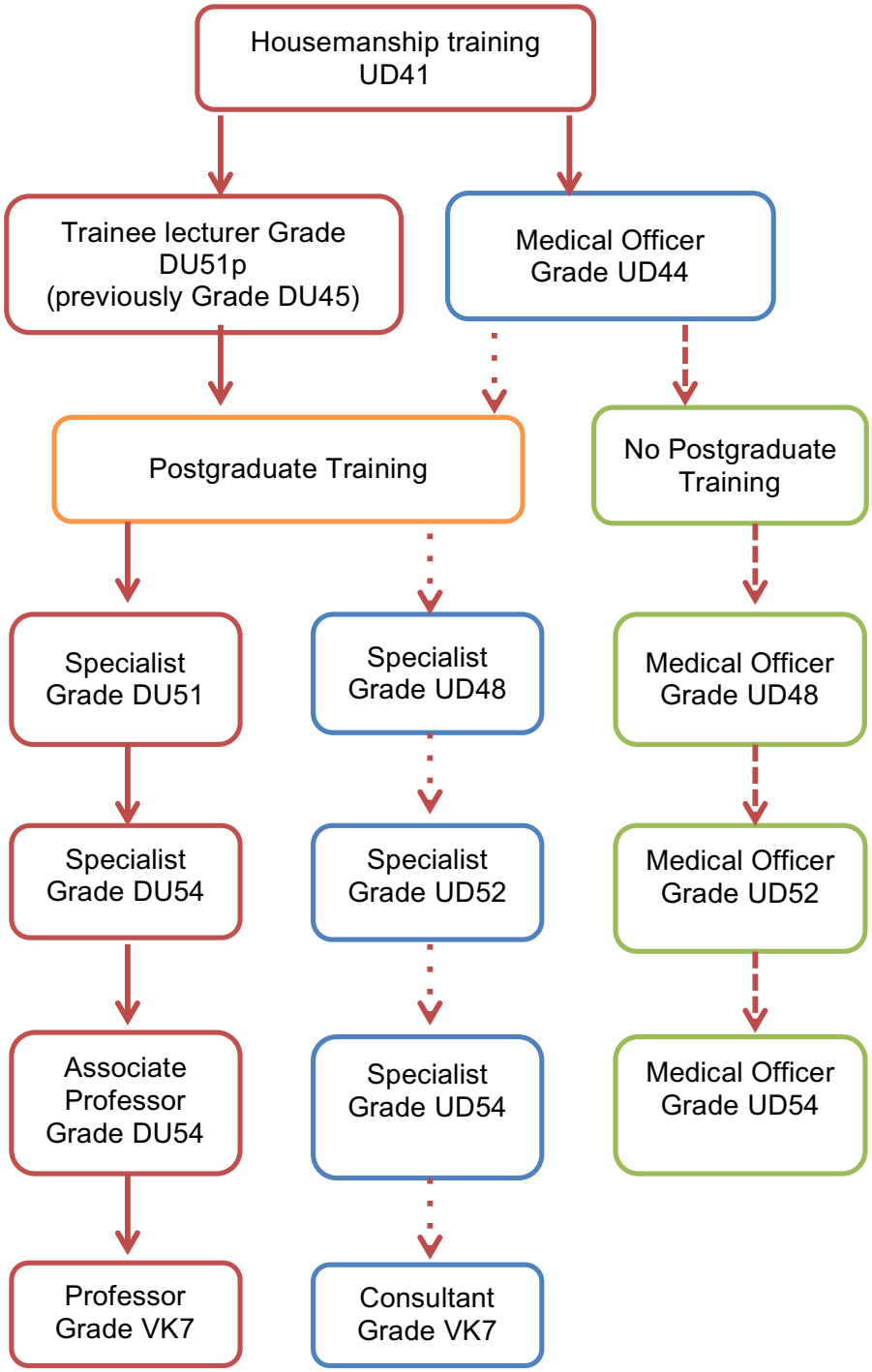
APPENDICES

APPENDIX 1: The pathways to become medical educators in Malaysia

	PATHWAY 1 (Trainee Lecturer Scheme)	**PATHWAY 2** (Specialty training by Royal Colleges Membership examinations)	**PATHWAY 3** (Specialty training under Masters Programme)
Compulsory government service	Two years during housemanship training. One more year of service can be done as a trainee lecturer. *Grade UD41 for the first two years then grade DU51p at the third year of service onwards.*	Three years in government service. The first part of the membership examination can be completed during housemanship training. *Grade UD41 for the first two years then grade UD44 at the third year of service onwards.*	Three years in government service. *Grade UD41 for the first two years then grade UD44 at the third year of service onwards.*
Postgraduate training in chosen medical disciplines	4 years of specialist training *Grade DU51p*	The completion of the second part of membership examination and training duration varies according to each chosen discipline. *Grade UD44 then UD48*	4 years of specialist training *Grade UD44 then UD48*
Upon qualifying as a clinical specialist	Gazetted as a specialist and qualified to become medical educators. *Grade DU52*	Gazetted as a specialist and qualified to become medical educators. *Grade DU52*	Gazetted as a specialist and qualified to become medical educators. *Grade DU52*
Minimum time required to qualify as clinical specialist	7 years	6 years	8 years

Grade UD refers to the salary grade of doctors working with MOH. Grade DU refers to the salary grade of medical educators working with MOHE. The small letter 'p' after the grade refers to medical educators who are still under probation.

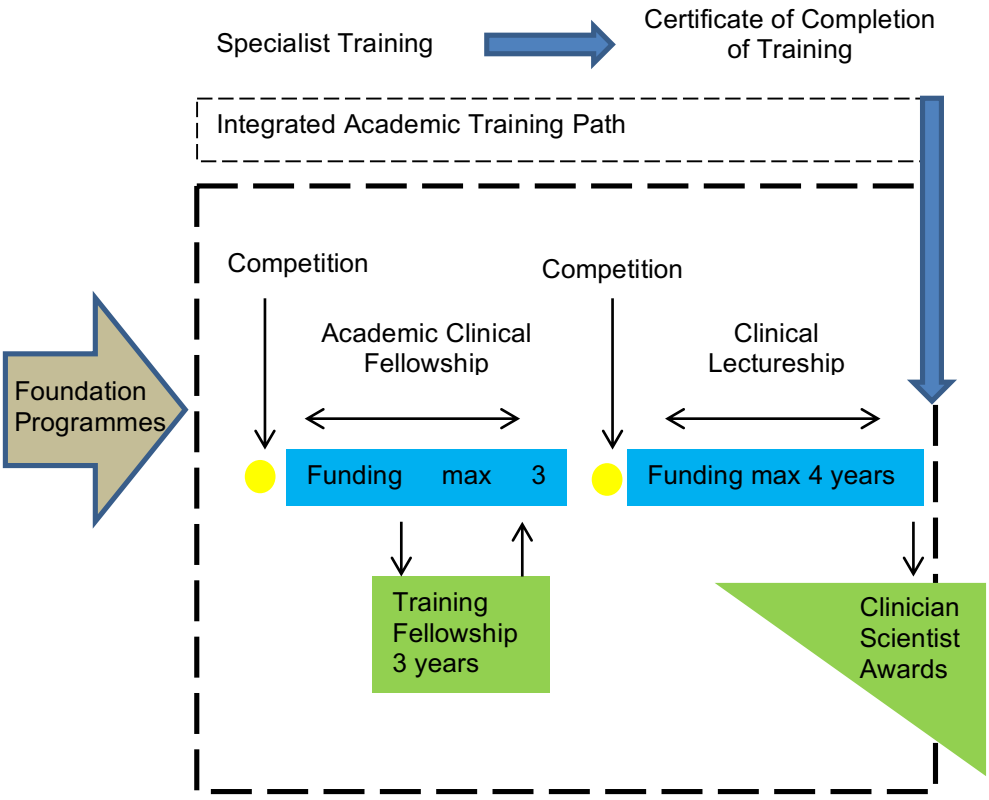
APPENDIX 2: Career promotion pathways for medical educators and other doctors in Malaysia



APPENDIX 3: Time-based promotion for medical educators in Ministry of Education and other doctors in the Ministry of Health, Malaysia

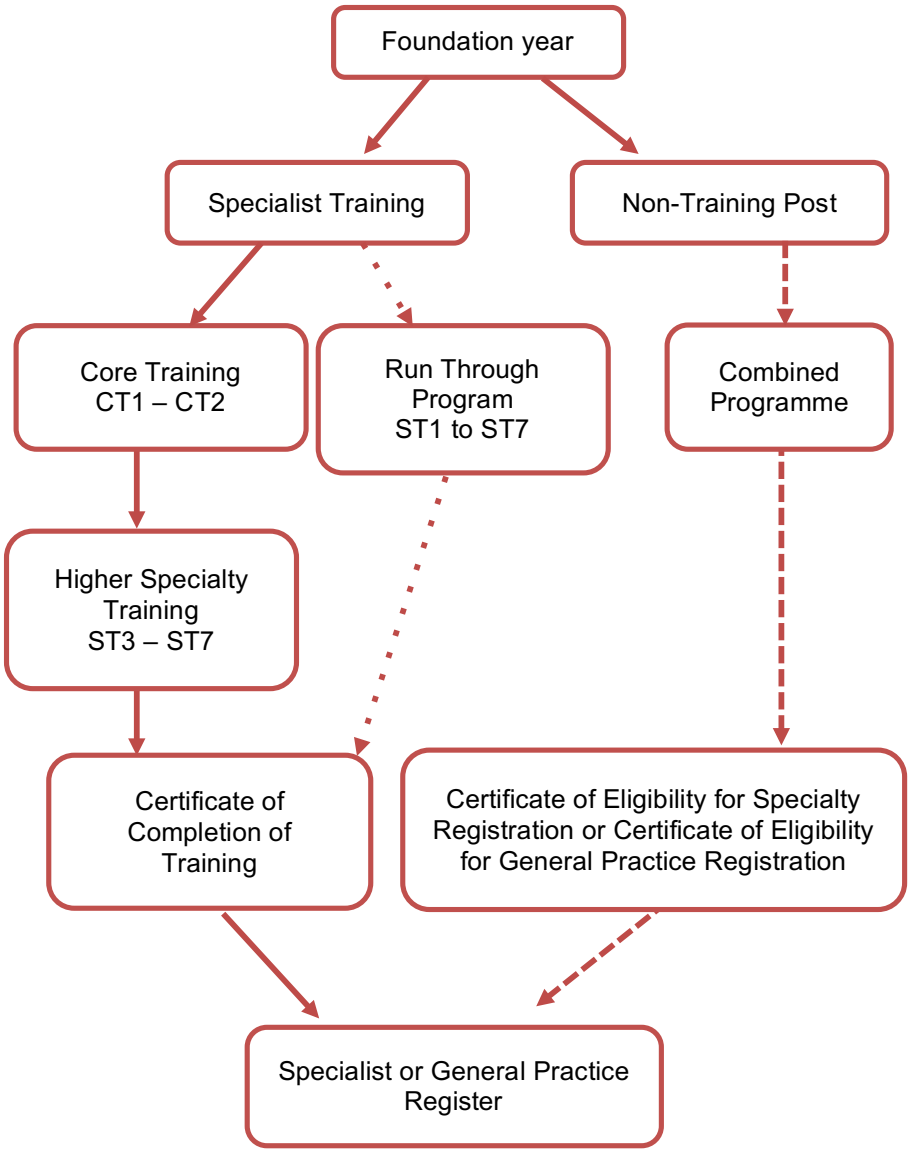
Promotion	Qualification		
	Medical Educator (Trainee Lecturer Scheme)	Clinical Specialist	Non-specialist
Grade 41 –> Grade 44	2 years at Grade UD41		
Grade 44 –> Grade 48	From Grade UD41 to Grade DU51p DU51p to DU51* Job confirmation in DU51p post Minimum of 3 years in Grade DU51p	3 years at Grade UD44 or date gazzeted as a specialist, whichever earlier.	3 years at Grade UD44
Grade 48 –> Grade 52		2 years at Grade UD48 or availability of post, whichever earlier, subject to MOH Expert Review Panel recommendations.	4 years at Grade UD48 or availability of post, whichever earlier.
Grade 52 –> Grade 54	DU51 to DU54* Qualified as a clinical specialist 4 years in Grade 51	2 years at Grade UD52 or availability of post, whichever earlier, subject to MOH Expert Review Panel recommendations.	3 years at Grade UD52 or availability of post, whichever earlier.
Grade 54 onwards	DU54 to Associate Professor Fulfilling the requirements of each university Job Promotion Board (not subjected to availability of post) Associate Professor to Professor Fulfilling the requirements of each university's Job Promotion Board (not subjected to availability of post)	Based on the recommendations of MOH Expert Review Panel.	Subject to availability of post.
Time to reach Grade 54 from date of appointment	9 years	9 years	12 years

APPENDIX 4: The integrated clinical academic career pathway in the United Kingdom



(Source: New academic training pathways for medical and dental graduates: A guide to programmes starting on or after 1st August 2007, Department of Health, Welsh Assembly Government)

APPENDIX 5: The Training Pathways for Doctors in the United Kingdom



Source: A Reference Guide for Postgraduate Specialty Training in the UK, May 2014 (p.22)

APPENDIX 6: Ethics Approval from Malaysia

KEMENTERIAN PENGAJIAN TINGGI MALAYSIA
BAHAGIAN PERANCANGAN DAN PENYELIDIKAN
ARAS 13, NO. 2, MENARA 2, JALAN P5/6, PRESINT 5
62200 WILAYAH PERSEKUTUAN PUTRAJAYA
TEL : 03-8870 5080 FAX : 03-8870 6809 WEB : http://www.mohe.gov.my

Ref. : KPT.R.620 – 1/1/3 Jld. 18 (41)
Date : 26 April 2012

YBrs. Dr. Suhaila Sanip
34A Ash Grove
LS6 1AY Leeds
West Yorkshire
United Kingdom

(Tel: +447912627474)

Dear Sir/Madam,

PERMISSION TO CONDUCT RESEARCH IN IPTA/ IPTS/ POLYTECHNIC/ COMMUNITY COLLEGE/ AGENCY/ DEPARTMENT/ DIVISION IN MINISTRY OF HIGHER EDUCATION MALAYSIA

With all due respect, reference is made to the above.

2. I am happy to inform YBrs. Dr. that your application to conduct a research titled **"Back to School to Teach: The Transitional Learning Process of Medical Educators in Malaysia and the United Kingdom"** has been approved.

3. This approval is based on the research proposal and research instrument that YBrs. Dr. submitted to this division. **The approval to recruit research participants must be obtained from Vice Chancellor/ Rector/ President/ Chief Executive/ Director/ Dean of Faculty in IPTA/ IPTS/ Polytechnic/ Community College/ Agency/ Department/ Division concerned.**

4. Please submit to this Division, a copy of your research report once the research has been completed. Please be informed that approval must be obtained from this Division if any part of the research findings is going to be presented at any forum or seminar or announced to the mass media.

Thank you.

Yours sincerely,

(SITI NUR BALQISH BINTI AMINUDDIN)
Planning & Research Division
On behalf of the Secretary-General
Ministry of Higher Education Malaysia

APPENDIX 7: Ethics Approval from EDREC

Faculty of Medicine and Health
Research Office

Room 10.110, Level 10
Worsley Building
Clarendon Way
Leeds LS2 9NL

T (General Enquiries) +44 (0) 113 343 4361
F +44 (0) 113 343 4373

UNIVERSITY OF LEEDS

Dr Suhaila Sanip
PhD Student
Leeds Institute of Medical Education
Room 7.09 Worsley Building
Clarendon Way
University of Leeds
Leeds, LS2 9NL

06 July 2012

Dear Dr Sanip

Ref no: **EDREC/11/036**

Title: **Back to School to Teach: The Transitional Learning Process of Medical Teachers in Malaysia and the United Kingdom.**

I am pleased to inform you that the above research application has been reviewed by the EdREC committee and I can confirm a favourable ethical opinion on the basis described in the application form, protocol and supporting documentation.

Please notify the committee if you intend to make any amendments to the original research as submitted at date of this approval. This includes recruitment methodology and all changes must be ethically approved prior to implementation. Please contact the Faculty Research Ethics and Governance Administrator for further information (fmhuniethics@leeds.ac.uk)

Ethical approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

I wish you every success with the project.

Yours sincerely

Dr John Sandars
Chair, EdREC

APPENDIX 8: Letters to the Deans

UNIVERSITY OF LEEDS

Leeds Institute of Medical Education
Medical Education Unit
University of Leeds
Worsley Building
Clarendon Way
Leeds LS2 9NL

22nd May 2012

Y.BHG. PROF. DR. MOHAMMED FAUZI ABDUL RANI
Dean
Kuliyyah Perubatan
Universiti Islam Antarabangsa Malaysia
Jalan Istana, Bandar Indera Mahkota
25200 Kuantan
Pahang

Through,

Y.BHG. PROF. DATO' DR. NIK MOHD NASRI NIK ISMAIL
Chairman, Councils of Deans of Public Medical Faculties
Dean, Faculty of Medicine & Health Sciences
Universiti Sains Islam Malaysia
Tkt 13, Menara B, Persiaran MPAJ, Jalan Pandan Utama, Pandan Indah
55100 Kuala Lumpur.

Dear Y. Bhg. Prof. Dato'/ Dr.,

PERMISSION TO CONDUCT RESEARCH ON NOVICE MEDICAL TEACHERS

Reference is made to the above.

2. My name is Dr Suhaila Sanip and I am a Senior Lecturer in Medical Education from Universiti Sains Islam Malaysia. I am currently pursuing my PhD degree at Leeds Institute of Medical Education, University of Leeds, United Kingdom. My research project is looking at the transitional learning process of novice medical teachers in Malaysia and the United Kingdom. The research will involve collecting data through face to face interview, filling in Teaching Perspective Inventory questionnaire and practice observation of teaching session (when applicable). This comparative research will be conducted in Malaysia and United Kingdom. Further information about this research is attached as Information Statement in Appendix 1.

3. The application to conduct research on tertiary education centres in Malaysia has been submitted to the Ministry of Higher Education, Malaysia and it had been approved. The ethical approval applications have also been submitted to University of Leeds' Research Ethics Committee and NHS R&D Ethical Committee. The approval from MOHE, Malaysia is attached in this letter as Appendix 2. Therefore, I would like to seek your kind consideration and grant me permission to recruit novice medical teachers from your institution and conduct this research at your premise. I will be supervised by Dr. Susan Kilminster, Prof. Dr. Trudie Roberts and Dr Naomi Quinton from University of Leeds throughout the duration of this research.

4. If you grant me the permission to conduct this research at your premise, may I also have the list of medical teachers employed from January 2012 onwards with their contact details to be recruited as my research participants? I would feel very much grateful if you can send their names and contact details to my email address.

5. Your cooperation in this matter is highly appreciated. If you have further question about this research, you can contact me through email at umssan@leeds.ac.uk or mobile phone +447912627474. Alternatively, you can also contact my principal supervisor through email at S.Kilminster@leeds.ac.uk or phone +441133431655.

Thank you.

Yours sincerely,

DR SUHAILA SANIP
MD (UKM), MMedEd (Sydney)
PhD Student
Leeds Institute of Medical Education
University of Leeds
7.09 Worsley Building, Clarendon Way
Leeds LS2 9NL, West Yorkshire, United Kingdom

UNIVERSITY OF LEEDS

APPENDIX 9: Participant's Invitation Letter

Dear Dr. (Participant's full name),

INVITATION TO PARTICIPATE IN A STUDY LOOKING AT THE LEARNING PROCESS OF NEW MEDICAL ACADEMICS

I am a PhD student from University of Leeds and I am carrying out a research project under the approval of Ministry of Higher Education Malaysia and University of Leeds' Medicine and Dentistry Education Research Ethics Committee. As I am looking at the learning processes of new academics, I would like to interview medical academics who have just started their career like your good self.

The Dean of your faculty gave me your name and address as they thought you might be interested in sharing your opinion and experiences with me in my research project. I enclosed herewith the information statement and consent form for you to look at so that you can make your informed decision about taking part in my research or otherwise.

I will be contacting you again in one week's time to find out about your decision in this matter. If you decide not to take part in this research and do not want me to contact you in one week time, please reply to this email by typing NOT INTERESTED as the email subject. If you decide that you do not want to participate in this research, please be rest assured that your decision will not be communicated to the Dean of your medical school.

I hope you find my research project interesting and I look forward to meeting you soon.

Yours sincerely,

SUHAILA SANIP

APPENDIX 10: Participant Information Statement

The title of the research project

The title of the research project is "*Back to School to Teach: The Transitional Learning Process of New Medical Academics in Malaysia and the United Kingdom".*

Invitation paragraph

You are cordially invited to participate in a research project. Before you make your decision, it is important for you to understand why this research is carried out and what it will involve. Please take some time to carefully read the following information. You may discuss with others if you wish to. You can also ask me if there is anything you need clarification for or you simply need more information before you can decide. Please take some time to decide whether you wish to take part or otherwise.

What is the purpose of the project?

Medical academics in general did not receive much formal educational training at the early stage of their career. This research project is carried out to study how new medical academics learn during the transitional phase from being novice to becoming expert medical academics. This research will be carried out over one year period in Malaysia and the United Kingdom.

Why have I been chosen?

You have been chosen because you have just started your career as a medical academic. There will be other academics who will take part in this research.

Do I have to take part?

Your participation in this research is totally on a voluntary basis. If you decide to participate in this research, you will be given this information sheet to keep and an informed consent form to sign. Even if you have decided to participate and signed the informed consent form, you can still withdraw at any time without having to give any reason. Your withdrawal from the research will not affect any benefits that you are entitled to in any way.

What will happen to me if I take part?

This research will be carried out over one year period and it will involve three interview sessions with each research participant. Two of the interview sessions that are at the beginning and at the end of the study period will be conducted face-to-face. The interview at the middle of the study period will be conducted either through telephone or Skype call. During the interview session, you will be asked open ended questions so that you have your freedom to express your opinion. The first and third interview session will also require you to fill in the Teaching Perspective Inventory (TPI). This exercise will be done towards the end of the interview session. TPI is an established questionnaire developed by Daniel D. Pratt and John B. Collins from University of British Columbia. This questionnaire is looking at the teaching perspectives of teachers and it has been carried out across multiple disciplines other than medicine. You will have to email the result of your TPI to the researcher for official record and further analysis to see your dominant and recessive teaching perspectives.

What are the possible disadvantages and risks of taking part?

The only possible disadvantage or risk from taking part in this research is that you have to spend some of your precious time to answer the interview questions.

What are the possible benefits of taking part?

The possible benefit that you can achieve by participating in this research is you have the opportunity to contribute to the knowledge of how new medical academics learn during the early stages of their career until they become expert medical academics. You can also benefit from reflecting at your own teaching practice and learning process during and after the study period.

Will my taking part in this project be kept confidential? What will happen to the results of the research project?

All data collected in this research will be kept strictly confidential. All interview conversation transcribed will be keep in an encrypted format. You will also be anonymized when the result of this research project is presented in conferences or published in journals or equivalent.

What type of information will be sought from me and why is the collection of this information relevant for achieving the research project's objectives?

You will be required to give details of your personal background and your opinion on how you learn to become expert medical academics at the beginning of your career, six months after the first interview (online) and also one year after the first interview. You will also be asked to fill in TPI form online in front of the researcher. The data you provided will help the researcher to understand the learning process of new medical academics as they move towards becoming expert medical academics.

Will I be recorded, and how will the recorded media be used?

The face-to-face interview sessions will be audio-recorded using a digital tape recorder so that the conversation can be recorded and typed verbatim. The interview session using telephone or Skype call will also be recorded for transcription purposes. Only the transcribed data will be used for data analysis and presentation of results.

Who is organising/ funding the research?

This study is carried out to fulfill the requirement for PhD in Medical Education at University of Leeds, United Kingdom.

Contact for further information

If you need further clarification or information regarding this research, please feel free to contact the following:

Researcher: Dr Suhaila Sanip
PhD Student
Leeds Institute of Medical Education
Room 7.04, Level 7, Worsley Building, Clarendon Way
LS2 9NL Leeds, West Yorkshire, United Kingdom
Email: umssan@leeds.ac.uk
Telephone: +447912627474

Supervisors: Dr Susan Kilminster
Leeds Institute of Medical Education
Room 7.04, Level 7, Worsley Building, Clarendon Way
LS2 9NL Leeds, West Yorkshire, United Kingdom
Email: S.Kilminster@leeds.ac.uk
Telephone: +441133431655

Professor Trudie Roberts
Leeds Institute of Medical Education
Room 7.04, Level 7, Worsley Building, Clarendon Way
LS2 9NL Leeds, West Yorkshire, United Kingdom
Email: t.e.roberts@leeds.ac.uk
Telephone: +441133431657

Dr Naomi Quinton
Leeds Institute of Medical Education
Room 7.04, Level 7, Worsley Building, Clarendon Way
LS2 9NL Leeds, West Yorkshire, United Kingdom
Email: N.D.Quinton@leeds.ac.uk
Telephone: +44113 3434911

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APPENDIX 11: Participant Consent Form

Title of Research Project: Back to School to Teach: The Transitional Learning Process of New Medical Academics in Malaysia and United Kingdom

Name of Researchers: Dr Suhaila Sanip, Dr Susan Kilminster, Prof. Trudie Roberts, Dr Naomi Quinton

	Add your initials next to the statements you agree with
1. I confirm that I have read and understand the information sheet dated [_____] explaining the above research project and I have had the opportunity to ask questions about the project.	
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline by contacting any of the researchers below: *Dr Suhaila Sanip +447912627474* *umssan@leeds.ac.uk* *Dr Susan Kilminster +441133431655* *S.Kilminster@leeds.ac.uk* *Prof Trudie Roberts +441133431657* *t.e.roberts@leeds.ac.uk* *Dr Naomi Quinton +441133434911* *n.d.quinton@leeds.ac.uk*	
3. I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research. I understand that my responses will be kept strictly confidential.	
4. I agree for the data collected from me to be used in relevant future research.	
5. I agree to take part in the above research project and will inform the lead researcher should my contact details change.	

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature

*To be signed and dated in the presence of the participant.

APPENDIX 12: Interview Guide 1

Specific questions will be phrased as appropriate depending on the discussion.

1. Can you describe how your typical day at work looks like?
2. What was it like moving to this job? How does this compare to the moves you made before in your medical career? What makes you decide to be a clinical educator? (e.g change of workplace, moving to new house, new state etc, motivation etc)
3. Do you remember your first day here? Best thing and worst thing? Why? How do you think your first day experience here can be improved?
4. Do you remember your first time teaching the student? What can you remember most about that day? Why? If you were given the opportunity to turn back time, what could you have done to improve your first experience teaching the student?
5. Did you do anything to prepare for this clinical educator role? If yes, who do you look up to? (asking senior colleagues, training and career as clinical educator to date – where, when, what …etc)
6. What is your expectation from the university? From other people (your colleague? Spouse? Family?) What kind of assistance do you think is necessary for you to make your experience as clinical educator to be smoother?
7. Do you ever ask anybody else for help? Who? How do you get help? Who? (teaching issues? process/admin issues?) How do you balance your work need and your family's need?
8. Is there anything else you want to tell me about your role as a clinical educator? What helped or hindered you in this change in your work?

APPENDIX 13: Interview Guide 2

Specific questions will be phrased as appropriate depending on the discussion.

1. How are you getting on with your teaching responsibility since the last six months?
2. Have you been given any new responsibility? How confident are you in tackling the new responsibility? How do you learn how to tackle it?
3. Have you managed to overcome any challenges you described in the last interview? Can you describe how you overcame the challenges? Have you experienced any new difficulty in your job?
4. Have you found any new form of support in your job?
5. Can you describe what part of your clinical training helps you to prepare for your academic job?
6. Have you identify any learning needs in your career?
7. Ask specific follow up questions for each participant.
8. Is there anything else you want to tell me about your role as a clinical educator?

APPENDIX 14: Interview Guide 3

Specific questions will be phrased as appropriate depending on the discussion.

1. How are you getting on with your teaching responsibility since the last six months?
2. Have you been given any new responsibility? How confident are you in tackling the new responsibility? How do you learn how to tackle it?
3. Have you managed to overcome any challenges you described in the last interview? Can you describe how you overcame the challenges? Have you experienced any new difficulty in your job?
4. Have you found any new form of support in your job?
5. Have you experience any role conflict? Can you describe it?
6. Can you describe what part of your clinical training helps you to prepare for your academic job?
7. Have you identify any other learning needs in your career?
8. Can you describe your plan for the future in your career?
9. What would be your advice for other doctors who are interested to becoming NMEs?
10. Ask specific follow up questions for each participant.
11. Is there anything else you want to tell me about your role as a clinical educator?