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University of Southampton

Faculty of Arts and Humanities

Modern Languages and Linguistics

**Pre-Service Teacher Cognition and Practices in Malaysian Secondary School Teacher
Education: How Trainee ESL Teachers Experiment with Multiliteracies Pedagogy**

By

Haziqah Zulaikha Binti Aris

ORCID ID 0000-0002-8335-1556

Thesis for the degree of Doctor of Philosophy

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Abstract

Faculty of Arts and Humanities

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Pre-Service Teacher Cognition and Practices in Malaysian Secondary School Teacher
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This thesis investigates pre-service teachers' cognition and practices upon the introduction of a new teaching pedagogy during a short, focused training held in their teacher education programme. Additionally, it looks at the relationship between their cognition and practices embracing the new teaching approach. Even though there has been an increased interest in the study of teachers' cognition research over the decades, studies on the cognition of language teachers on the uptake of a new teaching pedagogy mainly focused on in-service teachers. Studies on the cognition of pre-service teachers upon the uptake of an innovative practices remain limited, particularly research into teachers with little or no experiential background in teaching and in the context of a short-focused training.

In light of the rapid expansion of technology and the impact of globalization, the Malaysian education system, like many other countries, was aware of the importance of equipping its schoolchildren with the necessary skills, such as improving (English) language skills and digital literacy, to become global citizens of the 21st century. Consequently, Malaysia has joined the global education policy phenomena of introducing curricular innovations and reforms aligned with developing 21st century learning. The implementation of such innovation was, however, more problematic. Most secondary ESL classrooms were struggling to adopt different ways of teaching and learning as well as instruction in digital skills. Malaysian scholars have suggested that multiliteracies pedagogy might be helpful to the national agenda, improving English teaching and learning in Malaysian schools. While there has been a vast amount of research on this approach from various perspectives, there has been little research done on pre-service teacher cognition and multiliteracies pedagogy.

Therefore, this study aims to explore pre-service teacher cognition on multiliteracies pedagogy introduced in a short, focused training held in their teacher education programme; to investigate their implementation of the pedagogy in real classrooms during their teaching practicum; and to

examine the relationship between their cognition and practices with respect to multiliteracies pedagogy. The mental lives and instructional practices of six pre-service teachers were captured through a qualitative case study. The six pre-service teachers were from a four-year teacher education programme, Teaching of English as a Second Language (TESL) course for secondary education, at International Islamic University Malaysia (IIUM). The data were gathered from semi-structured interviews, classroom observation and document analysis. The outcome provides interesting insights into the evolving cognition and practices of the six pre-service teachers, factors that encourage the adoption of the pedagogy, and impediments that limited their practices in implementing the pedagogy and putting the theory into practice. This study also sheds light on the relationship between their cognition and actual practices in relation to multiliteracies pedagogy.

The findings suggest that the pre-service teachers had developing awareness on the principles underlying the characteristics of multiliteracies pedagogy but their level of understanding varied. They were aware of the characteristics of multiliteracies pedagogy elements such as the knowledge processes, multimodality, learner diversity as well as the roles of teachers and students in a multiliteracies classroom. Most of their conceptualizations/ understandings were congruent with the theory of multiliteracies pedagogy presented in the workshop but in some cases, inconsistencies were also evident. Some teachers were able to successfully implement multiliteracies pedagogy in their instructional practices. This is evident in their use of various knowledge processes, multimodal representations, diversity, and agency even though their interviews revealed only a partial awareness of some of the main tenets of multiliteracies pedagogy. Their instructional practices mirrored to a certain extent the practices of multiliteracies pedagogy even though the degree of application varied. The findings also reveal that the relationship between the pre-service teacher cognition and practices are complex, dynamic and interdependent. It was found that contextual and affective factors are key influences in the translation of cognition into practices. Meanwhile, the affective factors appear to be crucial in mediating the extent to which the pre-service teachers practiced multiliteracies pedagogy.

This study hopes to broaden the understanding of the complexity of teacher cognition upon the introduction of new ideas and the appropriacy of short, focused pre-service teacher education course to support cognitive development of teachers. The potential impacts of the study include understanding the factors that mediate the uptake of the innovative practices which confirmed and supported those of previous studies.

Table of Contents

Table of Contents	i
Table of Tables	vii
Table of Figures	ix
Research Thesis: Declaration of Authorship	xi
Acknowledgements	xiii
Definitions and Abbreviations	xv
Chapter 1 Introduction	1
1.1 Introduction.....	1
1.2 Rationale.....	1
1.3 Aims of The Study.....	4
1.4 Significance of The Study	5
1.5 Overview of The Thesis	6
Chapter 2 English Language Education in Malaysia	9
2.1 Introduction.....	9
2.2 A Snapshot of Malaysia	9
2.3 Overview of Malaysian English Language Policy.....	9
2.4 Overview of Malaysian English Language Curriculum	11
2.5 English Language Teacher Education in Malaysia: Training and Development.....	14
2.6 Summary	15
Chapter 3 Language Teacher Cognition	17
3.1 Introduction.....	17
3.2 Language Teacher Cognition	18
3.3 Language Teacher Cognition Framework.....	22
3.4 The Cognition of Pre-Service Language Teacher.....	25
3.4.1 The Influence of Prior Language Learning Experiences and Beliefs	25
3.4.2 The Impact of Pre-Service Teacher Education	28
3.5 The Relationship between Teacher Cognition and Classroom Practices.....	30
3.6 Implications of Language Teacher Cognition Framework for This Study	31

Table of Contents

3.7	Summary	33
Chapter 4	Multiliteracies Pedagogy	35
4.1	Introduction	35
4.2	The Multiliteracies Theory	36
4.2.1	Knowledge Processes.....	37
4.2.2	Multimodality	43
4.2.3	Learner Diversity	45
4.2.4	Role of Teacher and Learner	45
4.3	Multiliteracies Pedagogy in Malaysian Context.....	46
4.4	Multiliteracies in Language Teacher Education.....	47
4.5	Implications of Multiliteracies Pedagogy for This Study	48
4.6	Summary	49
Chapter 5	Methodology	51
5.1	Introduction	51
5.2	Research Summary	51
5.3	Research Paradigm	52
5.4	Research Design.....	54
5.5	Research Context	55
5.5.1	Site of Research	55
5.5.2	Research Participants.....	57
5.6	Data Collection.....	58
5.6.1	Multiliteracies Workshop	63
5.6.2	Semi-structured Interviews	68
5.6.3	Classroom Observation.....	69
5.6.4	Documentary Data.....	70
5.7	Data Analysis.....	71
5.7.1	Semi-structured Interviews	71
5.7.2	Classroom Observation.....	73
5.7.3	Documentary Data.....	74
5.7.4	Transcription and Translation.....	74

5.8	Trustworthiness.....	75
5.9	Ethics of the Study.....	77
5.10	Summary	78
Chapter 6	Findings	79
6.1	Introduction.....	79
6.2	Pre-service Teacher Cognition – Prior Learning Experiences	79
6.2.1	Awareness of Technological Evolution	80
6.2.2	Prior Experiences of Learning.....	85
6.2.3	Prior Beliefs about Language Teaching and Learning	90
6.3	Pre-service Teachers Cognition about Multiliteracies Pedagogy	94
6.3.1	Definition of Multiliteracies Pedagogy.....	94
6.3.2	Knowledge Processes	100
6.3.3	Multimodality	110
6.3.4	Learner Diversity	113
6.3.5	Attitude	114
6.4	Pre-service Teachers Implementation of Multiliteracies Pedagogy	119
6.4.1	Knowledge Processes	120
6.4.1.1	Experiencing	123
6.4.1.2	Conceptualising	126
6.4.1.3	Analysing	128
6.4.1.4	Applying.....	129
6.4.2	Multimodality	130
6.4.3	Learner Diversity	136
6.4.4	Role of Teacher and Learner	138
6.5	Findings Summary	140
6.5.1	The Influence of Prior Learning Experiences on Pre-service Teachers Cognition about Multiliteracies Pedagogy	140
6.5.1.1	Prior to the Workshop.....	140
6.5.1.2	After the Workshop.....	142

Table of Contents

6.5.2	The Influence of Pre-service Teachers Cognition about Multiliteracies Pedagogy on their Practices of Multiliteracies Pedagogy	145
Chapter 7	Discussion.....	147
7.1	Introduction	147
7.2	RQ 1: What is pre-service teacher’s cognition on multiliteracies pedagogy before and after a short, focused training held in their teacher education programme? 147	
7.2.1	Prior to the Workshop	147
7.2.1.1	Prior Learning Experiences.....	147
7.2.1.2	Beliefs about Teaching and Learning	148
7.2.2	After the Workshop	149
7.2.2.1	Definition.....	150
7.2.2.2	Knowledge Processes.....	151
7.2.2.3	Multimodality.....	152
7.2.2.4	Learner Diversity	153
7.2.3	Beliefs about Multiliteracies Pedagogy	153
7.3	RQ 2: How do these pre-service teachers implement multiliteracies pedagogy during their teacher education programme?	154
7.3.1.1	Knowledge Processes.....	155
7.3.1.2	Multimodality.....	156
7.3.1.3	Learner Diversity	157
7.3.1.4	Role of Teacher and Learner	158
7.4	RQ 3: What is the relationship between pre-service teachers’ cognition and their practices with regards to multiliteracies pedagogy?.....	159
7.5	Summary	164
Chapter 8	Conclusion	167
8.1	Introduction	167
8.2	Summary of The Study	167
8.3	Contributions of The Study	168
8.4	Limitations of The Study	170
8.5	Recommendations for Future Research	172

8.6	Concluding Remarks	173
Appendix A Multiliteracies Workshop Plan.....		175
A.1	Week 1: Lesson 1: Session 1	180
A.2	Week 1: Lesson 1: Session 2	183
A.3	Week 2: Lesson 2: Session 1	186
A.4	Week 2: Lesson 2: Session 2	189
Appendix B Pre-Intervention Interview Questionnaire		191
Appendix C Post-Training Interview Questions.....		195
Appendix D Post-Practice Interview Questions		197
Appendix E Pre-service Teacher Information Sheet		199
Appendix F Pre-service Teacher Consent Form.....		203
Appendix G School Student Information Sheet		205
Appendix H School Student Consent Form.....		207
Appendix I Description of Lesson Plan		209
I.1	Description of Irfan's Lesson	209
I.2	Description of Din's Lesson	210
I.3	Description of Aqilah's Lesson	211
I.4	Description of Iliana's Lesson	212
I.5	Description of Aiman's Lesson	214
I.6	Description of Balqis's Lesson	215
Appendix J Teaching Writing Course Syllabus		217
List of References		225

Table of Tables

Table 1 The Knowledge Processes (Cope & Kalantzis, 2015; Kalantzis & Cope, 2004, p. 63).....	38
Table 2 Descriptions of the Knowledge Processes (Kalantzis & Cope, 2004, p. 64-67; 2010, p. 208; Kalantzis et al., 2010, p.73-74;)	40
Table 3 Summary of Interpretive Design	53
Table 4 Multiliteracies Workshop Syllabus	61
Table 5 Overview of Data Collected.....	63
Table 6 Multiliteracies Workshop Tasks	64
Table 7 Irfan's Lesson Plan	209
Table 8 Din's Lesson Plan	211
Table 9 Aqilah's Lesson Plan	212
Table 10 Iliana's Lesson Plan	213
Table 11 Aiman's Lesson Plan	214
Table 12 Balqis's Lesson Plan	216

Table of Figures

Figure 1 Language Teacher Cognition Framework (Borg, 2006, p. 283).....	23
Figure 2 The Knowledge Processes (Yelland et al., 2008, p. 200).....	38
Figure 3 Pedagogical Traditions of Knowledge Processes (Cope & Kalantzis, 2009; Jewitt, 2008; Kalantzis & Cope, 2016; The New London Group, 2000)	42
Figure 4 Data Collection Procedure	59

Research Thesis: Declaration of Authorship

Print name: Haziqah Zulaikha Binti Aris

Title of thesis: Pre-service Teacher Cognition and Practices in Malaysian Secondary School Teacher Education: How Trainee Teachers Experiment with Multiliteracies Pedagogy.

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission.

Signature:

Date: 11.9.2020

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[b-ismi-llāhi r-raḥmāni r-raḥīmi]

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Definitions and Abbreviations

EMI	English as a Medium of Instruction
ESL	English as a Second Language
ERGO	Ethics and Research Governance Online
ETeMS	English for Teaching Mathematics and Science
FL	Foreign Language
HOTS	Higher Order Thinking Skills
IUM	International Islamic University Malaysia
KBSM	Integrated Secondary Schools Curriculum
KOED	Kulliyah of Education
L2	Second Language
MOE	Ministry of Education
NEP	National Education Policy
PAK21	21 st Century Learning
PCK	Pedagogical Content Knowledge
PIS	Personal Information Sheet
SBE	School-Based Experience
TED	Teacher Education Department
TESL	Teaching English as a Second Language

Chapter 1 Introduction

1.1 Introduction

This study set out to explore pre-service teachers' cognition upon the introduction of multiliteracies pedagogy during a short, focused training held in their teacher education programme; their classroom practices in implementing multiliteracies pedagogy during their teaching practicum; and the relationship between their cognition and practices with regards to multiliteracies pedagogy. This chapter begins with an overview on the importance of this study. Sections included are the rationale of this study, the purpose of this study which includes the research questions and the significance of this study. Finally, the structure of this thesis is described.

1.2 Rationale

The emergence of new technologies has undeniably changed the means of communication and impacted language teaching and learning (Ajayi, 2010; Bavonese, 2014; Cope & Kalantzis, 2009; Rowsell et al., 2008; The New London Group, 1996; 2000). Researchers suggest that language teaching and learning should evolve beyond the traditional approach and that developing new pedagogies of language learning is vital to better inform language teaching and learning, suitable for this digital era (Ajayi, 2010; Richards & Rodgers, 2014; Rowsell et al., 2008). Research has shown that teacher cognition: beliefs, knowledge and understanding have tremendous importance in shaping teachers' teaching practices, improving teaching and promoting change in adopting new teaching methods (Borg, 2009; Borg, 2015; Richards et al., 2001).

Borg (2009) posits, "we cannot properly understand teachers and teaching without understanding the thoughts, knowledge, and beliefs that influence what teachers do" (p. 163). It is recognized that teachers are central to improving language teaching apart from the method or materials that may be used during the transformation of educational process (Hatipoglu, 2005). Teachers' beliefs, knowledge, views and preferences about teaching and learning processes are crucial factors in shaping their instructional practices and determining the successful and effective implementation of new teaching methods (Almarza, 1996; Borg, 2003; da Silva, 2005; Debrel, 2012; Sheridan, 2016). For teacher change to happen in the classroom, teachers need support that facilitates change in their knowledge and beliefs as well (Borg, 2003; Grijalva & Barajas, 2013; Sheridan, 2016). If a teacher's belief is something in clear contradiction with what is being asked of them, there will be problems and perhaps the implementation will not be successful (Almarza, 1996; Borg, 2005; Johnson, 1994; Numrich, 1996; Tillema, 1994). However, most research in the area of teacher

Chapter 1

cognition looking at teachers embracing an introduction of a new teaching method has focused on in-service teachers whilst research in the context of pre-service teacher cognition and novel pedagogy remains limited (Borg, 2015). Therefore, this study attempts to understand pre-service teacher cognition and practices together with the relationship between their cognition and practices when adopting a new teaching pedagogy.

Like many other developing countries, the Malaysian education system is mindful of the priorities needed to confront changes in the world order, particularly in the light of developments in new globalized living settings and modern technologies. To this end, Malaysia has refined and developed its education agenda to accommodate developments in globalization, internalization and new technologies (Pandian & Balraj, 2015). Taking the leap into the information age, many innovative and relevant programmes within the context of rigorous academic standards were developed with the purpose of being at par with the society and global order while committed to the nation's policies and aspirations (Ministry of Education, 2012).

The Tenth Malaysia Plan (2011-2015) outlines the country's aspiration to produce 21st century learners who acquire higher order thinking skills and who could compete in the global community (Ministry of Education, 2012). The country also desires to "nurture a new generation of information and communication technology-savvy youth" (Pandian & Baboo, 2015, p. 231). Therefore, the main purpose of the educational change is to produce holistic human capital equipped with "knowledge and skills that encompass science and technology, entrepreneurial capabilities, cultural values and other positive attributes" (Ganapathy, 2014, p. 411). The essence of educational reforms in Malaysia is grounded in the understanding that student-centred, rather than teacher-centred, learning is more likely to promote learners' competencies in higher order thinking skills and creativity as well as capabilities in using various technological inventions during teaching and learning process (Rajendram & Govindarajoo, 2016). The core belief is that the learning environment, to a certain extent, should be challenging and active in a way that requires more than just learning passively, memorisation and rote learning (Ganapathy, 2015) whilst the incorporation of innovative skills, higher order thinking skills and creativity are particularly expected in order to produce global players that could contribute to the economic and social growth of the country (Ganapathy, 2014; Pandian, 2002).

Given the rise of Global English, the Malaysian education system, like many others, envisages that English language skills (both spoken and written) are an integral part of the Malaysian education policy (this will be discussed further in the following chapter). Enever (2009) explores how countries link economic and social capital with English skills and acknowledges that "the new, more global, technologized, and post-industrial economies is leading governments to reform

curricular approaches...give prominence to English language as a generic skill for human resource development” (p. 6-7). In the Malaysian landscape, students should be able to communicate effectively in English so that they can be global players and compete on the international platform, thus the English subject is among the critical components in Malaysian education system. As this study mirrors these concerns it is highly relevant to this global initiative.

The comprehensive review of the education system outlined in the Education Blueprint 2013 – 2015 (Ministry of Education, 2012) describes a range of initiatives such as the critical and creative thinking skills and 21st century learning concept as part of the English language teaching curriculum and syllabus in schools (Pandian, 2002). The improved English language curriculum content and learning activities grounded by those concepts calls for opportunities to appreciate diversity, being creative and innovative as well as encourage critical thinking.

Despite recent curricular reform, classroom research has identified that Malaysian teachers in secondary schools tend to remain committed to the traditional teaching and learning practices where the main focus is on completing activities set by textbooks and drilling for examinations (Mohd. Saat Abbas et al., 2011; Mukundan, 2011; Pandian, 2002; Pandian & Baboo, 2015). Kaur et al. (2012) characterize the pedagogical practices in Malaysia as “conventional approaches to grammar drills, classroom confined settings, textbook-centred methods, teacher as the primary source of information, students as passive learners, excessive pressure to pass exams and emphasis on uniformity” (p. 119). Many local scholars aptly suggest that the Malaysian education system should make more focused efforts to enhance English teaching and learning in Malaysian schools, in line with the national education agenda of 21st century learning (Kaur, 2010; Pandian, 2006).

This study sought to use multiliteracies pedagogy as a tool to support the implementation of approaches to 21st century learning and English linguistic skills (Pandian & Baboo, 2015). It aims to stimulate higher order thinking skills, innovation and creativity along with technological competence. The notion of multiliteracies was conceptualised by a group of literacy experts known as The New London Group (1996; 2000). One of the reasons that the multiliteracies pedagogy was initiated was due to the demand of change in pedagogical approaches used in classrooms as a consequence of the evolution of technology (Cope & Kalantzis, 2009; The New London Group, 1996). The approach promotes the incorporation of various multimodal forms of texts such as hypermedia, hypertext, videos and webpages in teaching and learning process in order to accommodate the changing ways of conveying and interpreting meanings (The New London Group, 1996; 2000). However, the approach is not solely focusing on the integration of technological tools in learning but also about supporting learners to acquire the knowledge and skills of the 21st century, such as developing critical thinking, creativity, collaborative and innovative skills with the

assistance of the usage of technology in a multiliteracies learning environment (Cope & Klantzis, 2009).

Research has affirmed that the adoption of multiliteracies pedagogy in English as a second language (ESL) classrooms has the potential to bridge the gap between the nation's educational aspirations and the reality of classroom teaching and learning practices (Ganapathy & Kaur, 2013; Pandian & Baboo, 2015; Pishol & Kaur, 2015). However, Pandian and Baboo (2015) emphasise that there is still need for further research to explore the opportunities multiliteracies pedagogy might afford in the improvement of English education in the coming years. Even though multiliteracies pedagogy has been widely researched in Malaysia, the focus of research was mostly on the effectiveness of the pedagogy (Behak et al., 2015a; Ganapathy & Seetharam, 2016; Pandian & Balraj, 2010), the use of the pedagogy by in-service teachers (Ganapathy, 2015; Kaur et al., 2012) and the perceptions of in-service teachers and learners (Pishol & Kaur, 2015; Rajendram & Govindarajoo, 2016). To date and to the author's knowledge, there has been no major study conducted to examine a multiliteracies approach from the perspective of pre-service teachers in Malaysia. Little is known about pre-service teachers' ability to implement the pedagogy and their perceptions towards it.

To summarize, there are global shifts in education policy in the East Asian region towards developing learner-centred teaching practices and to increasing uptake of digital technologies (Enever, 2009). This has meant that school leadership and teachers are now tasked with implementing substantial changes in provision and teaching practices. One way to support education reform is to change pre-service teacher education so that incoming professionals are upskilled in new theories about teaching and learning and relevant pedagogic tools. However, here is a dearth of research examining to what extent pre-service teachers' cognition and practices can be adapted to adopt new teaching pedagogy and understanding about learning.

1.3 Aims of The Study

This study aims to understand ESL pre-service teacher cognition and practices in relation to adopting a new teaching pedagogy. It will look at the cognitive development of pre-service teachers during a short-term teacher education programme and explore any relationships between emerging cognition and novel teaching practices. The study recognises that beliefs about teaching and learning, prior experience and learning are essential factors in teacher cognition (Borg, 2003; 2006; 2015) in addition to teachers' profiles. In order to achieve this, pre-service teachers were recruited to participate in a series of teacher education workshops over two weeks. The workshops were planned to introduce the trainee teachers to the theoretical precepts relating to multiliteracies and to explore how multiliteracies theory could be developed into practical or

learning activities. Changes in beliefs and knowledge were documented using interviews before and after the teaching programme. Following the workshops, the pre-service teachers implemented the pedagogy during their teaching practicum and their practices were observed and video recorded. This allowed the researcher to investigate how their understandings of multiliteracies were implemented and also to link this to their reports on developing cognition. Finally, a post-practice interview was carried out after the implementation of the pedagogy, to document teachers' reflections on their practices to further examine the relationship between cognition and actual practices regarding the new teaching approach.

The research questions that this study attempts to answer are:

1. What is pre-service teacher's cognition on multiliteracies pedagogy before and after a short, focused training held in their teacher education programme?
2. How do these pre-service teachers implement multiliteracies pedagogy during their teaching practicum?
3. What is the relationship between pre-service teacher's cognition and their practices with regards to multiliteracies pedagogy?

1.4 Significance of The Study

Research has proven that in-service teachers who possess a certain amount of experience in teaching can actually accommodate or resist the introduction of new teaching methods through their experiences of teaching (Freeman, 2016; Tsui, 1996). Little is known, however, about how teachers with limited practical experiences (pre-service teachers) respond to a new teaching pedagogy. For example, pre-service teacher cognition research has shown that these teachers tend to invoke prior experience as a learner to inform their understandings which are developing through their teacher education programmes (Borg, 2003; Pajares, 1992; Sanchez, 2013). As the pre-service teachers in this study have no experience of multiliteracies pedagogy either as a trainee teacher or as a learner, it will be useful to examine how they try to understand this innovative pedagogic approach and which personal resources they draw upon to understand and implement it. Therefore, the results of this study could contribute to understanding how teacher cognition is shaped in pre-service teachers.

In addition, this study also attempts to shed light how pre-service teacher cognition develop during a short, focused training programme. Borg (2015) claims that there is evidence that the nature of the programme is a variable which may influence the findings of research into the impact on student teacher cognition. For example, little change in pre-service teacher beliefs and limited impact were noted following an intensive course which lasted a matter of weeks (Borg, 2005). Borg

Chapter 1

(2015) suggests that the existence of short, intensive courses “creates a somewhat unique context for the study of how teacher education shapes teachers’ beliefs and knowledge” (p. 75). However, most studies in pre-service teacher cognition focus on the development of pre-service teachers’ beliefs over the period of teacher education programme (Paakkari et al., 2015) but little is known about pre-service teacher cognition in the context of a short-focused training and how these beliefs developed. Therefore, looking at pre-service teachers’ learning and thinking in a short-focused training course will inform us about how teachers learn a new concept over a short period of time and reflect the new ideas into their practices.

Given the global policy shift to learner-centred pedagogies and digital learning, explorations of how teacher cognition changes in relation to novel pedagogic concepts is likely to be useful to researchers and teacher education providers. Many researchers have suggested that English language teaching in Malaysia should be redesigned to incorporate transformative teaching practices such as multiliteracies pedagogy (Behak et al., 2015a; Ganapathy & Kaur, 2013; Kaur, 2010; Pandian, 2006; Pandian & Baboo, 2015). Closer examination of the process of learning novel pedagogies in initial teacher education could add to the knowledge in the field for the larger international context and in Malaysian context in particular.

1.5 Overview of The Thesis

This thesis is organised into eight chapters. The structure reflects the fundamental areas essential in understanding pre-service teacher cognition and practices on multiliteracies pedagogy introduced during a teacher education programme. The focus of each chapter is described in paragraphs below.

Chapter 1 introduces the research, presents its background and provides justifications for conducting this study. It outlines the rationale, aims and significance of this study. The explanation of educational reforms in Malaysia is discussed, including an account of the importance of teacher cognition in improving educational process, depicting the concerns that have led to the initiation of this research. The scope of this study is explained through the description of the aims and research questions and finally the justification of the significant of this study.

Chapter 2 describes the contextual background of the Malaysian education system. It presents the background of the country and its linguistic context, a detailed account of the role and status of English in Malaysian society, English education and English language teacher education in Malaysian context are also presented.

Chapter 3 discusses the first theoretical framework underpinning this study, the language teacher cognition framework by Borg (2003). This chapter is the first part of the literature review focusing on the cognition of language teachers and its research dimensions. A comprehensive account of the definition of the term 'teacher cognition' employed by this study, the nature of language teacher cognition, its importance in language teaching and language teacher education are also described. A thorough description of the cognition of pre-service language teachers, with special attention to the influence of their language learning experiences, their beliefs about language teaching and the impact of teacher training on their mental lives is presented. Then, a review of studies on the relationship between language teachers' cognition and classroom practices is also discussed. Finally, the implication of the teacher cognition framework and its literature for this study is explained.

Chapter 4 is devoted to the second part of literature review for this study. The chapter justifies the second theoretical foundation of this research, multiliteracies pedagogy which functions as a tool to explore the data and a lens to examine teacher cognition and practices embracing a new pedagogy. A comprehensive picture of the theoretical and practical aspects of the multiliteracies pedagogy as initiated and conceptualised by The New London Group (1996) as well as a detailed elaboration of the Learning by Design framework are presented. Literature on the multiliteracies approach in Malaysian context and the context of language teacher education are introduced and teachers' perceptions of the approach is examined. The implementation and impact of multiliteracies pedagogy in language teaching and learning are also discussed. Finally, the implication of the multiliteracies framework and its literature for this study is explained.

Chapter 5 accounts for the methodological underpinning of this study. The discussion articulates the research paradigm, research methodology, the description of the design of this study, the context and research participants. A description of the instruments used for data collection, the methods selected for data analysis, strategies employed to cater to the issue of trustworthiness ensuring the quality of this study and the ethical considerations taken are also discussed.

Chapter 6 presents the in-depth data obtained through semi-structured interviews, classroom observations and document analysis for this study. The findings and analysis of the collected data reveal notable insights into pre-service teacher cognition and actual classroom practices in implementing the pedagogy. For each participant, a case-by-case narration describes their instructional behaviours, thinking, knowledge and beliefs. These individual narratives begin with a teacher profile which includes their awareness on technological evolution and its impact on language learning, a description of their learning experiences as language learners as well as their held beliefs about teaching and their experiences as trainees in teacher training programme. The

Chapter 1

narrative then focusses on the participants' cognition in relation to multiliteracies pedagogy and finally, their actual classroom practices implementing the pedagogy during teaching practicum are uncovered.

Chapter 7 discusses the findings for the research questions of this study and compares them to the findings of previous studies. This chapter consists of three sections: the first section reveals pre-service teacher cognition in light of their understanding and misunderstanding of multiliteracies pedagogy; the second section examines pre-service teacher application of the pedagogy; and finally, the last section describes the relationship between their cognition and actual practices in relation to multiliteracies pedagogy. The relationship between cognition and practices is made clear through the triangulation of data from interviews and classroom observation as well as documentary data. Pre-service teachers' stated narratives and reflections are compared with what has been observed in their actual classroom practices, and the supporting documents collected (lesson plans, photocopies of worksheet and textbook units used for their multiliteracies lessons) and finally the research notes. The final section also highlights the mediating and contextual factors that influence pre-service teachers' adoption of the multiliteracies pedagogy and that impede them from translating their beliefs into practice.

Chapter 8 is the conclusive chapter that includes a summary of this study and the main research findings. The contributions and limitations of this study as well as recommendations of prospective areas for further research are discussed. Finally, the chapter concludes with final remarks.

Chapter 2 English Language Education in Malaysia

2.1 Introduction

This chapter discusses the educational context for this study, the Malaysian educational system and particularly English language education. It begins with a brief look at the geographical and linguistic context of the country followed by an overview of the policies in relation to English language in Malaysia. This is followed by a detailed description of the approaches focusing on English language teaching for secondary education curriculum and syllabus adopted by the Ministry of Education (MoE). Finally, the context of English language teacher education in Malaysia is presented.

2.2 A Snapshot of Malaysia

Located in between Thailand and Singapore, Malaysia a South East Asian country is divided into two main regions namely Peninsula (west) and East Malaysia (Malaysia Borneo) that consist of 13 states and three federal territories. Separated by the South China Sea, the states in the Peninsula include Terengganu, Kelantan, Pahang, Perak, Selangor, Negeri Sembilan, Melaka, Penang, Perlis and Johor while the states in the East Malaysia are Sabah and Sarawak. The three federal territories are Kuala Lumpur, Putrajaya and Labuan with the latter located off the coast of Sabah. The former two federal territories are two main capitals in Malaysia, Kuala Lumpur being the national capital of Malaysia while Putrajaya being the administrative capital of Malaysia where most of the country's official administrations take place.

Malaysia is known as a multiracial, multicultural, multilingual and multi-religious country a credit to its multi-ethnic population which includes Malays, Chinese, Indians and other indigenous ethnic groups. Despite the diverse background of ethnicities, cultures and religions the official national language of the country is the Malay language, and Islam is the official religion. The constitution states that all Malaysians are given freedom to worship and practice different first languages used on the basis of ethnicity, culture and religion. In fact, English is widely used and is declared the second language in Malaysia.

2.3 Overview of Malaysian English Language Policy

To begin, it is important to highlight that language policy decision-making and planning processes in Malaysia is top-down thus any reforms in policy are made by leaders and people in authority often with little or no consultation with stakeholders (Gill, 2006). During pre-independence, English

Chapter 2

was constituted as the official language of Malaysia and it functioned as the language of administration and education. It was used as the main medium of instruction in schools and is still important post-independence. However, in 1967 the Malaysian government recognised Malay instead of English as the official language in order to strengthen the unity of the country.

As stated in Article 152 in the Federal Constitutions of Malaysia, English has become the second most important language after Malay language and become a core subject in the education system of Malaysia (Darmi & Albion, 2013; Jalaluddin et al., 2008). Most scholars claim that the English language was accorded the status of a second language (Darmi & Albion, 2013; Hall, 2013; Pandian, 2002; Tsui, 2004) perhaps because of its potentiality to assist Malaysia to become a “developing and industrialised nation and to take its place in internationalisation” (Omar, 1992, p.66). Therefore, English was to be taught as an effective second language and is viewed as important language to be acquired to compete internationally (Ozog, 1990; Tan, 2005).

With the above in view, the English curriculum in Malaysia is treated as an English as a Second Language (ESL) and the curriculum used as stated in the education blueprint was Communicative Language Teaching (CLT) approach (Ministry of Education, 2012). The approach focusses on using communicative activities in the teaching and learning of English aiming towards not only the learning of the language but also using the language through engaging the students in real-life communication in the English language (Darmi & Albion, 2013). English subject is introduced and included in the national curriculum as early as kindergarten until higher level education which shows the importance of the language for the Malaysians. Secondly, during compulsory primary and secondary education, English subject is compulsory in all public schools and in fact, at the end of high school year where learners sit for the national examination, taking English subject is made compulsory. In other words, the minimum requirements for learners to pass the exam and obtain the exam certificate is taking English subject alongside Malay language (the national language) and History. This exam is equivalent to British GCSE and is highly important for the continuation to tertiary education, securing scholarships to further studies and working in the government sector.

Despite the fact that the role of English has changed and been reduced since independence, English language learning was given prominence because “English language has been viewed as an asset to achieve development and acquire knowledge” in Malaysia (Thirusanku & Yunus, 2014, p. 255). The former Prime Minister of Malaysia, Tun Dr. Mahathir Mohamad emphasized that the acquisition of the language is vital for international communication and the reinforcement of the spirit of nationalism in bringing about progress and development for the country (Gill, 2002). In other words, English is seen as essential for higher education, employment opportunities and to rise up the socioeconomic ladder, thus it is important for Malaysians to be competent in the language. With

the implementation of Malay as sole language for schooling and official purposes English has officially become a second language and remains as one of the compulsory subjects taught from the primary to tertiary level of education in Malaysia. English as a subject is included in the national standardized leaving examination for secondary schools (major public exams in Malaysia) in which every Malaysian student has to sit for the subject, though it is not compulsory to obtain a 'pass' grade.

Although English is no longer the medium of instruction, decades later in 2003 it was decided that Science and Mathematics should be taught in schools in English. Under the English for Teaching Mathematics and Science (ETeMS) policy, Malay language was replaced with English as the medium of instruction for Mathematics and Science subjects in primary and secondary schools. It was argued that English is the language of science and technology and therefore if students learn Science and Mathematics in English it could better prepare them to compete in the era of globalization and raise the standard of human capital in the country (Omar, 2012; Rashid et al., 2016).

The teaching of subjects through a foreign language has generated a mixed response from the research community. Malakolunthu and Rengasamy (2012) suggest that the policy could familiarise learners with the terminologies that will take them through to their university education while at the same time enhance their English proficiency. Similarly, Omar (2012) supports science and mathematics EMI (English as a Medium of Instruction) asserting that it is likely to facilitate transition from school to university, especially onto science-based degree programmes as most science-based degree programmes in Malaysian tertiary education are delivered in English. Others argue that EMI in mainstream education threatens the status of Malay language as it might decrease its roles as the first language (Rashid et al., 2016; Selvaraj, 2010; Thirusanku & Yunus, 2014). Studies illustrated the challenges of this policy noting that the implementation has resulted in reduced attainment of subject content in national examinations for lower-achieving student and a lack of teacher pedagogic confidence in delivery of subject content in a second language (Nor & Aziz, 2010; Rashid et al., 2016; Selvaraj, 2010; Tan, 2011). Therefore, after almost a decade of implementation, the policy was abolished and the medium of instruction for both subjects were returned to Malay.

2.4 Overview of Malaysian English Language Curriculum

The Malaysian education system is governed by the MoE in which all national education-related matters at all levels of education such as policy and curriculum planning are led by the ministry. All school curricula and syllabi are centralised across the country thus all Malaysian public national schools are expected to adopt the common curriculum and common standardised national

Chapter 2

examinations. As this research study explores pre-service secondary school teachers, the following section will examine the English curriculum for secondary schools.

Malaysia's educational aspirations, as stated in the National Education Philosophy (NEP) seek to optimize the potential of individuals in a holistic and integrated manner so as to enable them to be globally competitive and to contribute to the nation's prosperity. To support these aspiration, six key attributes needed by students to be globally competitive are outlined in Malaysia Education Blueprint (Ministry of Education, 2012) including bilingual proficiency. Therefore, the goal of English in the education policy and planning is to prioritize the teaching of language and to develop learners' linguistic abilities.

To support the policy, the MoE implemented the Integrated Secondary Schools Curriculum (KBSM) which is skills-based, integrates the four skills and language areas and aims to enhance communicative competence. Alongside subject knowledge and skills development, the curriculum recognizes the importance of social and emotional characteristics. Consequently, moral and spiritual values such as respect, honour and appreciation are promoted through English language teaching (Pandian, 2002). Additionally, in accordance with the NEP, English language teaching should efficiently support language learning while provide opportunities for students' personal development. Therefore, teaching and learning are expected to stimulate real-life contexts in discussions and activities conducted in a way that optimize students' participation. The promotion of interactions between teacher and students as well as students with their fellow classmates are encouraged and engagement with higher order thinking skills activities is recommended. In other words, the curriculum calls for development of linguistic and communication skills as well as metacognition (analysing, conceptualising, evaluating and creativity) and social/emotional aspects.

The English language syllabus is based on the communicative approach focusing on the importance of communicative proficiency and it is arranged thematically according to the four language skills. The English syllabus, following KBSM curriculum stimulates real-life conditions and includes knowledge from other subjects, language content, language skills and moral values. In addition, apart from that, Higher Order Thinking Skills (HOTS) are also implemented aggressively as part of the English syllabus in order to fulfil further requirements from the KBSM curriculum. In order to align with the national aspiration highlighted in the education blueprint of producing knowledgeable generation of Malaysians who are multi-lingual, upright, have strong leadership qualities and can compete at the global level, the English syllabus is infused with the HOTS concept, that aims to equip students with the ability to think, analyse, evaluate, be critical and be creative. The goal of the syllabus is to promote and emphasize the thinking skills component with the hope

of “imbu[ing] in students an analytical, critical and creative mind, capable of problem solving and decision making” (Pandian, 2002, p. 44).

Another initiative integrated as part of English syllabus is the concept of 21st century learning (PAK21) which is in line with the Malaysian education development strategies as stated in the education blueprint. This initiative advocates learner-centred learning infused with communication, collaboration, higher order thinking skills, values and ethics for the purpose of equipping students with the skills needed to take on the challenges of the 21st century (Mustapa et al., 2016). In practice, Zakaria et al. (2017) added that the approach specifically “requires students to collaborate in projects, apply critical thinking skills in solving problems, be creative in exploring solutions and connect to learn with the world” (p. 383).

It is important to note that multiliteracies was chosen as the new pedagogy under investigation in this study was due to the fact that it supports the national agenda (Ganapathy & Kaur, 2013; Pandian & Baboo, 2015; Pishol & Kaur, 2015). This can be seen through the similarities and equivalent between multiliteracies and the current curriculum of English language education in Malaysia. Most of the theoretical concepts under the current curriculum somehow shared the same objectives and outcomes as multiliteracies concepts. For example, the use of HOTS in the English language teaching syllabus is similar to the knowledge processes framework in multiliteracies that aims to promote analytical, critical and creative thinking skills component (Cope & Kalantzis, 2009; Pandian, 2002; The New London Group, 1996).

Apart from that, the implementation of 21st century concept that highlights the importance of diversity, collaboration, active learning, learner-centred learning and the use of technology was also apparent in the concept of multiliteracies (Mustapa et al., 2016; Zakaria et al., 2017). The main principles and practices of multiliteracies include various teaching strategies for active learning and collaborative learning, addressing learner diversity, empowering agency and the use of multimodal resources (Cope & Kalantzis, 2009; The New London Group, 1996). Learners are encouraged to make meaning using the multiple modes particularly with the use of new media technologies.

It was evident that the use of technology and digital resources has become necessary, and the government has shown increased efforts in providing schools with technological facilities. This is in line with the transformation of the education curriculum and is another step taken by the government in making the education system in Malaysia on par with the advancement of the world in general and the emergence of technological evolution in particular. Yet, constraints such as having low or no access to the internet, lack of technological facilities in schools especially in rural areas as well as other difficulties in accessing technology could undermine the benefits to be derived from the use of technology for teaching and learning. For example, even though learners

are familiar with technology and embrace it in their private lives in which would facilitate the use of technology in learning, yet the unavailability of technology or lack of technology in schools impeded the attainment of the aspirations set to be achieved by the government.

2.5 English Language Teacher Education in Malaysia: Training and Development

The teacher Education Department (TED), a division under the MoE is in charge of teacher preparation for primary and secondary schools in Malaysia. The pathways to enter the teaching profession in Malaysia are through college and university level education. Teacher education at college level is directly under the supervision of TED which prepares teachers for primary schools, while secondary school teachers are trained by local universities because they are under the jurisdiction of the higher education sector in the MoE. At university level, under the Faculty of Education two types of pre-service teaching programmes are offered: a Bachelor of Education degree programme and a Post-graduate Teaching Diploma which is a one-year conversion course. The entry requirement for the latter is a bachelor's degree in any field from any local or international university because the course is mainly for non-education graduates who wish to convert to the education profession.

The teacher education curriculum aims to develop individual teacher's potential and prepare future teachers with knowledge and skills to implement effective teaching and learning processes aligned with the teaching practices in Malaysia. Pre-service teachers are the agents of implementation of the educational programme in Malaysia thus they are trained according to the existing syllabus and curriculum based on the national aspirations integrated with learning outcomes in each of the teacher education programmes. In other words, apart from institutional training programmes' objectives most teacher education programmes are aligned with the latest education policy in Malaysia. Therefore, trainee teachers could be rewarded with the teacher qualification status upon the completion of their studies once they have studied at a university that meets the MoE requirements.

Most of the teacher training programmes in Malaysia focus on transmitting input and knowledge about teaching and learning and expect teacher trainees to be able to put the theories into practice after they have completed their training programme, during a teaching practicum. Pre-service teachers are usually engaged in a school-based experience (SBE) observing teachers in real classrooms in schools. This usually takes place at the beginning part of the training and lasts for less than three months while putting their knowledge into practice in a real school during the teaching practicum is usually scheduled during the latter part of the training programme and lasts for six

months per semester. Both are significant elements of teacher training programmes and seek to provide a safe space in the real world setting for trainee teachers to put into practice all that they've learnt and develop attributes and professionalism as teachers.

It is important to note that the similarities of the principles and practices of multiliteracies were also found in the syllabus of the teacher training programme of the trainee teachers in this study. It might be label under different terms, yet the concepts learnt by the trainee teachers were somehow equivalent to what is expected of multiliteracies. Given that teacher education programmes in the context of this study are under the authority of MoE, the trainee teachers are trained based on the requirements set by MoE and the current curriculum of English language education in Malaysia. For example, the second language acquisition theories and pedagogical concepts introduced in the training programme is in line with the current theoretical and pedagogical concepts being implemented in schools such as 21st century concept, learner-centred learning, communicative language teaching and higher order thinking skills concept. Therefore, this perhaps explain the inclusion of the elements of multiliteracies pedagogy in the teacher training programme. Apart from this, trainee teachers were taught to use multiple resources for the teaching of writing (refer appendix J) such as the use of picture and technology. This in relation to multiliteracies pedagogy is the application of the elements of multimodality where teachers are encouraged to use multimodal texts and resources especially through the use of multiple modes such as visual, audio, spatial, gestural as well as the use of new media technologies for meaning making.

2.6 Summary

This chapter explained the contextual settings that situate this study mainly in regard to the background of the country, the role and status of English language in Malaysia, the approaches adopted for English language teaching in Malaysia and the context of teacher training and institutes in Malaysia. This chapter provided a broad understanding of the context of study by giving a general description of education in Malaysia particularly in the English language education settings.

Chapter 3 Language Teacher Cognition

3.1 Introduction

With the expansion of language learning beyond the traditional methods and the advent of new communication technologies, new practices and pedagogies are required to better inform language teaching and language teacher education (Ajayi, 2010; Rowsell et al., 2008). Consequently, researchers attribute a great deal of importance to developing new theories of language learning (Richards & Rodgers, 2014). As this is a global concern, scholars also highlight the need to respond to these developments with a new literacy pedagogical approach suited for teaching and learning in the 21st century (Kaur & Ganapathy, 2016; Kaur & Sidhu, 2007). With the urgency for educational reforms and initiatives to improve pedagogical practices, exploring teachers' mental lives is especially important for effective adoption of teaching methods and has been acknowledged as central to successful teaching (Borg, 2015; Moini, 2009). Exploring mental lives is an essential factor in getting teachers to experiment with novel pedagogy. Both teachers' thoughts processes and actions are fundamental unit of analysis in educational research on the successful implementation of teaching pedagogy in language teaching to improve teaching practices, teacher development and teacher education programs.

On that note, there has been an increased in the interest in the study of teachers' cognition research over the decade particularly on the study of teacher cognition upon the uptake of new teaching methods. Looking at teacher's mental lives with regard to an uptake of innovative practices, the main focus has been mainly on the studies of the cognition of in-service language teachers. There were few studies conducted on pre-service teachers embracing new pedagogy but according to Borg, 2015, it remains limited. There is a dearth of research examining pre-service teachers' cognition and practices responding to an innovative pedagogic approach. So, this research is timely due to investigate pre-service teachers' cognition and practices and their relationship in the context of adopting a new teaching pedagogy introduced during a short, focused training held in their teacher education programme.

This chapter aims to discuss the theoretical framework of language teacher cognition research underpinning this study. The chapter begins with a language teacher cognition section outlining the history of language teacher cognition, the definition of the term 'teacher cognition' and the nature of teacher cognition. Then, the next section explains Borg's language teacher cognition research framework and its importance in understanding teachers' cognition and classroom practices. In this study, language teacher cognition is theorized following Borg's (2006) framework due to its

explanation of the relationship between teachers' mental lives and their observable teaching practices. Given the context of this study, looking at the cognition of pre-service teachers, the following section focus on discussing pre-service language teacher cognition particularly in regard to the influence of prior language learning experiences, their beliefs about language teaching and the impact of teacher education on their cognition. Then, the relationship between language teacher cognition and their classroom practices as well as the impact of contextual factors on teacher cognition and practices are presented. This is to provide justification for the importance of examining both teacher cognition and classroom practices in the present study. Finally, a discussion of the implication of Borg's theoretical framework of language teacher cognition and the relevant literature discussed in this chapter towards this study is provided.

3.2 Language Teacher Cognition

Historically language teacher cognition gained recognition with a paradigm shift in general education research into language education in the 1970s (Borg, 2015). Previously educational researchers focused on the study of teacher effectiveness, whereas the behaviours of teacher and students in the classroom and how their behaviours will influence student achievement were investigated. Known as the process-product approach where learning is seen as a product of teaching and teaching is conceived as teacher's behaviours in the classroom, the objectives were mainly to describe these behaviours, identify effective behaviours and investigate the relationship between these behaviours and learning outcomes (Borg, 2006). Educational researchers then shifted to constructivism and cognition psychology as they began to recognize the teacher's central role in shaping classroom events and therefore as an agent of change (Borg, 2006, Li, 2017). The focus moved from process-product approach to studying teachers' mental lives and shaping the conceptions of teacher's thinking (Li, 2017).

In the 1980s, the process-product approach was replaced with the thought-processes approach where the emphasis shifted towards teachers as active-decision makers and the cognitive process of the teachers (Fang, 1996; Richardson, 1996). Clark and Peterson (1986) were among the earlier scholars who proposed "teachers' thought processes" for teachers' cognitive processes and introduced "a model of teacher thought and action" in order to understand the relationship between the two domains and how they influenced the process of teaching (p. 13). The proposed model highlights the interaction between the unobservable construct of teachers' thought processes and the observable elements of teachers' action and its effects (Freeman, 2016). The concept shapes the conceptualizations of teacher thinking in language teaching and consequently led to the inquiry of what teachers know, think and believe.

Borg (2009) states that the growth of teacher cognition research began in the 1980s and 1990s where at that time the concept of beliefs and knowledge represented teacher cognition in educational research. Consequently, terms such as beliefs (Pajares, 1992), pedagogical content knowledge (Shulman, 1987), teacher's beliefs, attitude and knowledge (BAK) by Woods (1996), and personal practical knowledge (Clandinin & Conelly, 1987) emerged and required different concept of analysis for teacher cognition in language teaching (see Borg, 2006).

Pedagogical content knowledge (PCK) focuses on the source of teacher knowledge and how teachers apply this knowledge in the classroom. According to Shulman (1987) it "represents the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organised, represented and adapted to the diverse interests and abilities of learners, and presented for instruction" (p. 8). In another words, it is about the teacher's ability to translate their underlying subject-matter knowledge into an appropriate teaching approach for classroom teaching (Ibid.). Shulman (1987) further highlights that teacher education should emphasis on PCK so that trainees could think of pedagogical alongside subject-content knowledge.

Personal practical knowledge (PPK) on the other hand further explores the idea of knowledge construction of teachers developed through their personal classroom experiences (Clandinin & Conelly, 1987). The BAK system highlights the focus on beliefs, decision-making and classroom practices in which Woods (1996) states that the system is developed through individual experiences built from being a learner and teacher throughout the years of teaching with other factors coming into play. Guided by the context of teaching, the BAK system emphasises the presentation of time as part of thinking processes in which teacher decision-making might be built into experience through time (Freeman, 2016).

Throughout the years language teacher cognition research has broadened dynamically through the different interpretations from different perspective and contexts used as part of the research. The growth of teacher cognition research in the past 20 years has resulted in this recognition of the area as one of the most researched areas in the language teaching field. Borg (2006) suggests that the evolution of teacher cognition research begins with understanding what teachers need to learn in order to teach then shifted towards how teachers learn. As stated earlier, the initial concern was about understanding information-processing, decision-making and teaching effectiveness before changing direction towards exploring teacher knowledge, cognitive development and its use. Language teacher's cognition became significant due to its impact on teacher behaviour in the classroom and its importance for understanding both teaching and learning (Borg, 2003; Burns, 1992; Freeman & Richards, 1996). Borg later introduced the term cognition and a framework to redefine the construct of thought processes. Borg defines cognition as "the unobservable cognitive

dimension of teaching – what teachers know, believe and think” (Borg, 2003, p. 81). The framework highlights elements such as schooling, professional coursework, classroom practices and contextual factors and their relationships as they contribute to the teacher cognition process. Schooling and professional coursework elements present the historical background and the construction of teacher thinking processes while classroom practices and contextual factors present the setting and environment for thinking.

Despite being a well-established field, teacher cognition encompasses a wide range of concepts and terminologies such as cognition, beliefs and knowledge and has generated much debate among researchers over the years. Researchers in the field acknowledge that the various terms associated with teacher cognition are to a certain extent problematic (Borg, 2015; Pajares, 1992; Verloop et al., 2001). This is owing to the various definitions in the literature and multiplicity of labels employed by researchers to describe identical concepts as well as lack of clear definition of concepts (Clandinin & Connelly, 1987; Eisenhart et al., 1988; Pedersen & Liu, 2003). Borg (2006) lists varying definitions in the literature aiming to describe the concepts of beliefs and knowledge in order to show the different interpretation of both belief and knowledge by some researchers.

Until now, there is no consensus on the accepted definition for the concept of teachers’ beliefs given the confusion that lies in the distinction between knowledge and beliefs. Pajares (1992) explains the messiness of the distinction between knowledge and beliefs was due to the multiplicity of labels employed by scholars and the lack of clear definition for the concept. A few scholars in the field of teacher cognition hold the belief that both terms are interchangeable because they are not always clear enough to be identified as different terms (Borg, 2003; Kagan, 1990; Pajares, 1992; Verloop et al., 2001) while another group asserts that there are differences because beliefs are subjective and implicit while knowledge is objective and explicit (Ford, 1994; Woods, 1996). Nevertheless, Fives and Buehl (2012) argue that distinguishing and defining the concepts are not the main issue but rather “to consistently define and use the terms within and across fields that examine these constructs” (p. 473).

Kagan (1990) suggests that both terms are similar because there is “mounting evidence that much of what a teacher knows of his and her craft appears to be defined in highly subjective terms” (p. 241). In the same vein, Grossman et al. (1989) suggest that “the distinction of teachers’ knowledge and beliefs about subject-matter for the purpose of clarity is blurry at best” because teachers often treat their beliefs as knowledge (p. 31). Verloop et al. (2001) suggests that it is possible to differentiate between beliefs and knowledge if knowledge is to be seen as the truth, but both are deemed to be overlapping concepts that are inextricably intertwined in teachers’ minds if they are to be perceived as personal construct. Calderhead’s (1996) review from the literature on the other

hand, highlights the sub-types under both constructs. Teacher's knowledge is associated with subject knowledge, personal practical knowledge and theoretical knowledge while teacher's beliefs on the other hand is discussed under beliefs about learners and learning, beliefs about teaching, beliefs about subject and beliefs about learning to teach. So, while beliefs are understandings, perceptions, judgements or propositions that are felt to be true (subjective), knowledge on the other hand is theoretical or practical understanding that informs and is informed by their teaching.

Since this study is looking at teacher's knowledge of multiliteracies pedagogy as they embrace the new approach, their cognition involves knowledge of subject matter alongside their beliefs and perceptions about the pedagogy. Even though there is a distinction between knowing what the pedagogy is about based on their knowledge of the theory and their interpretation of the pedagogy based on their beliefs and personal judgements, but the two concepts are intertwined. The pre-service teachers need the knowledge of the subject matter in order to translate the pedagogy into practice for classroom teaching such as "blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organised, represented and adapted to the diverse interests and abilities of learners, and presented for instruction" (Shulman, 1987, p.8). Also, at the same time they too need their personal decisions which is based on their personal beliefs and knowledge in order to tailor the approach and adapt appropriate teaching materials, suitable for the needs of their students. This in a sense shows that, in embracing and adopting the new pedagogy, apart from the knowledge of the subject matter, the pre-service teachers also need their beliefs about how to apply the knowledge based on their personal experiences of 'what works'.

The interconnectedness of the relationship between beliefs and knowledge has led the researcher to adopt Borg's (2003) label of teacher cognition as the "unobservable cognition dimension...what teachers know, believe and think" (p. 81) in which teachers' knowledge, beliefs and thinking together with their teaching practices and the relationship between their cognition and practices are examined (Borg, 2006). The term is viewed as "an inclusive term referring to the complex, practically-oriented, personalized, and context-sensitive networks of knowledge, thoughts and beliefs that language teachers draw on their work" (Borg, 2015, p. 321). With the adoption of the term, it is hoped to "highlight the complex array of factors that interact in the processes of teaching and learning...elaborating knowledge and belief structure that teachers hold, to the influence of their past experiences, even experiences outside of teaching, in shaping how teachers think about their work, and to the diverse processes of knowledge growth involved in learning to teach" (Calderhead, 1996, p. 721). The inclusion of both constructs under the term cognition is supported by Pajares (1992), even though he acknowledges the messiness of the constructs yet suggests that 'little will have been accomplished if research into educational beliefs, on the one hand, and teacher practices, teacher knowledge, and students' on the other hand (p. 327)

The scope of language teacher cognition research includes a wide range of contexts in second language (L2) and foreign language (FL) teaching and the availability of a substantial body of work suggests that language teacher cognition is a well-established domain of research activity (Borg, 2015). The majority of research was conducted largely since the 1990s in the contexts where English is taught as second or foreign language. This research can be further divided into studies which examine pre-service teachers' cognition, the cognition of in-service teachers and the examination of language teacher cognition in relation to specific curricular domains in language teaching such as grammar and literacy (Ibid.).

Due to the considerable amount of empirical works done in this area, researchers have affirmed that teachers' mental lives have great influence in what teachers do in the classrooms (Borg, 2015; Johnson, 1994). For example, beliefs act as a filter for information and experience; providing a framework and guidance for teachers' action whether they are aware of it or not (Bailey et al., 1996; Fives & Buehl, 2012). In other words, teacher beliefs inform not only how they interpret experience but also how they act in the classroom too. In most situations what teachers think represents what they do in the classroom but the transmission between teacher beliefs and decision making does not always result in an observable action. For example, teachers might have certain beliefs which support their instructional decisions but that does not necessarily result in their practices because they might decide then not to do it, perhaps due to the interference of contextual factors or for other possible reasons known only to the teacher. These beliefs are often described as professed and enacted beliefs and the relationship between the two is highly dependent on other factors such as contextual factors (Speer, 2005).

3.3 Language Teacher Cognition Framework

Borg (2003) devised a framework to describe the aspects of teachers' mental lives and the relationships among teacher cognition, teacher learning and classroom practices. The framework is based on his analysis and review of 64 studies in language education pertaining to second and foreign language teachers' knowledge, beliefs and thinking about language teaching. His analysis includes teachers with varied experience and examined teacher cognition and classroom practices as well as teacher cognition without actual classroom teaching.

Borg's language teacher cognition framework was an innovative addition to the field of language teaching as there was no framework available to describe language teacher mental lives in the late 90s. In his rigorous literature review he found recurring themes such as teachers' experiences as a language learner, pre-service teacher training, professional coursework and contextual factors interacted with each other shaping teacher's mental lives about language learning and their

classroom practices. He argues that research on teachers' mental lives is a messy construct thus suggesting the need to identify and acknowledge these themes in a proper framework. He asserts that the framework could bring about positive changes to classroom teaching practices and has the potential to investigate teacher's reactions and behaviors in regard to innovative practices and could be an indicator of the intended impact of an innovation. His framework paves the way for further work and has been used as a tool to conceptualize the field of language teacher research. Freeman (2016) notes that the representation of the four elements of a teachers' thought processes is useful and suggests that the framework reflects the evolution in teachers' mental lives. Figure 1 demonstrates a succinct illustration of the elements and processes in language teacher cognition as presented in Borgs' (2006, p. 283) updated framework.

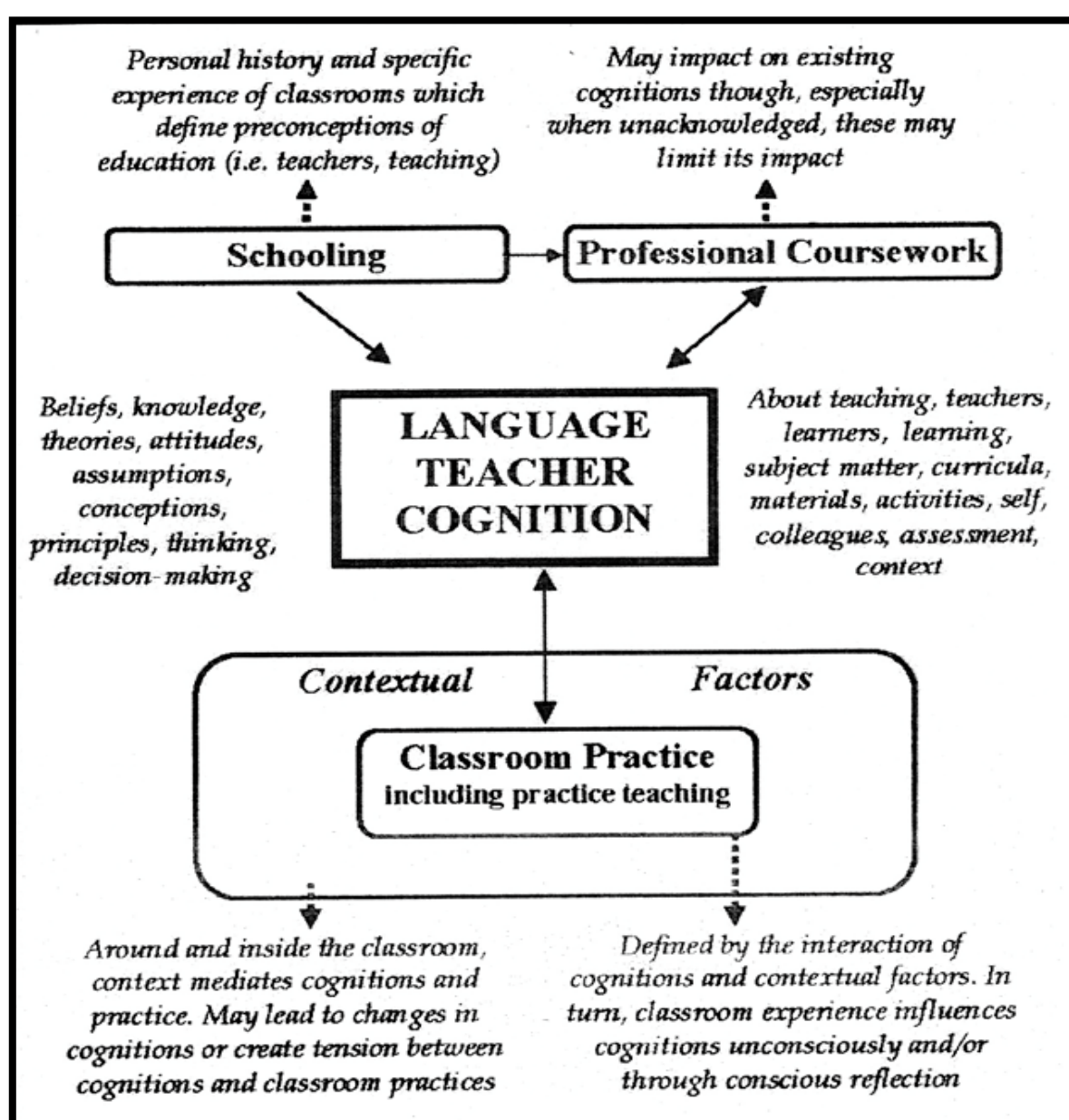


Figure 1 Language Teacher Cognition Framework (Borg, 2006, p. 283)

Schooling

Schooling concerns with teachers' experiences as language learners accumulated from their schooling period of spending hours in language classrooms and their broader experiences early in life. Exposure to the behaviours and teaching methodologies of their teachers and the relationship with influential adults such as their parents shaped their preconceptions about education and language learning. Research has shown that teachers' beliefs about teaching are formed, developed and influenced by their vast experience as learners, what Lortie (1975) terms as the 'apprenticeship of observation'. This concept highlights the contribution of teachers' memories as students and the memories of their former teachers. And functions as an existing framework that guides teachers' process of learning to teach, and it may continue to influence them throughout their teaching career. Thus, understanding teachers' prior language learning experiences is essential to understanding teacher cognition and classroom practices (Pajares, 1992; Sanchez, 2013).

Professional Coursework

Professional coursework refers to a teacher training programme, where teachers are formally taught about the knowledge and pedagogy of teaching. Teacher education programmes can vary from intensive short certificate courses, undergraduate university programmes or master's programmes. Professional coursework may or may not alter teachers' existing knowledge and beliefs about language teaching. Given the fact that teachers carry their schooling experiences into professional coursework, conflicts may arise in accepting and internalizing any new ideologies and teaching methodologies that are introduced during teacher training. The impact of teacher education on teacher cognition remains a matter of debate among researchers as some argue that teacher education is a weak intervention that has limited impact on teacher cognition (Kagan, 1992; Richardson, 1996) while others argue that there is evidence that teachers' mental lives can be influenced by teacher education (Borg, 2005; Graber, 1995; Phipps, 2009).

Classroom Practices

Teachers' practices and decision-making in the classroom are shaped by teacher cognition and contextual factors. Borg's latest framework positions teaching and the classroom as contextual factors instead of being viewed as a separate contribution to teacher cognition. He explains that contextual factors serve as the most influential domain that could affect teachers' instructional practices and thus the classroom itself becomes part of the context (Borg, 2003; 2006). Contextual factors have a great deal of importance as mediators in shaping teachers' practices as they may lead to changes in cognition or create tension between cognition and classroom practices. While the interaction between teacher action and teacher thinking are mutually informing (Clark &

Peterson, 1984) contextual factors play a role in the congruency between what teachers think they do and what they are actually doing (Borg, 2003). The contextual factors that inform teacher cognition go beyond the classroom and may include the department, curriculum of the institution or the country educational system at large.

Classroom experiences can also shape cognition through unconscious and/or conscious reflection (Borg, 2006). In the context of experienced teachers, classroom practices are viewed as one of the most powerful sources in shaping teacher cognition (Crookes & Arakaki, 1999). As teachers gain experience over years of teaching, nurturing successful routines and unfolding what works well and what does not, these experiences and practices are influential in determining whether they adapt to change and accept or reject new ideas. In the case of pre-service teachers, changing their practices and beliefs depends on how top down the management is and how much teachers are required to follow the curriculum. In the event of being observed they might show certain teaching practices that they may or may not believe in just because they are being assessed and expected to portray certain behaviour (Almarza, 1996). Therefore, the context is a key feature for studying relationship between cognition and practices.

3.4 The Cognition of Pre-Service Language Teacher

3.4.1 The Influence of Prior Language Learning Experiences and Beliefs

For the purpose of this study, pre-service teachers are defined as teachers who are enrolled in an initial teacher education programme and who have limited or no formal language teaching experience. Pre-service teachers bring existing personal theories, prior learning experiences and broader experiences in life to initial teacher education (Borg, 2003; Pajares, 1992; Sanchez, 2013). Formed and developed through “apprenticeship of observation” (Lortie, 1975), pre-service teachers’ mental images and memories as students and of their former teachers can also be seen as positive and negative experiences (Numrich, 1996) which then become the basis for their initial conceptualization of language teaching (Borg, 2003; Burn et al., 2010). It is the key influence on how they would develop their cognition about language teaching and learning during their teacher education and what they do as teacher (Calderhead & Robson, 1991; Incecay, 2011; Kagan, 1992; Richardson, 1996).

Research dedicated to studying pre-service teachers’ prior experiences and its impact on cognition found that their language learning experiences play a role in the adoption or rejection of instructional strategies introduced to them (Almarza, 1996; Borg, 2003; da Silva, 2005; Numrich, 1996). It is one of the conditions for teacher learning as teacher learning takes place through the

Chapter 3

interaction of what pre-service teachers bring into teacher education program and the experiences and content, they encounter in it (Loughran & Russell, 1997; Richardson, 1996). Given that pre-existing beliefs are tenacious, the traditional prior beliefs that pre-service teachers hold and bring into teacher education training can impede or support the development of their teaching practices and thus increase or lessen the impact of teacher education (Pajares 1992; Richardson 2003). Therefore, teacher education should account for prior learning experiences and beliefs to better support teacher as they learn and internalize new ideas during teacher training that may eventually inform their practices.

Despite being influential in pre-service teachers' cognitive development, pre-existing beliefs are known to be difficult to change and Richardson (2003) suggests that this is because prior beliefs are 'highly idealistic, loosely formulated, deeply seated, and traditional' (p. 6). Nevertheless, Borg (2006) asserts that "pre-service teachers' prior cognition act as a filter...acknowledging this prior cognition, making them explicit and providing teachers with opportunities to examine and reconsider these in the light of new information and experience are thus important elements in the process of teacher learning" (p. 276). These prior beliefs have the potential to shape the interpretation of new beliefs, knowledge and understanding. Therefore, to counteract any limitations imposed by prior beliefs, teacher education should encourage teachers to explore their beliefs and how these may or may not influence their cognition. But of course, not all prior beliefs negatively impact teacher practices as some are really useful. In such cases, making them aware of those beliefs could deepen their understanding about teaching and learning and improve their teaching practices.

Given the powerful influence of prior language learning experiences, these mental images and memories also shape classroom practices of pre-service teachers. Prior learning experiences are key influence in guiding pre-service teachers' instructional decisions mainly in selecting future teaching practices and the extent to which they would implement the theories learnt in their classroom practices (Almarza, 1996; Borg, 2005; Johnson, 1994; Numrich, 1996; Tillema, 1994). Johnson (1994) found that pre-service teachers' instructional decisions made during the teaching practicum are also based in part on images and memories generated from their language learning experiences and it affects how they perceive themselves as teachers and their own classroom practices too. Her study shows that there are instances where pre-service teachers want to adopt more student-centered learning approaches but did not because the images and memories of their former teachers, activities and classroom organization influenced them to hold the traditional beliefs about teachers being the source of knowledge and authority in the classroom. These traditional images and memories overrode their professed beliefs and led to a more teacher-centered classroom. This coupled with their lack clear images of how to implement student-

centered learning in the classroom and contextual constraints also led them to feel powerless to alter their practices.

Similarly, Numrich (1996) found that when pre-service teachers engage in or avoid specific teaching practices this could be due to positive and negative experiences with related practices as learners. For example, the student teachers in that study express interest in integrating the cultural aspect of second language learning in their teaching because this was an enjoyable experience when they were learners. In their view, their teacher made language learning come alive as they were immersed in the food, fashions and geography of the target culture and they were motivated to replicate this in their own teaching practices. In contrast, the pre-service teachers reported avoiding teaching grammar because they were embarrassed making grammatical mistakes when they were learners. As they deemed that experience as negative, they felt incapable and not confident to teach it in their own classroom.

Another element of pre-service language teacher cognition is teacher beliefs. Beliefs play a key role in learning to teach and the interpretation, understanding and internalization of new ideas presented during teacher training rest mainly on this mental construct. Empirical research has shown that the promotion and adoption of new teaching strategies is facilitated by the congruency of pre-service teachers' beliefs with the new ideas introduced (Almarza, 1996; Borg, 2005; Johnson, 1994; Tillema, 1994). Tillema's (1994) study on bridging the gap between new information and pre-existing beliefs of teachers postulates congruence hypothesis to examine the connection between teacher trainees' cognition and the input introduced in a training. Focusing on the effectiveness of training, the hypothesis implies that "the more congruence there is between a teacher's cognition and the teaching approach advocated by the trainer, the more a training design is consistent with existing cognition, the better the training results will be" (p. 603). In this study with one hundred and forty trainee teachers as participants it was found that the consistency between teacher beliefs and new ideas introduced plays key influence for teacher learning directly supporting the congruence hypothesis. Tillema concludes that the acquisition of new knowledge was likely to take place with greater correspondence between teachers' beliefs and the content of the training given that teachers' beliefs filter the acceptance or rejection of new information proposed. Therefore, the more the training content is in conflict with the beliefs held by pre-service teachers, the lesser the possibility for learning to take place and its impact on knowledge acquisition.

A case study looking at pre-service teachers' beliefs and how they impact the teacher training experience focus on one trainee teacher cognition development in a CELTA course and found evidence of growth in understanding as the trainee teacher held strong beliefs about teaching that paralleled the course content (Borg, 2005). The CELTA course discourages didactic pedagogical

approaches and encourages approaches that focus on making learners active participants during teaching and learning. This approach was in line with the trainee teacher's anti-didactic beliefs about teaching and allowed the teacher to affirm her beliefs and develop related teaching practices as she successfully implemented a learner-centered lesson with high student engagement (Ibid.). Nevertheless, while some of her beliefs showed development and acquisition of new knowledge yet some was proven unaffected. In short, pre-service teachers' beliefs are difficult but not impossible to change and this may be especially challenging task during or after their enrolment in teacher education programmes but there are more contextual factors that must be taken into consideration.

3.4.2 The Impact of Pre-Service Teacher Education

This section focuses on the impact of teacher education programmes on pre-service teachers' cognition. Given that the primary goal of teacher education is the formation and modification of pre-service teacher cognition, this section aims to examine the manner in which pre-service teacher cognition is developed during the process of teacher education (Borg, 2006; Richardson, 2003). Language teacher education programmes can take a number of forms such as one year or three to four-year programmes (undergraduate degree programmes or master's programmes) and short intensive courses (such as CELTA) that last a matter of weeks. Overview of research examining the impact of teacher education on pre-service teacher cognition by empirical studies includes investigations of changes in beliefs (Borg, 2005; Cabaroglu & Roberts, 2000; Peacock, 2001; Richards et al., 2001; Urmston, 2003;), analyses of congruency of input and practices (da Silva, 2005), and changes in practices (Almarza, 1996). Meta-analysis of studies illustrates a variety of findings including: 1) teacher education is a weak intervention with limited impact (Kagan, 1992; Richardson, 1996) and 2) teacher education exerts influence on pre-service teachers' cognition to a certain degree (Cabaroglu & Roberts, 2000; Debrel, 2012; Phipps, 2009; Sendan & Roberts, 1998; Sheridan, 2016). However, in general, most studies provide a range of evidence that shows that changes occur either in one or both of cognition and practices (Borg, 2006).

Phipps argues that teacher education impacts the cognition of pre-service teachers in complex and incremental ways (Phipps, 2009) because trainee teachers' structure or re-structure beliefs through the lens of existing cognition that shape and guide how they interpret new knowledge and experiences (Pajares, 1992). Sheridan (2016) monitored the development of existing pedagogical beliefs of a cohort of pre-service teachers with respect to pedagogy for secondary teaching and found that changes in beliefs result from opportunities to link theory to practice and engage in critical reflection of pedagogical reasoning during teacher training. These findings were further supported by a study of pre-service teacher cognition in Mexican universities which found that

trainees showed a gradual increase of awareness and understanding of teaching strategies in a process that was facilitated by reflective and theoretical tools against which they could compare their own beliefs on teaching and learning (Grijalva & Barajas, 2013). It is important to recognize that the study reported changes in beliefs but did not include an examination of how such changes might have influenced practice.

Other pre-service teacher education studies have attempted to explore teaching practice and how these might link to developing teacher cognition. However, caution must be exercised in interpreting changes in practice as changes in belief because 'belief change is an extremely complex phenomenon; cognitive change does not necessarily imply behavioural change and vice versa' (Phipps, 2009, p. 32). In addition to this, Borg (2015) further added that "similar behaviors in different teachers may be underpinned by very different cognition, and that similar cognition may be translated into a range of behaviorally distinct practices" (p. 326).

It is difficult to link behavioural change with underlying changes in cognition in teacher education as trainee teachers know they have to exhibit certain behaviours to pass the assessment (Almarza, 1996; Borg, 2015). Almarza (1996) reveals that during assessed teaching practice teachers may exhibit particular behaviours to conform to an expected standard yet still hold onto their pre-existing beliefs. This is evident in the author's description of one of the students' teachers who once she 'saw herself free from the constraints imposed by the context of the classroom, she was back in a position in which she could continue the ideas she had about language prior to the beginning of the course" (p. 69). This implies that there is no real change happening as her behaviour only reflects what needed to pass the assessment of teacher education rather than a reflection of her own beliefs about how to teach. The study suggests that changes discovered in a context where trainee teachers are assessed do not significantly alter their cognition because even though behaviourally, they could efficiently put into practice all the theories learnt, cognitively their acceptance of the theories varies due to the influence of their prior cognition.

It is interesting to note that trainee teachers often show a mismatch between practices and cognition due to contextual factors (da Silva, 2005; Tsui, 1996). In language skills lessons, trainees plan activities which align with their developing theoretical knowledge about language teaching, but these vary in their implementation due to contextual factors such as large student numbers. For example, one teacher found it challenging to correct pronunciation, even though this was planned, due to class size (da Silva, 2005). In other words, whilst there was reported cognitive change, behavioural change did not ensue due to contextual factors.

Alternatively, Richards et al., (2001) argue that changes in practice reflect implicit beliefs. They argue that as teachers reflect on practice, their implicit beliefs are naturally inclined towards

attempting new ideas and motivated in changing their beliefs, consequently resulting in successfully changing their behaviour. However, this finding is based on self-report questionnaires which explore beliefs and intended practices. More specifically, there was no observation of actual practices, so it is possible that self-reporting practices was inaccurate (Speer, 2005).

3.5 The Relationship between Teacher Cognition and Classroom Practices

The aim of this study is to understand the cognition of pre-service teachers upon the introduction of a new teaching pedagogy introduced during a teacher education programme and describe its influence on classroom practices. Although teachers' beliefs are a key influence for classroom practices, teachers' stated beliefs only offer a partial window on understanding teachers' practices (Basturkmen et al., 2004). Borg (2006) stresses that the relationship between the two is far from straightforward due to the fact that both cognition and practices may not always concur due to constraints from the context and that teacher cognition does not necessarily shape practices but is shaped in response to what happens in the classroom. Therefore, it is important not only to assess what teachers say they do, but also what they actually do.

The possible relationship between teacher cognition and classroom practices can be categorized into four different forms: "beliefs influence practices; practices influence beliefs; teachers' beliefs are disconnected from their practices; and reciprocal, but complex, relationship between teachers' beliefs and practices" (Buehl & Beck, 2015, p. 68-70). Instances of beliefs influencing practices are evident when teachers' instructional practices reflect the beliefs that they hold (Farrell and Ives, 2015; Farrell and Kun, 2008; Kuzborska, 2011; Pajares, 1992; Richards et al., 2001). Whilst the relationship between beliefs and practices can be complex, researchers conclude that when teachers' beliefs correlate with their practices or when teachers' practices are in line with their beliefs this indicates that their beliefs influence their practices. For example, Farrell and Ives (2015) case study suggests that teachers' professed beliefs are reflected in teaching practices in the classroom when the content of the prescribed textbook corresponds with existing beliefs about teaching thus assisting teachers to exercise their beliefs during teaching and learning. Similarly, Kuzborska (2011) found that teachers' beliefs were congruent with their practices and asserts that "English teachers teach in accordance with their theoretical beliefs" (p. 121).

Contrary to the beliefs comes before practices relationship, is the idea that engaging in particular actions and practices could eventually shape the beliefs of the teachers. The correlation is often seen in studies on the impact of interventions such as professional development on in-service teachers' beliefs and the impact of teaching practicum on pre-service teachers' beliefs (Buehl &

Beck, 2015). Buehl and Beck further state that support during the post-intervention phase increases the potential for any changes to happen because “the level of support that the teachers received during the experience may determine if the beliefs will increase, decrease or remain unchanged” (Ibid., p. 69).

Scholars also conclude that beliefs and practices may not be related. Evidence of lack of congruence between observed practices and professed beliefs has been mainly associated with the influence of contextual factors such as social, curricular and institutional settings which teachers perceived as external forces beyond their control (Basturkmen, 2012; Graham et al., 2014; Jamalzadeh & Shahsavar, 2015; Lim & Chai, 2008; Roothoof, 2014). For example, in a study investigating 115 EFL teachers’ stated beliefs and practices about listening in a foreign language, Graham et al. (2014) found that teachers “infrequently reported using approaches and activities that the literature suggests for an effective listening skill development” even though they strongly endorsed it and in fact learned how to teach the approaches and activities (p. 53). The reasons given for this were their larger concerns about curriculum demands, assessment and classroom management. Borg (2006) explains that “contextual factors may interact with teacher cognition...they may alter practices directly without changing the cognition underlying them. This latter scenario can lead to a lack of congruence between teachers’ stated beliefs and actual practices” (p. 324).

Finally, there are also cases where the relationship between beliefs and practices is “reciprocal, yet complex in which the relationship may vary across individuals and contexts as well as they type of beliefs and practices being assessed” (Buehl & Beck, 2015, p.70). This complexity raises from the fact that teachers’ beliefs and practices are mutually informing yet at the same time they are conflicting each other. For example, Phipps and Borg (2009) found that language teachers’ peripheral beliefs about language learning were absent but their core beliefs about student learning were evident in their grammar teaching practices. Other researchers also conclude that even though both constructs are mutually informing yet they can potentially become disconnected indicating that the relationship between the two is not necessarily linear or unidirectional but rather interactive and highly complex (Borg, 2006; Buehl & Beck, 2015; Calderhead, 1991; Li, 2013; Phipps & Borg, 2009; Richardson, 1996).

3.6 Implications of Language Teacher Cognition Framework for This Study

The main framework used in this study to understand the cognition and practices of pre-service teachers embracing a new pedagogy introduced in a short, focused training programme is the framework of language teacher cognition by Borg (2006). The framework was chosen as the

Chapter 3

underpinning framework for this study due to its recognition and usefulness to conceptualize the cognition and practices of teachers in the field of language teacher research. From the framework it is understood that recognizing trainee teachers prior learning experiences is vital in understanding teacher cognition and classroom practices given that their experiences as learners in school formed, developed and influenced their beliefs about teaching and learning. The prior learning experiences also serve as an existing framework to guide teacher's learning processes and could continuously influence teachers throughout their career. The framework also informs this research that teacher education might or might not have an impact on teacher's cognition particularly in accepting and internalizing any new ideas if conflicts arise between their schooling experiences and the new ideas introduced. With regard to classroom practices, the framework highlights that contextual factors are an important mediator in the relationship between cognition and practices as it has high potential to either change or disconnect cognition and practices. So, this framework helped this study to understand the elements and process that shapes the cognition and practices of trainee teachers.

The framework has helped to guide the research design, data collection method and data analysis process of this study. For example, this study used case study approach to allow the researcher to comprehensively describe the elements and processes involved and its interactions in shaping cognitive dimension and observable behaviors for every trainee teacher as demonstrated by the framework. Therefore, an in-depth and holistic understanding of the cognition and practices as well as its relationship for individual teacher (as a case) could be presented. Furthermore, guided by the framework, different types of data collection methods such as interviews, classroom observation and documentary data were selected to ensure that the elements and processes that shaped the cognition and practices of the trainee teachers as suggested by the framework is captured. Besides, the data was also collected at different time during the data collection process so that trainee teachers' prior learning experiences, their knowledge and beliefs of the new pedagogy before and after practice as well as their practices implementing the pedagogy could be recorded. The framework also guides the generation of guiding questions for the interviews so that the pre-service teachers' learning experiences, pre-existing beliefs, their experiences attending teacher training, beliefs about teaching and learning, understanding and knowledge of the new pedagogy, their perceptions towards the new pedagogy as well as their reflection of the classroom practices during the implementation of the pedagogy.

In addition to that, the analytical procedure of this study was shaped and directed by the conceptual framework of teacher cognition. The analysis was done in such a way that it would generate findings that could describe the factors that interact in the process of teacher learning and accepting new pedagogy; explain the cognitive structure that trainee teachers have; the influence of their prior

learning experiences and professional coursework in shaping their cognition; and classroom practices adopting the new pedagogy. Besides, the codes and themes generated were in line with and pre-defined based on the framework in order to establish deeper analysis from the data. Nevertheless, rather than dictating the possible outcomes of this study, analysis of the data was approached with an open mind so that the data could 'speak for themselves'.

3.7 Summary

This chapter has provided a literature review of the theoretical framework of language teacher cognition that informs this study. An understanding of language teacher cognition, specifically for pre-service teachers was elaborated through a description of the influence of prior learning experiences, their beliefs about language teaching and the impact of teacher education. A discussion of the prominence of teacher cognition on classroom practices as well as the impact of the mediation of contextual factors on both cognition and practices was also presented. The relationship between cognition, practices and context was also discussed to underscore their importance in understanding and interpreting the mental lives of teachers.

Acknowledging the array of terms associated with the concepts of teacher knowledge, belief, thinking and practices as well as its messiness in the literature, this study adopted the term 'cognition' by Borg (2003) as an inclusive term to describe teachers' thought processes which include their knowledge, believe and thinking and also to explain their practices and the relationship between their cognition and practices embracing a new pedagogic intervention. This study also adopted Borg's (2006) theoretical framework of language teacher cognition to understand teacher cognition and practices as well as the relationships between their unobservable cognition dimension and their observable teaching practices. The framework explains the elements and process in teacher cognition as such that the mental lives of teachers are shaped by their schooling, professional coursework and their classroom practices and the interaction between these elements. For this study, the framework facilitates the investigation of teacher's acceptance and behaviors upon embracing innovative practices as the representation of the elements reflect teacher's mental lives.

Studies in the field of teacher cognition assert that pre-service teachers enter teacher education with established pre-conceptions about teaching and learning and it is a key influence in shaping their mental lives during teacher training and possibly throughout their teaching careers. Pre-existing beliefs gained through prior learning experiences is known to be difficult to change and that it is the foundation for the trainee's initial conceptualization of language teaching as such that it acts as a filter that determines the acceptance and rejection of new teaching practices introduced

Chapter 3

during teaching training and how they would put these theories learnt into classroom practices. In the case of embracing new ideas, engaging and avoiding particular instructional practices partly depends on their positive and negative learning experiences as learners.

Chapter 4 Multiliteracies Pedagogy

4.1 Introduction

Rapid changes in the available means of communication and increased access to technology at home, work, and school has changed the choices that people have in designing communicative processes and products (Bavonese, 2014; Cope & Kalantzis, 2009; The New London Group, 1996; 2000). The emergence of multimedia such as ICT, the internet, digital devices and web-based applications has also impacted literacy learning by encouraging an evolution in the traditional approaches to literacy pedagogy (Ajayi, 2010; Rowsell et al., 2008; The New London Group, 2000). However, regardless of the changes that have occurred globally, literacy emphasis in the context of the current study has lagged behind, and the emphasis has remained on paper-based mediums (Pandian & Baboo, 2015).

Given the context of this research, Malaysia has been known to have high-stake standardized national examination systems and teaching is restricted to the margins of the standardized national curriculum. In addition, learners' achievement is assessed based on individual performance in the examination (Behak, 2013). Teachers mostly tend to focus on drilling the students to acquire the tips and techniques on how to answer the examination questions to the extent that the students were less able to practice the knowledge they learnt in school in real life (Behak et al., 2015b). In fact, evidence of teacher-centred classrooms and alphabet-based literacy are easily found in Malaysia and there is less evidence of a participatory culture that engages learners with neither multimodalities nor technology (Behak, 2013; Kaur & Sidhu, 2007; Pandian & Balraj, 2010). Yet the Malaysian national educational agenda in the Tenth Malaysia Plan (2011-2015) outlined by the Ministry of Education in the Malaysian Education Blueprint 2013 - 2025 aims to produce 21st century learners that could compete in the global community (Ministry of Education, 2012).

Local researchers have relevantly pointed out the urgency for Malaysian education system to respond to a new literacy pedagogical approach that is effective for the teaching and learning in the 21st century. They recommend a new literacy teaching approach that promotes learner-centred learning and teaching environments, learners' engagement as well as supporting the technological developments, economic progress and social aspirations of the country (Kaur & Ganapathy, 2016; Kaur & Sidhu, 2007). Based on this notion, the current study is inspired to explore an alternative pedagogical approach that would generate teaching and learning processes in line with the nation agendas. The current study attempts to encourage the development of multiliteracies pedagogy through the understanding of student teachers' cognition and practices upon embracing

Chapter 4

multiliteracies pedagogy introduced during a short, focused training held in their teacher education programme.

Therefore, this chapter attempts to discuss multiliteracies pedagogy as conceptualised by The New London Group (1996; 2000). Definitions of the pedagogy and a detailed elaboration of the theoretical framework and its implementation as they relate to the context of this study will be presented. An account of multiliteracies pedagogy in language teacher education, the implementation of the pedagogy in language classrooms and teachers' perceptions of the approach in language teaching will also be examined. Finally, a discussion of the implication of the theoretical framework of multiliteracies pedagogy and the relevant literature discussed in this chapter towards this study is presented.

4.2 The Multiliteracies Theory

The multiliteracies concept was first designed by a group of experts under the umbrella of literacy studies in London (Cope & Kalantzis, 2000; The New London Group, 1996). At the time, these scholars were mainly concerned with rethinking conceptions of literacy teaching and learning due to growing cultural diversity and the evolving communication environment occurred in various contexts (The New London Group, 1996; 2000). Their aim was to shift the focus from print-based literature and linguistic skills as primary forms of literacy learning towards the use of multimodal and technological resources through multiliteracies pedagogy. For example, instead of the traditional teacher-centred classroom and linguistic-based literacy learning, they attempt to widen understandings about the potential for literacy instruction by equipping learners with multiple literacies and broader skills. This was a consequence of the dramatic expansion of digital technologies and, the evolution of the way people works, communicate, socialize beyond paper-based text.

Literacies in multiliteracies are multiple in two ways: firstly, literacy is no longer exclusively emphasize the basics of reading and writing but to negotiate differences in various text forms, languages and cultural contexts (Cope & Kalantzis, 2015; Kalantzis & Cope, 2008). The concept also highlights that literacy is situated as such that literacy practices differ across context rather than restricted to one official and standard form. Due to the rapid growth of global connectedness in culturally and linguistically diverse contexts, literacy and literacy education should satisfy the needs to participate in social and cultural activities of the modern world that are evidently more complicated and connected than before. Therefore, the approach attempts to enrich traditional literacy approaches and existing teaching practices and pedagogies to allow learners to be able to

recognize and include cultural and language differences in mastering the standard form of the target language.

Secondly, literacies in multiliteracies concept highlights the use of multiple modes of making meaning such as oral, visual, audio, gestural, tactile and spatial alongside written-linguistics modes (Kalantzis & Cope, 2008; The New London Group, 1996, 2000). The multiple modes are associated with multimodality which the pedagogy makes explicit the importance of recruiting numerous instructional modes and contexts for literacy learning (Cope & Kalantzis, 2015). Multiliteracies argues that contemporary literacies require multiple meaning making skills and multiple communication approaches due to the changing social and changing communicative landscapes (The New London Group, 1996). Therefore, the teaching and learning of literacy in the 21st century should move away from the conventional teaching of literacy that is “paper-based, formalized, and standardized forms of language that only reflects the dominant language and culture” (Sang, 2017, p. 16) towards the understanding of multiple literacies that include multimodal representations of different forms of languages in different context (Cope & Kalantzis, 2009).

Multiliteracies has been established as an important framework for over 20 years and continues to inform studies and discussions in the fields of literacy and language learning. Studies grounded in this concept include initial conceptualisations of multiliteracies (Cope & Kalantzis, 2009; 2013; 2015; Kalantzis & Cope, 2008) and the empirical investigation of its implementation in various learning contexts (Gee, 2003; Kalantzis & Cope, 2004; Kalantzis & Pandian, 2001; Kaur & Sidhu, 2007; Pandian & Balraj, 2010; Tan & Guo, 2009; 2013; Tan & McWilliam, 2009). Practical and cultural issues in relation to multiliteracies have also been explored (Ajayi, 2010; Boche, 2014; Burke & Hardware, 2015; Corkett & Benevides, 2015; Kaur et al., 2012; Rowsell et al., 2008; Skerret, 2011).

4.2.1 Knowledge Processes

Multiliteracies pedagogy attempts to encourage student engagement and collaboration through a broad range of learning activities or pedagogical acts; and to allow for multimodality in meaning-making reflecting the complex nature of media (Cope & Kalantzis, 2009; Kalantzis & Cope, 2004; 2005). Therefore, the pedagogy emphasizes “allowing alternative starting points for learning...such as the varied experiences that need to be brought to bear on the learning, the different conceptual bents of learners, the different analytical perspectives the learner may have on the nature of cause...and the different settings in which they may apply or enact their knowledge” (Cope & Kalantzis, 2009, p. 188). This is achieved through paying specific attention to knowledge processes, pedagogical moves, that represent a different way of making knowledge and learning. The illustration of the four pedagogical dimensions is illustrated in Figure 2.

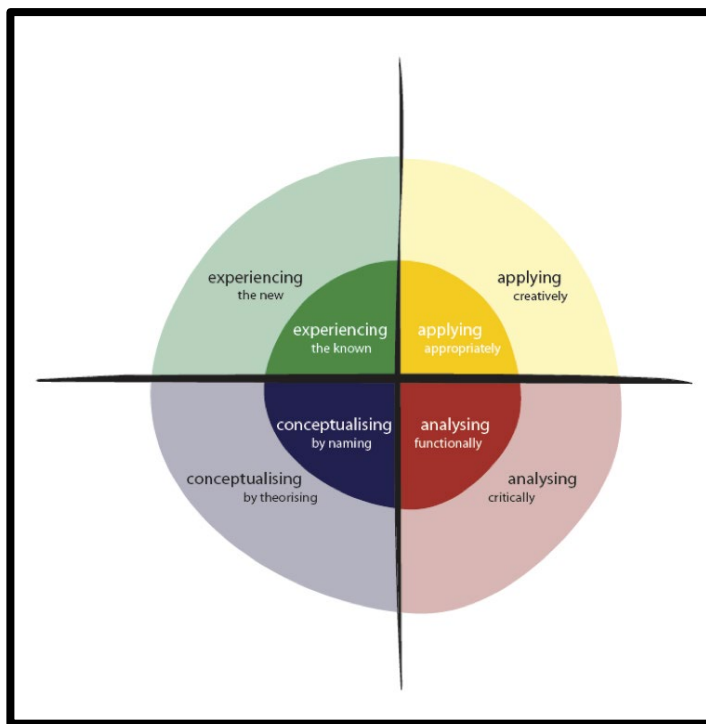


Figure 2 The Knowledge Processes (Yelland et al., 2008, p. 200)

Initially, the four components were: situated practice, overt instruction, critical framing and transformed practice (Cope & Kalantzis, 2000; 2009; The New London Group, 1996). But over the past decade, the framework has evolved through a number of stages where the components in multiliteracies pedagogy were extended into the practical concept of knowledge processes by two of the original members of the New London Group, Bill Cope and Mary Kalantzis (Cope & Kalantzis, 2009; 2015). These elements were reframed and translated into ‘Knowledge Processes: Experiencing, Conceptualising, Analysing and Applying’ in order to make the four pedagogical dimensions more recognisable as pedagogical acts (Cope & Kalantzis, 2009; 2016; Kalantzis & Cope, 2004; 2005; 2010; Yelland et al., 2008;). Table 1 maps the original multiliteracies pedagogy against the knowledge processes in the Learning by Design model.

Learning by Design Model (Knowledge Processes)	Equivalent Multiliteracies Curriculum Orientations
Experiencing	Situated practice
Conceptualising	Overt instruction
Analysing	Critical framing
Applying	Transformed practice

Table 1 The Knowledge Processes (Cope & Kalantzis, 2015; Kalantzis & Cope, 2004, p. 63)

Situated practice/experiencing highlights that human cognition is situated and contextual where meanings are based on experiences, action and personal interests (Gee, 2004). In learning situation, experiential knowledge involves learners working with personal experiences or with familiar and unfamiliar texts. Successful teaching and learning using this pedagogical act would build up learning to cross-connect between classroom learning and learner's out-of-school experiences. Learners should be able to use available meaning-making resources embedded in their lifeworld to generate knowledge in diverse social settings. *Overt instruction/conceptualising* requires learners to be active, analytical and conscious to describe and interpret concept or theory. Conceptual learning involves learners expanding metalanguage that characterizes or describes the patterns or processes in knowledge and meaning. Evidence of successful teaching and learning would be when the students were able to develop metalanguage and vocabulary so that they could manage their own learning.

Critical framing/analysing involves critical capacity either to analyse function or evaluate relationship (Cazden, 2006). Critical learning entails learners critically interrogating or thinking about purpose, rationale, implication or effect and solution of knowledge and meaning. Successful teaching and learning from this pedagogical aspect would be when the students demonstrate the ability to problematise context and be critical in interpreting the knowledge or meaning they are studying in relation to their context. They know what the knowledge is for, its function and the rationale behinds it. *Transformed practice/applying* involves transformation in meaning-making practice where knowledge and meaning is transferred to work in a different context. This pedagogical act immerses learners applying or making new knowledge out of context and putting it to use somewhere else. Evidence of successful teaching and learning would be reproducing or creatively creating new knowledge and meaning that is congruent with another context.

These knowledge processes are equivalent to pedagogical actions which take place through the various different movements or moments in the learning process. There are four main knowledge processes with two sub-knowledge processes each. Table 2 presents a description of every knowledge processes and its definition as offered by the New London Group members.

Knowledge Processes	
<i>Experiencing</i> – is a knowledge process involving learning through immersion in the real, everyday stuff of the world: personal experience, concrete	<i>The Known</i> – learners reflect on their own experiences, interests and perspective – for example, bring in, show or talk about something or somewhere familiar.

engagement and exposure to evidence, facts and data. Immersion in experience and the utilization of available discourses, including those from the students' varied lifeworld.	The New – learners observe or take part in the unfamiliar; they are immersed in new situations or contexts.
Conceptualising - is a knowledge process focussing on systematic, analytic and conscious understanding. The introduction of an explicit language to describe the patterns in knowledge and meaning.	By Naming - learners group things into categories, apply classifying terms and define these terms
	By Theory - learners make generalization using concepts and connect terms in concept maps or theories.
Analysing - is a knowledge process involving the examination of constituent and functional elements of something, and an interpretation of the underlying rationale for a particular piece of knowledge, action, object or represented meaning. Interpreting the social and cultural context of particular designs of meaning; standing back from meanings and viewing them critically in relation to their purposes and cultural context.	Functionally - learners understand the purpose of something, analyse logical connections, cause and effect, structure and function.
	Critically - learners understand consequences or implications of something, evaluate their own and other people's perspectives, interests and motives.
Applying - is a knowledge process involving active intervention in the human and natural world, learning by applying experiential, conceptual or critical knowledge. Transfer in meaning-making practice which puts the transformed meaning to work in other contexts or cultural sites.	Appropriately - learners apply new learning to real-world situations and test their validity.
	Creatively - learners make an intervention in the world which is innovative and creative or transfer their learning to a different context.

Table 2 Descriptions of the Knowledge Processes (Kalantzis & Cope, 2004, p. 64-67; 2010, p. 208; Kalantzis et al., 2010, p.73-74)

Kalantzis and Cope (2016) explain that the multiliteracies theory is outlined and mapped against widely known pedagogical theories such as Bloom's Taxonomy (Anderson & Krathwohl, 2001) and

Kolb's Model of Experiential Learning (1984). The four knowledge processes are the result of the combination between theories of knowledge and theories of learning thus every knowledge process represents a kind of pedagogical orientation or phase. This is supported by empirical studies such as Kaur (2010) who examined the perceptions of ESL teachers in using this approach as a literacy pedagogy. She found that the teachers in her study commented that the framework is somehow similar to other literacy practices because they believe that the approach is what they have already been using but with additional elements of technology integration and a broad range of distinct pedagogical emphases for varied starting points of learning. Figure 3 describes the pedagogical traditions that underpinned every knowledge process adapted by Kalantzis and Cope (2016).

Doucette-Vanthuyne (2016) suggests that the incorporation of all knowledge processes concurrently in employing multiliteracies pedagogy is essential. She argues that multiliteracies pedagogy is not a new form of best practice, yet the concept is said to be lost and mirrored traditional type of learning if the knowledge processes is not integrated as a whole. Nevertheless, Kalantzis and Cope (2012) emphasise that the incorporation of knowledge processes should fit the learning goals of the lesson and address learner diversity instead. They further explain that the framework serves as a prompt to guide teachers to design learning and widen their pedagogical repertoires. Kalantzis and Cope (2016) also strengthen the argument by reiterating that use of knowledge processes should consider the suitability of content of the lesson as well as the readiness and learning needs of the students. Therefore, these components do not necessarily have to be in a linear hierarchy nor to be included all together in one lesson, they could occur simultaneously and are necessary for teaching.

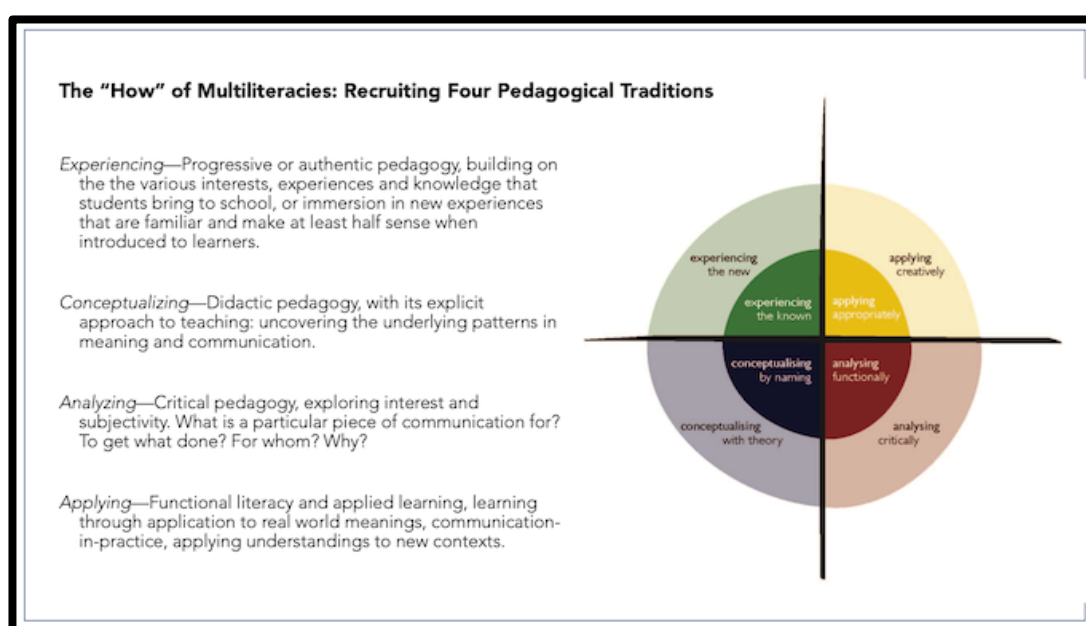


Figure 3 Pedagogical Traditions of Knowledge Processes (Cope & Kalantzis, 2009; Jewitt, 2008; Kalantzis & Cope, 2016; The New London Group, 2000)

Studies investigating the implementation of the pedagogy across learning contexts have used knowledge processes as part of their theoretical framework and showed positive perceptions (Arvanitis & Vitsilaki, 2015; Kaur et al., 2012; Pandian & Balraj, 2016; van Haren, 2015; 2016; Yelland, 2015;). For example, Kaur et al. (2012) conducted a study on designing teaching writing lesson using multiliteracies approach in the context of Malaysia found that teachers in their study unanimously pointed out the advantages of knowledge processes framework. The teachers specifically highlight positive impact of the framework such as prompting ideas to engage learners with ICT, empowering learners' agency and creativity, nurturing collaborative activities and increasing learners' engagement level.

Van Haren (2016) also looks at the application of the principles and practices of multiliteracies pedagogy by teachers in primary schools and a high school in Australia and found that consideration of knowledge processes has helped the teachers to develop new understandings of pedagogical strategies and provided a framework which assisted teachers to plan and design lessons. The teachers viewed the framework positively as they experienced a more detailed approach to planning lesson and highlighted the potential of the framework to engage learners, address diversity and provide learners with various ways of learning and opportunities for quality learning. The way the teachers implemented the knowledge processes reflected the usefulness of multiliteracies pedagogy, but they also experienced challenges applying the framework as they found that the designing processes were complex and time-consuming. The study also found that the use of the knowledge processes could overlap between one another where there is the possibility that the teacher could address two different knowledge processes simultaneously in an activity.

Similarly, teachers in Arvanitis & Vitsilaki (2015) also reported that their teaching repertoires were extended and enriched through the implementation of the knowledge processes in multiliteracies pedagogy. The pedagogy was implemented by teachers from different schools in Greece where their comments and reflections on multiliteracies practices were recorded. Their evaluation on the knowledge processes framework showed greater satisfaction as vast majorities of the teachers felt that the knowledge processes is useful and beneficial. Not only that the framework expanded and improved their teaching practices, but it also assisted the teacher to deepen their teaching through scaffolded activities and addressed learner diversity through differentiated instructional practices.

4.2.2 Multimodality

Multiliteracies pedagogy posits that various modalities of expression are central in understanding specific meanings because a large number of texts around us are multimodal in nature and involve complex relationships among various modes (Cope & Kalantzis, 2009; The new London Group, 1996; 2000). Typically, text is recognized as printed words on paper rather than an image or a logo. But due to the advancement of technology and communication channels, the notion of text has widened, and texts are no longer only written words but can also be digital or printed (Kress, 2003). Texts could also be oral, visual, aural and gestural spatial. For example, on the Internet, emails, video games, social medias and websites include different ‘modalities’ such as videos, sounds, images, and moving icons that making them multimodal texts.

In the current age of continually evolving technology, multiliteracies pedagogy has become increasingly significant (Behak et al., 2015a; 2015b; Doucette-Vanthuyne, 2016; Pugh, 2017; Xing Meng, 2016). More recently multiliteracies pedagogy has been investigated with respect to technological advances and how these have been incorporated into multiliteracies practices to support the process of teaching and learning (Cope & Kalantzis, 2015; The New London Group, 1996; 2000). In line with other studies that attest to the changing nature of texts and literacy due to the emergence of technologies, multiliteracies suggest that literacy teaching should involve engaging learners to deal with a variety of communication channels to facilitate their understanding and production of multimodal texts (Borsheim et al., 2008; Burke & Hardware; 2015; Ganapathy & Kaur, 2013; Kaur, 2010; Kaur et al., 2012; Pandian, 2006). The pedagogy put significant importance on utilising multiple literacy modes that are distinct form paper-based resources while preserving the essential part of reading and writing (The New London Group, 1996; 2000).

Multiliteracies pedagogy is concerned with the use of multimodal texts as part of teaching and learning because it “allows for different modalities in meaning-making, embracing alternative expressive potentials for different learners and promoting synaesthesia as a learning strategy” (Cope & Kalantzis, 2009, p. 188). According to the concept, synaesthesia means “learning that emerges from mode switching, moving backwards and forwards between representation in text, image, sound, gesture, object and space” and is a powerful foundation in multimodal texts (Cope & Kalantzis, 2015, p. 3). Nevertheless, modes are not necessarily parallel to each other because “meaning expressed in one mode cannot be directly and completely translated into another” (Cope & Kalantzis 2009, 180):

The movie can never be the same as the novel. The image can never do the same things as the description of a scene in language. The parallelism allows the same things to be

Chapter 4

depicted in different modes, but the meaning is never quite the same. In fact, some of the differences in meaning potential afforded by the different modes are fundamental.

Multimodal texts allow messages to be conveyed in different ways through the choice of mode even though the exact same meaning cannot be achieved. Nevertheless, it is important to mention that the understanding of meaning through different modes should be viewed as vital and helpful for the learner. For example, something that seems challenging in writing can be understandable through action, images or sound (Ibid.).

Empirical studies researching the implementation of multiliteracies pedagogy mainly incorporated multimodality through multimedia texts such as clay animations, PowerPoint presentation, video games, interpreting information from websites and eBooks (Neville, 2016; Pishol & Kaur, 2015; van Haren, 2015; 2016; Yelland, 2015). However, the critical point of the pedagogy is not on the technological aspects or modalities per se but together with the way they are utilized in making the most appropriate and suitable teaching and learning strategies for learners (Cope & Kalantzis, 2009). Lopez-Gopar (2007) asserts that the use of multimodal texts goes beyond digital domain and is beneficial for students without or with limited access to technology.

Considerable evidence has shown that the use of a multimodal approach enhances learning and increases students' motivation and participation in teaching and learning (Flewitt, 2013; Ganapathy & Kaur, 2013; Ganapathy & Seetharam, 2016; Kaur et al., 2012; Pandian & Balraj, 2010; Rajendram & Govindarajoo, 2016). Ganapathy and Seetharam (2016) investigated the effectiveness of the multiliteracies approach in literacy classroom through students' perspectives and perceptions found that students' agency and autonomy in learning were enhanced. Their data also suggests that students' motivation to learn and engage a range of learning styles was supported through the use of multimodal representational and communicational resources. The students declared during their focus group interview sessions that they were highly likely to participate in a lesson due to the incorporation of various multimodal resources such as videos, slideshows and activities. The study also found that the application of multimodal learning resources had the potential to assist students' understanding and retention of content taught which therefore promoted positivity and motivation to learn and engage in the learning process. Similarly, Kaur et al. (2012) affirm that the negotiation of broad repertoires of multimodal pedagogical practices in literacy teaching results in positive learning outcomes. The study reported that the implementation of multiliteracies pedagogy in an ESL writing classroom enhances students' writing performance through the positive engagement with multimodal learning resources. It increased the students' motivation to learn and their interest to actively participate during the lesson which led to the enhancement of their language learning.

4.2.3 Learner Diversity

Multiliteracies views effective learning as learning that engages with the diverse, complex and multilayered learners' identities. The pedagogy suggests that learners do not learn the same way so addressing learner diversity and inclusivity is important in multiliteracies pedagogy through engaging with learner identities and learner differences is important (Kalantzis & Cope, 2004). Two main conditions of learning proposed by the pedagogy are creating a sense of belonging for learners yet taking them to a journey away from the familiar encouraging them out of their comfort zones towards new frames of understanding (Kalantzis & Cope, 2016). In other words, learning according to multiliteracies should build on learners' knowledge, interests, experiences and motivation but also introducing them new knowledge which is within their zone of proximal development in order for learning to occur.

Kalantzis and Cope (2016) also outline a number of ways to address learner diversity including designing self-paced individual learning or self-managed group learning. The knowledge processes should encourage learning activities that emphasise different learning orientations and encourage responsibility towards active learning so that learner identities and subjectivities become apparent. Furthermore, the learning outcome for the lesson should not focus on producing one particular way of doing work but rather focussing on comparable performance in relation to assessment standards.

Van Haren (2015) suggests that some of the factors to address diversity include: "taking into consideration learners' lifeworlds and identities, scaffolding learning, creating student agency, including challenge and intellectual quality, and providing a meta-language for students to participate in their learning" (p. 270). The factors were evident in the pedagogical choices of teachers in her study as they created a sense of belonging by bringing in learners' prior knowledge and relate learning to their lifeworlds. Additionally, differentiated instructions allowed teachers to integrate various knowledge processes, scaffold learning and empowered learner's agency. It was evident that the teachers engaged learners to work collaboratively and thus positioned them as makers of their own knowledge responsible for their own learning. Arvanitis and Vitsilaki (2015) also support these findings as they explain that "differentiated instructional design...created new spaces of learning moving away from the didactic paradigm to a more inclusive one" (p. 65).

4.2.4 Role of Teacher and Learner

Pandian and Balraj (2016) categorize the critical roles of teachers in multiliteracies as: designing learning and teaching material based on the assessment of the students' knowledge and skills; being attentive to learners' experiences, tensions and power issues faced by them; and being

equipped with necessary ICT skills. Teachers, through the application of the knowledge processes framework are expected to broaden their teaching repertoires so that instructional decisions made for the lesson create conditions for a more inclusive learning. As such, they are responsible for empowering learners to express themselves in different modes, that move away from excessive use of pen and paper towards more opportunities to learn in an environment that is more flexible and less prescriptive than a structured traditional classroom. This, in turn allow students to explore their passions and make competent choices regarding their learning. Burrows (2016) strengthens this line of argument by explaining that “the framework prompts teachers to reflectively consider the diverse needs of their students, the pedagogical alternatives available to them, and to make context appropriate decision about their practices” (p. 149).

Research on multiliteracies further highlights the importance of creating learning spaces where teachers engage in a reflective thought-through process when designing learning and where students become the agents for their learning (Burrows, 2016; Cope & Kalantzis, 2009; Kalantzis & Cope, 2016). It is also noteworthy, that recognizing and harnessing learner’s potential is of great importance in multiliteracies so that learners are not seen as passive recipients of knowledge but rather as active producers of hybrid texts (Xing Meng, 2016). Rather than passively following the syllabus, mandated curriculum or textbook, multiliteracies encourages teachers to be designers of engaging learning experiences for students. Learning that balances the responsibility between the teacher and the learners and responds to the interests of learners enables learners to take more responsibility for their own learning (Cope & Kalantzis, 2009). Therefore, teachers should make meaningful choices about what is learned and how learning takes place.

4.3 Multiliteracies Pedagogy in Malaysian Context

Historically, research on multiliteracies in the context of Malaysia begun soon after the first publication of the original multiliteracies manifesto which was published by The New London Group in 1996 (Kalantzis & Cope, 2008). Multiliteracies as a concept in its broadest sense was discussed in the previous section but multiliteracies in Malaysian context, the emphasis has been about incorporating technological and multimodal resources in teaching and learning as well as to encourage the acquisition of higher order thinking skills through the lens of English literacy (Behak, 2013; Kaur et al., 2012; Kaur & Sidhu, 2007; Pandian, 2006; Pishol & Kaur, 2015). The enormous body of work done applying the notion of multiliteracies beyond the original framework by The New London Group has made it a growing phenomenon in the context of Malaysian research. Applications of the multiliteracies framework in the context of Malaysia have focused on the effectiveness of the pedagogy in several learning contexts such as secondary public schools, private schools and higher education (Behak, 2013; Behak et al., 2015a; 2015b; Ganapathy, 2014;

Ganapathy & Seetharam, 2016; Kaur & Sidhu, 2007), the enhancement of teaching and learning through multiliteracies approach (Ganapathy & Kaur, 2013; Kaur et al., 2012; Pandian, 2006; Pandian & Balraj, 2010; Rajendram & Govindarajoo, 2016) and the perceptions of teachers and learners on multiliteracies pedagogy (Kaur, 2010; Pishol & Kaur, 2015).

Most studies suggest that the design and framework of the multiliteracies approach as initiated by The New London Group is a viable literacy teaching strategy to be reconfigured in the Malaysian education system as a possible pathway to bridge the disparity between the national educational aspirations and the reality of the current state of teaching and learning environment (Kaur, 2010; Kaur & Sidhu, 2007; Pandian, 2006; Pandian & Balraj, 2010). Research has shown that a multiliteracies framework implemented in a high-stakes assessment climate that privileges print literacy can have possible outcomes for students (Behak et al., 2015b; Ganapathy, 2011; 2015; Matthewman et al., 2004; Pandian & Balraj, 2010; Tan & Guo, 2009; 2013; Yunus et al., 2012).

4.4 Multiliteracies in Language Teacher Education

The urgency for teacher education programmes to prepare teachers to incorporate new literacies into their classrooms is increasing due to the fundamental evolution and globalization of technology that has profoundly shifted literacy instruction and the way students learn (Ajayi, 2010). In fact, studies in the wider context highlight the need and importance of teacher education programmes to prepare pre-service teachers with multiliteracies for literacy teaching to accommodate the changes in globalization and technology (Ajayi, 2010; Corkett & Benevides, 2015; Doucette-Vanthuyne, 2016; Rowsell et al., 2008). Research studies have investigated ways in which a multiliteracies approach is employed in pre-service teacher education; examining pre-service teachers' knowledge, dispositions, attitudes and perception; as well as exploring pre-service teachers experiences and practices implementing the pedagogy (Ajayi, 2010; Boche, 2014; Rowsell et al., 2008; Skerrett, 2011).

Ajayi (2010) highlights that pre-service teachers understand that the new media technologies influence the conception of literacy and they expressed enthusiasm for using multiliteracies pedagogy. Teachers reported being aware of the evolution of communication technologies and their impact on literacy forms, knowledge, learning and instructions but are concerned with constraints coming from schools and school districts, such as the lack of access to technologies, examination-based education systems and scripted literacy programmes in schools that might hamper the teaching of multiliteracies. Despite this, pre-service teachers were still motivated to take additional courses to help prepare them to teach multiliteracies. This suggests that pre-service

teachers were positive in accepting the new pedagogy despite the possibility that contextual factors might hamper their practices.

Rowse et al. (2008) believe that orienting teaching and teacher education towards multiliteracies is beneficial for a number of reasons including: it addresses broader range of literacies, it connects learning to students' lives, it improves student-teacher relationships, it instils aspects of inclusivity for diversity and establishes positive class community. Nevertheless, the authors also recognize the challenges associated with the implementation of the approach such as limited elaboration of the nature of the approach, lack of exploration of literacy forms, and a limited understanding of the relationship of the approach to cultural and linguistic diversity. They further suggest that "we need to go into greater depth on certain key ideas, making them clear through explanation, modelling, detailed examples, and quality practicum experiences" (p. 119).

4.5 Implications of Multiliteracies Pedagogy for This Study

Multiliteracies pedagogy was chosen as a tool to address the main objectives of this study which was to understand the cognition and practices of pre-service teachers embracing a new pedagogy introduced in a short, focused training programme. Choosing multiliteracies was closely related to the context of this study because in the context of this study, scholars have suggested that multiliteracies pedagogy has the potential to support the national agenda, improving English teaching and learning in Malaysian schools. A vast amount of research done on multiliteracies in Malaysia merit that multiliteracies is an innovative approach that can be appropriated in the country.

It is important to note that this study did not aim to evaluate the pedagogy or to look at the effectiveness of the implementation of the pedagogy in schools. Instead, the main focus was to look at the understanding and implementation of principles and practices of multiliteracies pedagogy by pre-service teachers following an education intervention. Therefore, the focus was more on exploring the mental lives and instructional practices of these teachers embracing multiliteracies rather than criticising the pedagogy or examine its impact on students learning. Acceptance and adoption of the pedagogy is measured through pre-service teachers' awareness, understanding and perceptions of multiliteracies as well as their ability to put into practice the principles of multiliteracies in a classroom.

The literature presented earlier in this chapter has helped to guide the researcher to create the syllabus of the workshop, to understand the principles of multiliteracies framework, how the pedagogy should be operationalised in a classroom and what possible outcomes that the researcher might anticipate at the end of the study. The syllabus of the workshop was mainly built by the

researcher adapting from multiliteracies theory (The New London Group, 1996; 2000) while materials for the activities were adopted from New Learning website authored by the two main scholars of multiliteracies pedagogy, Bill Cope and Mary Kalantzis. The framework of multiliteracies pedagogy was adopted and adapted in the workshop to give theoretical and practical input for trainee teachers to engage and learn through multiliteracies approach. The researcher modelled the framework of multiliteracies during the workshop as the syllabus was designed based on the structure and principles of multiliteracies pedagogy. This gives the trainee teachers opportunities to not only understand the element but to experience it for themselves so that they could have better understanding of the approach.

Apart from designing the workshop, multiliteracies framework is also used to guide the data collection and data analysis process of this study. The framework was used as a guide to generate questions for all interviews where the themes were mainly related to the participants' understanding, perceptions, experiences and attitudes towards the pedagogy. In fact, the framework is also used to facilitate the documentation of the instructional practices of trainee teachers implementing the pedagogy. Adding to that the analytical process of this study also relied on the conceptual frameworks of multiliteracies pedagogy. Given that part of the research questions, research design and data collection process of this study is guided by multiliteracies concept therefore the analytical procedure necessarily directed by the theoretical proposition. For example, some of the codes, themes and categories for data analysis were pre-defined based on the framework and literature reviews. This was not used to determine the outcomes of this study as data were approached with an open mind, but it is use as a guide to construct further analysis from the data.

The literature review has given a detailed description on why, what and how of multiliteracies but at the same time it also gave a bigger picture on what it would possibly look like when put into practice in a specific context. For example, the literature on multiliteracies in language teacher education informed the researcher on how studies have examined the integration of multiliteracies in teacher education looking into the trainee teachers experiences with the pedagogy, their practices as well as cognitions, dispositions and attitude. This certainly has provided an underlying basis and guidance for this study to refer to when conducting the research.

4.6 Summary

This chapter has discussed the theoretical framework of multiliteracies pedagogy that underpins this study. An understanding of the theory of multiliteracies as conceptualised by The New London Group (1996; 2000) was described in detail. The discussion includes the definitions of the pedagogy

Chapter 4

and detailed elaboration of the main principles and practices of the pedagogy such as the knowledge processes, multimodality, learner diversity and the role of teachers and learners. Then, an account of multiliteracies pedagogy in the context of this study particularly with regard to its historical aspect in the country and its significant importance for the country was examined. Finally, a discussion of multiliteracies pedagogy in language teacher education particularly with regards to the implementation of the pedagogy in language teaching as well as teachers' perceptions of the approach was presented.

Multiliteracies theory was initiated due to the concern of dramatic expansion of digital technology and its impact on the working and social life. The evolution has led to global connectedness, growing cultural diversity and evolving communication environment which drive the rethinking of literacy and literacy education. Ever since, the pedagogy has been around for more than 20 years and has been research researched in various field of studies and context. The pedagogy mainly aims to enrich traditional literacy, shifting the focus from print-based literature towards negotiating various texts form, languages and contexts as well as multimodal representation of meaning making. The principles and practices of the pedagogy includes the framework of knowledge processes, the use of multiple modes of meaning-making, addressing learner diversity and empowering agency among teacher and learners.

Scholars have agreed that multiliteracies in the context of Malaysia is found to be effective for both public and private schools as well as higher education (Behak, 2013; Behak et al., 2015a; 2015b; Ganapathy, 2014; Ganapathy & Seetharam, 2016; Kaur & Sidhu, 2007). In fact, the approach as an alternative pedagogy facilitates the enhancement of teaching and learning process and is perceived positively by teachers and students (Kaur, 2010; Pishol & Kaur, 2015) thus it was recognized as a viable literacy teaching to be reconfigured in the Malaysian education system. In the context of language teacher education, scholars agreed that there is an urgency for teacher training programmes to equip trainee teachers with multiliteracies to accommodate the technological and globalization settings. Studies suggest that trainee teachers were enthusiastic and motivated to embrace multiliteracies pedagogy as they understand and were comfortable with the idea of new media technologies and value its significant in literacy education (Ajayi, 2010; Boche, 2014; Rowsell et al., 2008; Skerrett, 2011). In fact, implementing multiliteracies in language teacher education was found to be useful and beneficial particularly with regard to addressing multiple literacies, establishing positive community and promoting inclusivity and diversity (Rowsell et al., 2008).

Chapter 5 Methodology

5.1 Introduction

This study investigates the cognition and practices of ESL pre-service teachers on the uptake of multiliteracies teaching practices introduced during a short, focused training held in their teacher education programme. This chapter is devoted to a discussion of the methodological procedures adopted for this study as outlined in the sections that follow. The chapter begins with a presentation of the aims and research questions. Then the research paradigm underpinning this study, the research design and a description of the context are described. Following that the process of data collection and the methods used with the rationale for this type of data collection are discussed in detail. The next section then focusses on data analysis particularly on the approach employed to analyse data followed by strategies applied to ensure trustworthiness mainly in regard to reliability and validity. Finally, the ethical considerations of this study are presented.

5.2 Research Summary

The aim of the current study is to investigate pre-service teachers' cognition and practices upon the introduction of a new teaching pedagogy introduced during a short, focused training held in their teacher education programme. Therefore, the objectives are:

1. to discover pre-service teachers' cognition of multiliteracies pedagogy introduced during a short, focused training programme.
2. to examine their implementation of multiliteracies during teaching practicum; and
3. to describe the relationship between their cognition and practices with regard to multiliteracies pedagogy.

The research questions that this study attempts to answers are:

1. What is pre-service teacher's cognition on multiliteracies pedagogy before and after a short, focused training held in their teacher education programme?
2. How do these pre-service teachers implement multiliteracies pedagogy during their teaching practicum?
3. What is the relationship between pre-service teacher's cognition and their practices with regard to multiliteracies pedagogy?

5.3 Research Paradigm

Guiding philosophies behind qualitative research which are also known as research paradigms entail “beliefs about ontology (the nature of reality), epistemology (what counts as knowledge and how knowledge claims are justified), axiology (the role of values in research), and methodology (the process of research)” (Bryman, 2016; Creswell, 2013, p. 20; Duff, 2008; Patton, 2002; Silverman, 2011). These paradigms are vital as they guide the construction of proper techniques and topics for qualitative inquiry therefore this section attempts to make explicit the philosophy underpinning this study and discusses how it is enacted in the study.

As mentioned, the aim of this study is to examine pre-service teachers’ cognition and practices embracing multiliteracies pedagogy introduced during their teacher education programme therefore the interest of this study is to deeply understand the meaning people have constructed about their world and their experiences instead of predicting what may happen in the future (Merriam, 2002). Attempting to understand the complexity of the phenomenon, this study is directed towards interpreting the reality experienced by pre-service teachers and providing a detailed account about their cognition and practices of the new pedagogy. Since the main focus was to get a rich, comprehensive view of how pre-service teachers’ thinking, knowledge, beliefs and practices are constructed upon the uptake of the new pedagogy, it is therefore crucial that this study observe behaviour in its natural setting with as little disruption as possible (Merriam, 2009).

The key philosophical assumptions that informed this study are the interpretive research paradigm because it involves “systematic analysis of socially meaningful action through direct detailed observation of people in natural settings in order to arrive at understandings and interpretations of how people create and maintain their social worlds” (Neuman, 2011, p. 101-102). This paradigm which is also known as constructivist by other researchers asks foundational questions about “how people constructed reality; what are their reported beliefs, perceptions, explanations and worldview; as well as what are the consequences of their constructions for their behaviours and for those whom they interact” (Denzin & Lincoln, 2003; Gall et al., 2007; Lincoln et al., 2011; Patton, 2002, p. 96). In line with the research questions posed in this study, this paradigm allows the researcher to understand how the pre-service teachers make sense of the new pedagogy introduced and how they translate that into practice. Based on Lincoln et al., (2011, p. 165, 166, 170, 173) and Creswell (2013), table 3 shows the summary of the interpretive design employed in this study.

Philosophical Beliefs	Interpretive Paradigm
Ontology	Multiple realities; local, specific, holistic and co-constructed through our lived experiences and interactions with others.
Epistemology	Researcher and the researched interact and inseparable in constructing reality. Reality is subjective and created by individual experiences.
Axiology	Researcher values are honoured and not denied.
Methodological Beliefs	Qualitative and inductive methods.

Table 3 Summary of Interpretive Design

From an ontological perspective, the nature of reality viewed in this study is based on relativism. Since interpretive research analyses socially meaningful actions to understand how people create reality, the construction of reality is seen as not fixed but rather multiple, local, specific, holistic and co-constructed (Lincoln et al., 2011; Schwandt, 2000). Relativists see reality as multiple and that these realities are determined by what exists in people's minds, their experiences, and their interaction with other people (Bryman, 2016; Denzin & Lincoln, 2005). Therefore, the same social phenomenon in this study is interpreted based on individuals and the reality perceived might be the same but not necessarily similar from person to person.

The epistemological belief held in this study is that knowledge is subjective, and it is mainly assembled based on evidence such as quotes from the participant. The interpretive paradigm holds the belief that reality can only be fully understood through subjectivity and by taking the subjectivist position and that, reality relies on the interpretation of social phenomenon created by individual experiences (Guba, 1990; Lincoln et al., 2011). Additionally, the study is conducted at the place where the participants live and work so the researcher can get to know the participants and know what can be known from first-hand information (Creswell, 2013). Therefore, in that natural setting the relationship between the researcher and the researched is inseparable and interactive.

Axiological assumptions are concerned with the value that researcher brings to a study (Creswell, 2013). The researcher positions herself as an integral part of the research, as a research tool therefore this study is value-laden and biases are present (Cousin, 2010; Day, 2012). The researcher was part of the university that the participants are studying yet was not directly involved with them in the sense that the researcher never taught them before. Being an insider to a certain extent helps with the familiarity of the context and helps to create rapport (Creswell, 2009) but it is important to note that the relationship between the researcher with the participants was not so close because

they only met for the first time during the data collection process, and they did not have any prior experiences together. Given that the researcher and the participants affect each other, the researcher could possibly be neutral, yet it is acknowledged that the researcher is influenced by her own values and biases. Consequently, the interpretation of the researcher in this study was in accordance with the interpretations of the participants therefore the voices in this study were mixed between the researcher and the participants (Lincoln et al., 2011). James and Vinnicombe (2002) suggests that rather than being regarded as bad practice, reflexive practice acknowledges the personal involvement of the researcher in data production as a source of data in its own right.

As previously mentioned, this study adopts an interpretive paradigm with relativist ontological and subjectivist epistemological assumptions, therefore methodology fitting this paradigm utilizes methods and techniques that could be done in the participant's natural contexts and adaptable to deal with multiple realities. As a result of this, qualitative methods such as semi-structured interviews, classroom observation and document analysis are favored to capture realities holistically. Data are approached inductively to look for and observed patterns rather than testing or proving hypotheses.

5.4 Research Design

This study adopts a case study approach to explore pre-service teacher's cognition and practices of multiliteracies pedagogy introduced during their teacher education programme. Yin (2014) outlines twofold definition of case study in which the first is defined as "an empirical inquiry that investigates a contemporary phenomenon (the 'case') in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (p.16). The second part of the definition refers to the approach being able to cope with multiple realities, relies on multiple data sources and could benefit from theoretical propositions in guiding data collection and analysis. Both definitions demonstrate features of case study which are appropriate for understanding pre-service teachers' cognition and practices of multiliteracies pedagogy in this study. Additionally, there are other reasons for the adoption of this approach.

Firstly, a case study approach allows for deeper understanding of the case under investigation through examination of individual cases and through the collection of multiple data sources. In alignment with the aim of this study, a small number of pre-service teachers are studied to uncover the complexities of their cognition and practices upon the introduction of a new pedagogy. Van Lier (2005) suggests that a case study contributes to the developing of thick description and analysis, so these participants are studied individually to obtain rich and accurate portrayal of their cognition and practices embracing the pedagogy. The study traces and observes teacher's mental lives and

examines their practices through multiple methods at different points of time during the data collection process. Therefore, in order to focus on a case and describe the phenomenon in-depth and holistically, a case study approach is chosen (Merriam, 2002; Yin, 2014).

Secondly, a case study approach is preferred because the research questions posed in this study are both exploratory and explanatory which according to Yin (2014) might represent a descriptive case study. As one of the three types of case study identified by Yin, a descriptive case study mainly focusses on providing a holistic description of phenomenon studied within its context. In an exploratory manner this study aims to “develop pertinent propositions for further inquiry” through understanding the cognition of pre-service teachers about multiliteracies pedagogy and the relationship between their cognition and practices, while in an explanatory manner this study attempts to “explain how events happened” through observing the classroom practices of the pre-service teachers implementing the pedagogy (p. 10).

Finally, this study attempts to offer an in-depth understanding of real-world case which is likely to involve contextual conditions because the phenomenon is understood as they took place. Given that this study is context, subject specific, and aimed at describing and accounting for observed patterns, it is necessary to understand the phenomenon in their uniqueness as part of a particular context (Bassey, 1999) and the relevant behaviours cannot be manipulated (Patton, 1990). The use of case study approach in this study is then particularly fit for these conditions because firstly the approach seeks to understand situations in its natural setting (Patton, 1990) and secondly, having limited or no control over the actual behaviour events, the researcher observes and examines the phenomenon under investigation directly in their natural settings (Yin, 2014). Even though the pre-service teachers are introduced to a new pedagogy prepared by the researcher, the implementation of the new pedagogy which includes the designing of the lesson and adoption of the teaching practices were done solely by the pre-service teachers without the interference by the researcher.

5.5 Research Context

5.5.1 Site of Research

The study took place at the International Islamic University of Malaysia (IIUM). IIUM is one of the well-established public university in Malaysia located at the capital city of Kuala Lumpur. The university offers admission for both local and international students from all over the world offering various degrees for various field of study. The Faculty of Education at IIUM is known as the Kulliyah of Education (KOED) and offers a bachelor’s degree in education for various majors such as English, Arabic, Islamic education and counselling. KOED is under direct supervision of the Ministry of

Education (MOE), and was established to train teachers for secondary schools throughout the country. Its four-year education programme includes a combination of coursework and fieldwork. KOED aims to produce professionally trained graduate teachers who uphold the philosophy of education and possess the attributes necessary to act as excellent role models for the younger generation and are committed to serve the country (IIUM website).

In the KOED curriculum, under required courses for Teaching English as a Second Language (TESL) a course namely Teaching Writing in Secondary Schools, is offered to prepare teachers to teach English particularly for the teaching of writing. This course includes attending lectures, micro teaching and peer teaching. During the fourth and final year, it is compulsory for student teachers to take this course among other courses in the first semester in order for them to be eligible to do their teaching practicum 2 (teaching practice) in the second and final semester. The teaching writing course does not include a focus on multiliteracies approach as part of the syllabus (refer Appendix I). Therefore, the students have had no formal encounter with the approach before and in fact it was a new pedagogy to them. For the purpose of this study, a short-focused training on multiliteracies approach was conducted at the end of the semester when all the syllabus content of the teaching writing course had been covered. The workshop was administered as part of the course syllabus but was neither graded nor evaluated. Even though the study is embedded within the teaching writing course, it has no influence or impact on the pre-service teachers' evaluations or assessments in the course and the practicum.

Students have to complete all courses including both major and minor courses prior to their teaching practice at schools. During teaching practice, student teachers work as full-time teachers for 12 weeks at schools teaching subjects related to their field of specialization. The objective of the teaching practice is to enable student teachers to practice and apply content knowledge, pedagogy, skills and principles previously learned during their teacher education programme in secondary classrooms. All the student teachers involved in this study were placed in public secondary schools in Gombak, Kuala Lumpur area for their teaching practice.

Secondary research sites involved in this study are the schools and classrooms where participants completed the teaching practicum and implemented the multiliteracies pedagogy. The schools were attended by local students and each school had a population of approximately 1000 students. The majority of the students were native Malay speakers with a few Chinese and Tamil speakers. All schools provide English as a compulsory core subject. The English subject was divided into five components that focus on different skills including reading comprehension, writing, listening and speaking, literature and grammar. In a week, two periods of English are assigned for reading comprehension or writing, another two periods for listening and speaking or literature, and one

period for grammar. Each period lasts 30 minutes, so every week students will engage with English learning for two and a half hours.

The secondary school classes observed in this study included Form 1 to Form 4 (equivalent to Year 8 to Year 11 in the UK) and the students taught were aged between thirteen to sixteen years old. Class-size varied from a range between twenty to thirty students per classroom. All students were Malaysian since the schools involved were public schools but they each had quite different knowledge and skills, varied learning styles and capability in English proficiency. All students were expected to sit for a standardised national exit examination towards the end of their final secondary school year. The examination is compulsory for all students, and it is a purely printed based examinations. In almost all classrooms, the environment was well organised, clean and joyful with colourful tablecloths, flowerpots and cheerfully decorated wall with posters, bulletin board, charts, learning resources and students' artworks. In all classrooms, each student has a table of their own and four to five tables were pushed together so students sit in a group. This is to facilitate students' discussion and support collaborative work among students. In front of the classroom, there was a table for the teacher on the side and a white board attached to the wall at the centre. The layout of the classrooms was flexible where students could engage in their learning, interact with their teacher and peers either in groups or individually.

5.5.2 Research Participants

The main purpose of this study is to understand pre-service teachers' cognition and practices upon embracing multiliteracies pedagogy introduced during a short, focused training held in their teacher education programme. To achieve the aims of this study, the participants were chosen through a convenience sampling because the researcher was a former student of and is currently associated with the university, but not as a lecturer for any courses offered in KOED, IIUM.

The participants of this study are six fourth year undergraduate, TESL pre-service teachers enrolled in the Teaching Writing in Secondary Schools course at the IIUM in the academic year 2017/2018. The participants age ranged from 20-30 years old with majority of them in their early twenties. The participants included 3 males and 3 females. After the Ethics and Research Governance Online (ERGO) permission was granted, the first informal meeting with the pre-service teachers was conducted where the significance of the research, the design of the study and an overview of the five-months data collection timeline was presented. During the first formal meeting all participants were provided with the consent form (see Appendix E) and participants information sheet (see Appendix F). The participant information sheet explained in detail and participants were provided with an opportunity to ask questions before deciding whether or not to sign the consent form. All

of them agreed to participate and the signed consent forms were collected at the end of the meeting.

Prior to the teaching practicum, all participants had passed the Teaching Writing in Secondary Schools course thus, allowing them to embark on their teaching practice journey. Even though the researcher received a researcher pass from the Prime Minister Office of Malaysia to conduct research in schools, it was necessary to obtain permission from the school principal to gain access to the particular schools involved prior to the classroom observation. Therefore, formal meetings with the principals requesting for their approval were held a week before the classroom observation. In these meetings the researcher presented: the letter from the prime minister's office, the researcher's pass and an approval letter from the university to observe the pre-service teachers during their teaching practicum. The aim of conducting research in the school, the significance of the study and the procedure of data collection process were explained and at the end of the meeting, permission to conduct research in the school was granted. Then, the pre-service teachers were contacted to make arrangements for classroom observation. Prior to the scheduled classroom observation, all the participants were asked to distribute the participant information sheet to the school students to obtain informed consent. A separate consent form and participant information sheet for the school students were designed (see Appendix G and H). The pre-service teachers were asked to explain about the research and inform the school students about their indirect participation during the classroom observation prior to requesting their consent to participate. All school students gave their consent before the classroom observation took place.

5.6 Data Collection

In line with qualitative inquiry and case study research methodology, the data collection methods used in this study are semi-structured interviews, open-ended questionnaire, classroom observation and document analysis. The data collection took place over a five-month period from late 2017 to early 2018. The study was conducted in five phases in order to track pre-service teachers' understandings and practices of multiliteracies pedagogy. These phases were established after discussions with the module lecturer and considerations were made for, the pre-service teachers' exams period, their inter-semester break and the dates they would start teaching practicum in their respective schools. The main stages of data collection for this study is as shown in Figure 4.

The first stage involved individual semi-structured interviews and open-ended questionnaire at the beginning of the data collection process. The purpose of this pre-intervention interview was as an introductory interview in order to establish background information about pre-service teachers'

awareness of the evolution of technology and its impact on linguistics practices, their prior experiences as language learners and their prior cognition that would be brought into the workshop.

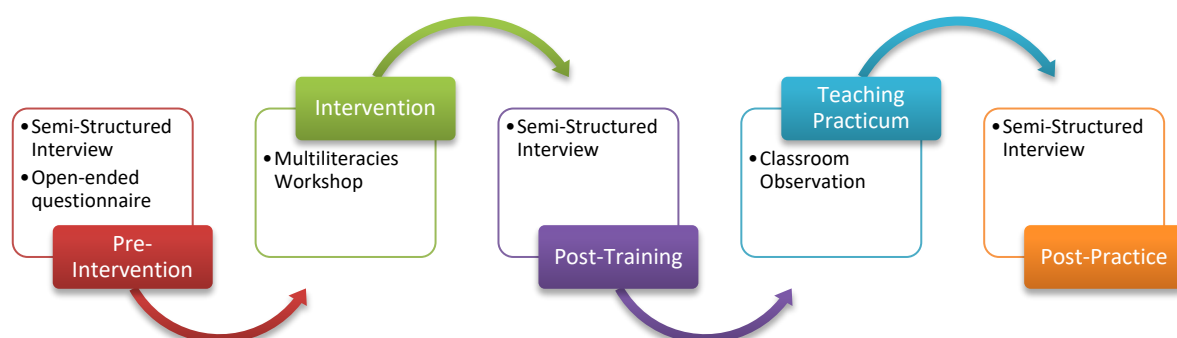


Figure 4 Data Collection Procedure

This background information is important for the adoption and/or rejection of new pedagogy introduced to the pre-service teachers as teacher's pre-existing beliefs act as a filter for the internalization of new ideas (Almarza, 1996; Borg, 2003; da Silva, 2005; Numrich, 1996). Their pre-existing beliefs should be acknowledged and made explicit in order to provide opportunities to examine and reconsider new information introduced and also to counteract any possible that may inhibit teacher learning (Borg, 2006). The initial plan was for the pre-intervention interview to be individual and face-to face the week before the workshop started, however, due to unforeseen constraints imposed by the university, the entire data collection period was shortened. The workshop was originally planned for the second week, one week after the pre-intervention interview, had to be brought forward.

Consequently, only a day was given for the interview to be conducted and the interview was reformulated from an individual face-to-face interview to an open-ended questionnaire. All guiding questions for the interview were changed into a written form of an open-ended questionnaire. All pre-service teachers were gathered in an hour session to answer the questionnaire. During the session the questionnaire was distributed, a brief explanation was given before participants started answering the questionnaire to clear up any misunderstandings as well as to give them a chance to ask questions. The questions were in English, but they were allowed to either answer the questions in English or in their native language, Bahasa Malaysia. The pre-service teachers completed the questionnaire individually and the questionnaire was collected at the end of the session. However, after the session it was revealed that most of the questionnaires were filled with short and unclear answers. This was perhaps because the questionnaire was quite long, and the allotted time was not sufficient.

Chapter 5

The limitations of open-ended questionnaire as an alternative research method which was low-quality survey response data has influenced the researcher to take another measure to collect data. Therefore, another measure was taken where the participants' answers were discussed during the post-training interview in order to gain more information. Before the post-training interview was conducted, a small portion of time was allocated to clarify unclear answers and ask further questions to gain in-depth information.

In an attempt to shed light on ESL pre-service teachers' cognition and practices upon embracing multiliteracies pedagogy introduced during the teacher education programme, a multiliteracies workshop was integrated in the Teaching Writing in Secondary Schools course in the pre-service teacher education programme. As the second stage of data collection, the main objective of this workshop was to give theoretical and practical input to student teachers and to allow them to engage and experience learning through the multiliteracies approach before they attempted the implementation of the approach during their teaching practicum. The workshop was conducted after the pre-intervention interview took place and during the final three weeks of the Teaching Writing in Secondary Schools course. The sessions began at the endpoint of the first semester and took place over a two-week period.

Initially the workshop was planned to be conducted in three weeks' time and to take a total of nine hours at a lecture room in the Faculty of Education, IIUM in which student teachers would attend one three-hour class per week listening to lectures and completing classroom activities. However, the course instructor could only accommodate the multiliteracies workshop for two weeks. Since the teaching writing course is conducted twice every week the workshop could only be done for two sessions per week with one hour and thirty minutes for each session. The syllabus was revised to reflect the available time and the content planned for the third week was discarded (further explanation is discussed in section 5.6.1 in the "week 2" section). The workshop was conducted in English and the researcher was the instructor. Table 4 outlines the initial multiliteracies workshop syllabus.

Week	Course Objectives	Course Learning Outcomes	Lesson Learning Outcomes
1	Understand the concept of multiliteracies pedagogy.	Describe the principles of multiliteracies pedagogy.	Learners draw upon and articulate personal knowledge and familiar, lived experiences about the teaching and learning of English in general and of writing in English in particular.

			Learners immerse themselves in and reflect upon new information; multiliteracies pedagogy.
	Examine the elements, structure and functions of Multiliteracies pedagogy.	Analyse the structure, purpose and implications of Multiliteracies pedagogy.	Learners examine and organize key features of multiliteracies concept in a lesson plan.
			Learners account for motives and consequences behind ideas and information of the lesson plan.
2	Develop a multiliteracies lesson plan for teaching of writing.	Apply the principles of multiliteracies pedagogy for teaching writing in a lesson plan.	Learners apply the principles of multiliteracies pedagogy for teaching writing in a lesson plan.
3	Demonstrate the teaching of writing using multiliteracies approach with peers (microteaching).	Integrate and implement multiliteracies pedagogy in the teaching of writing.	Learners integrate and implement multiliteracies pedagogy in the teaching of writing.

Table 4 Multiliteracies Workshop Syllabus

After completing the workshop and before attempting to implement the approach in real classrooms during their teaching practicum, for the third stage of data collection, a post-training individual face-to-face semi-structured interview was conducted. Pre-service teacher knowledge, beliefs and understanding of multiliteracies pedagogy based on the workshop were recorded. Conducting the interview at this stage helped to examine their understanding of what had been taught, how much they managed to internalize the input given and to see if there were any misunderstandings, of specific interest where their cognition on the definition and characteristics of multiliteracies approach teaching practices were documented. This interview was arranged in advance according to the time and venue preference of the pre-service teachers.

Approximately two months after the workshop, for the fourth stage of data collection, the pre-service teachers implemented multiliteracies pedagogy in the teaching of writing classroom in schools and their teaching practices were observed. The pre-service teachers began their teaching practicum at appointed secondary schools in Malaysia during the second semester of their final year. Observations took place in the second week of their teaching practicum in order to allow the

pre-service teachers to settle in at the new school for the first week and also to avoid further intrusion of their teaching practicum and the school curriculum beyond the second week. In this study, the purpose of the observation was not to evaluate or grade the teaching of the pre-service teachers but as a means to understand how they translated the input given during the short-focused training and put it into practice. As such, the observation did not have any bearing on the evaluation of their teaching practicum. A single lesson taught by each pre-service teacher was observed. The lesson was observed only once mainly due to time constraints and the availability of the school students during the data collection period. All lessons were video recorded in order to allow the researcher to replay the video during data analysis and this helped to increase the descriptive validity and reliability of the analysis (Maxwell, 1992). It also helped the researcher to focus on what happened in the class without missing the important aspects of the lesson.

Finally, post-practice individual face-to-face semi-structured interviews were conducted during the last two weeks of the data collection, after the observation of pre-service teachers' implementation of the pedagogy in the classroom. The rationale of this interview is to invite pre-service teachers to reflect upon their classroom practices as they tried to implement the multiliteracies pedagogy. Therefore, their cognition about the approach and its implementation were examined and recorded. It is likely that their cognition may have changed or improved after having implemented the pedagogy because by the time this interview took place, the trainee teachers already had some classroom experiences. With added classroom and personal experiences in designing multiliteracies lesson for an actual classroom, it is fair to assume that the trainee teachers might have a better understanding of the pedagogy as compare to when they did at the completion of the workshop.

Nevertheless, there are some limitations of the interviews such as the accuracy of reported information and interviewees may have given the information that they assume the interviewer wants to hear (Yin, 2009). Even though semi-structured interviews allow the researcher to explore the tacit aspects of participants lives, the extent to which a complete account of teachers' thinking is arguable. There is a possibility that the explanations given were made up at the time of the interview rather than the accounts of their thinking. Apart from that, there is also a limitation in terms of time gap in between the completion of the lesson and the interview. There is a possibility that there would be some loss of reported thought processes that is no longer in their short-term memory (Borg, 2016). Therefore, in order to minimize these threats, a few measures were taken such as 1) scheduling the post-practice interview two or three days after the observation took place and 2) triangulating the interview data with data from other sources such as observation and documentary analysis data. Table 5 presents the details of data gathered from each of the data collection methods used in this study.

Data collection method	Data collected	Description
Pre-intervention interview	6 hours of audio recordings	6 one-to-one semi-structured interviews with pre-service teachers
Open-ended questionnaire	6 questionnaire responses	6 open-ended questionnaire responses from pre-service teachers
Post-training interview	6 hours of audio recordings	6 one-to-one semi-structured interviews with pre-service teachers
Classroom observation	About 6 hours of video-recorded lessons	6 lessons observed, 1 lesson for each pre-service teacher
Post-practice interview	6 hours of audio recordings	6 one-to-one semi-structured interviews
Documentary data	<ul style="list-style-type: none"> • Lesson plans • Photocopies of worksheet used by pre-service teachers • Photocopies of the textbook units used for multiliteracies lesson • Research notes 	

Table 5 Overview of Data Collected

5.6.1 Multiliteracies Workshop

The multiliteracies workshop uses a researcher-designed syllabus grounded in the Learning by Design framework (Cope & Kalantzis, 2015). Most materials for the activities in this workshop were gathered, collected and adopted from the New Learning website initiated by two of the New London Group scholars and experts of multiliteracies pedagogy, Bill Cope and Mary Kalantzis. The syllabus focuses on understanding the concept of multiliteracies pedagogy and how to implement it in ESL classroom. In developing the syllabus, the researcher modelled the multiliteracies approach in the workshop in order to provide an example for the students to see how the approach is operationalised and to enhance their understanding on how to apply the approach in teaching practices. Therefore, the syllabus of the workshop was designed following the structure of multiliteracies pedagogy to allow student teachers to experience the four knowledge processes of

Chapter 5

multiliteracies pedagogy; ‘experiencing’, ‘conceptualising’, ‘analysing’ and ‘applying’ (Cope & Kalantzis, 2015; Kalantzis & Cope, 2004). Each workshop session included an objective drawn from multiliteracies pedagogy as well as content and instructional knowledge needed to create multiliteracies lessons. Table 6 outlines the knowledge processes framework planned and tasks that were incorporated during the workshop sessions.

Knowledge Processes	Knowledge Sub-Processes	Tasks
Experiencing	<i>the known</i>	<ul style="list-style-type: none"> • Share knowledge about teaching English and teaching writing • Share experiences of learning English • Share best and worst English learning experience
	<i>the new</i>	<ul style="list-style-type: none"> • Listen to a lecture of a new teaching pedagogy; a pedagogy of multiliteracies
Conceptualising	<i>by theory</i>	<ul style="list-style-type: none"> • Differentiate between concepts of traditional pedagogy and multiliteracies pedagogy
Analysing	<i>functionally</i>	<ul style="list-style-type: none"> • Map the knowledge processes of multiliteracies pedagogy
	<i>critically</i>	<ul style="list-style-type: none"> • Discuss the purpose and implications of multiliteracies pedagogy
Applying	<i>appropriately</i>	<ul style="list-style-type: none"> • Develop multiliteracies lesson plan for the teaching of writing
	<i>creatively</i>	<ul style="list-style-type: none"> • Implement multiliteracies pedagogy in the teaching of writing classroom

Table 6 Multiliteracies Workshop Tasks

Week 1

The first week of the workshop began with an introductory session and two formal learning sessions. The researcher started off the week with an ice breaking session where the students and the researcher got to know each other and where, the researcher could build rapport with the students. The researcher also elucidated the description of the multiliteracies workshop in details.

The first formal lesson took place in the first session where the main objective of the lesson was to encourage the students to describe the principles of multiliteracies pedagogy. To achieve this

objective, the researcher asked the students to personally reflect, draw upon and articulate their personal knowledge and lived experiences about teaching and learning of English in general and of writing in English in particular. Students were also introduced to the new pedagogy and were asked to differentiate between the concepts of traditional pedagogy and multiliteracies pedagogy. Engaging learners with 'experiencing the known', this lesson aimed to start with what students know about and what they bring to the topic as well as to create problem awareness on the issue of teaching of writing in Malaysia. This is to instil in them the significance and the rationale of this workshop that attempts to rethink the current teaching practices of writing instruction through an adoption of multiliteracies approach, a transformative pedagogy that could bring about change in the language teaching parallel with the demand of the current digital age. Following that, the students were engaged in 'experiencing the new' where they were asked to immerse themselves in and reflect upon new situations and information about the multiliteracies pedagogy. The researcher defined and described the term multiliteracies pedagogy which included the elements and structure of the approach.

The students listened to a lecture of a new teaching pedagogy and later were engaged in the 'conceptualising by theory' as they differentiate between concepts of traditional pedagogy and multiliteracies pedagogy (refer to appendix A.1). Eliciting the distinction between the two concepts, the activity was aimed to help trainee teachers to conceptualize multiliteracies and portray the elements and principles of multiliteracies pedagogy. Apart from that, given that multiliteracies pedagogy was build based on previous learning theories such as the Bloom's Taxonomy, the concept was discussed in detail. It was introduced and discussed during the lecture as the pre-service teachers mentioned that the knowledge processes framework was somehow familiar to them. Given that the concept and its similarities with the knowledge processes was discussed in detail, the pre-service teachers were able to make sense of the knowledge processes. The inclusion was intended to influence the participants' cognition of multiliteracies pedagogy so that they were able to build connection between the two concepts and increased their understanding of the knowledge processes.

The second lesson was conducted in the second session of the week and the main objective of this session was to engage learners in analysing the structure, purpose and implications of multiliteracies pedagogy. In achieving the objective, trainee teachers were asked to examine and organize the key structures (knowledge processes) of multiliteracies in a lesson plan and account for motives and consequences behind ideas and information of the lesson plan. In groups the students were given a chunk of multiliteracies lesson plan and they were asked to figure out which knowledge processes they believed were activated by the various activities and they were also asked to map the activities to the multiliteracies placemat and to sequence the activities into a

Chapter 5

meaningful order according to the knowledge processes – thinking about and discussing how they would expect it to work in practice. This activity intended to introduce how multiliteracies pedagogy can be transformed into practice, to help students to develop an understanding of the knowledge processes and how they can be employed purposely to design learning. Students were then ‘analysing functionally’ as they analysed the logical connections as well as the structures and functions of the knowledge processes. Next, the trainee teachers were asked to analyse the purpose, implications and consequences for learners and how they thought the lesson plan could be improved. Here, they were ‘analysing critically’ as they account for motives and consequences behind the ideas and information of the learning element as well as evaluate their own perspectives, interests and motives and those of others.

Week 2

The main objective of the second week was to focus on assessing the students’ understandings of the workshop content by developing a multiliteracies lesson plan for the teaching of writing class and to allow them to demonstrate how they would teach writing to their peers using a multiliteracies approach with peers. In the first session of week 2, the researcher helped the trainee teachers to operationalise the theory of multiliteracies pedagogy. The students were guided through a series of a design phases which begin with ideation phase followed by mapping, sequencing and finally reviewing and aligning. The researcher explained to them the designing phase of a multiliteracies lesson adopted from Bill Cope and Mary Kalantzis’ Learning by Design project (Kalantzis & Cope, 2012). After a brief explanation of the process of designing and the phases in designing a multiliteracies lesson, the students were asked to create a multiliteracies lesson plan for the teaching of writing. Engaged in ‘applying appropriately’ the students applied the principles of multiliteracies pedagogy for teaching of writing in a lesson plan.

During this designing session, the researcher focused more on the application of the knowledge processes framework and less on the implementation of other literacies mentioned in multiliteracies concept. In the lecture, the pre-service teachers were given an explanation about what literacies that are included in the multiliteracies pedagogy through the discussion of multimodality element. They were told about how literacy education in this digital age has evolved alongside the technological evolution, going beyond paper-based reading and writing. They were also informed about the inclusion of multiple modes of representation such as audio, visual, gestural and spatial alongside written and linguistics mode. Emphasis on the use of new media technologies were highlighted and examples of the use of these media were described. Nevertheless, the implementation of each of these literacies in the classroom were not discussed

in detail and this is a limitation found after the workshop which were discussed further in the limitation section in chapter 8.

The second session of the week focused on the students' presentation of their multiliteracies lesson plan. Each group presented their completed multiliteracies lesson plan to the entire class and received feedback from their peers. This session was initially supposed to focus on students' implementation of the multiliteracies lesson plan that they have created with their peers through a microteaching activity. They were supposed to engage in 'applying creatively' as they integrate and implement the approach for the teaching of writing lesson. Since there were five groups and each microteaching activity needs at least an hour per presentation, more than an hour and 30 minutes was needed. This would have exceeded the time allocated for the session. Additionally, the last week of the workshop had to be discarded due to unforeseen constraints that resulted in the shortening of the workshop duration by the university course instructor, therefore the syllabus was revised. The trainee teachers were asked to present their lesson plan to the class instead and get feedback from their peers after the presentation. The rationale was that they would have the opportunity to reflect on the strengths and weaknesses of the created lesson plan, giving opportunities for them to improve the available lesson plan and learn from the feedback given. This could then be helpful for when they design their own multiliteracies lesson for the teaching practicum.

Detailed multiliteracies workshop plans are attached in Appendix A.

The link between lessons

The main goal of the workshop was to provide student teachers with sufficient theoretical and practical knowledge of the theory so that they could integrate the approach into their teaching practices during teaching practicum. The lessons from the first week and the second week were designed to assist the students to create a multiliteracies lesson for the teaching of writing.

Each lesson provided the students with information, support and strategies for integrating the approach in their teaching practices. The lesson assisted the students to comprehend and conceptualize the theory as a teaching pedagogy for language teaching. The students also learnt to examine the elements, structure and functions of multiliteracies pedagogy. Finally, the students were engaged in practical experience by creating the multiliteracies lesson plan for the teaching of writing. This was helpful for the students to construct ideas for their upcoming teaching practicum. Every session began by stating the objectives of the session followed by a reflection of the previous lesson in order to continuously tie the sessions together.

5.6.2 Semi-structured Interviews

Semi-structured interviews have been widely used to account for what teachers thought, knew and believed as they have potential to elicit in-depth information and rich qualitative data (Borg, 2003). It is a powerful tool to understand people's points of view and beliefs due to its interactive nature as it gives the freedom for the researcher to ask pre-determined questions as well as to prompt and probe beyond significant events and participants' answers to venture into new areas and get into a deeper insight about things under study (Cousin, 2009; King & Horrocks, 2010). In this study three different types of semi-structured interviews were conducted at different times during the study. Pre-intervention interviews were conducted before the workshop, post-training interviews were conducted right after the workshop and post-practice interviews were conducted after the implementation of the pedagogy during teaching practicum.

One-to-one semi-structured interviews with pre-service teachers were conducted and each interview was audio-recorded using a digital voice recorder. All participants were Malay, and their native language is Bahasa Malaysia, yet the interview was conducted using the preferred language of the pre-service teachers, either Malay or English. The rationale was because since they are TESL students studying in an international university where the medium of instruction is English, there is the possibility that they are more familiar with the teaching and learning terminologies in English thus better able and more comfortable to express their thoughts, feeling and ideas in English compared to their native language, Bahasa Malaysia. Most of the participants spoke in English during the interviews while some used their mother tongue mixed with English. Every interview lasted for 30 minutes to an hour.

In regard to designing the interview guide, the main themes for every interview were generated from the research questions; the theoretical frameworks of this study; the related literature; and for the final interview, insights from the classroom observations. The interview guide with loosely prepared set of questions was prepared in advance before the interview (see Appendix B for the pre-intervention interview, and Appendixes C and D for the post-training and post-practice interviews). The purpose of the pre-intervention interview was to gather background information about pre-service teachers' awareness of the evolution of technology and its impact on language practices, their prior experiences as language learners and their prior cognition brought into the workshop. Therefore, the interview starts with questions about themselves as an icebreaker and as a means to build rapport with the trainee teachers. Then the interview continues with questions about their perceptions on literacies in digital age, their experiences as language learners, their experiences attending the teacher education programme and their beliefs about language teaching and learning.

The post-training interview aimed to capture pre-service teachers' knowledge, beliefs and understanding of multiliteracies pedagogy right after the workshop has completed. The interview guide for this interview covered themes such as their understandings about multiliteracies pedagogy, the characteristics of multiliteracies practices, their experiences attending the workshop and their anticipation towards implementing the pedagogy. The questions helped to made explicit their understanding about multiliteracies pedagogy and provide answers for the first research questions of this study. Finally, the themes for the post-practice interview included an account of the pre-service teachers' practices implementing multiliteracies pedagogy, their experiences designing a multiliteracies lesson, challenges they encountered adopting the multiliteracies pedagogy and their final perceptions about the pedagogy after they attempted classroom implementation. Data gathered from this interview provide answers for the second research questions of this study as their practices implementing the approach were examined.

5.6.3 Classroom Observation

The purpose of using this method in this study is to document the behaviours of pre-service teachers' implementing the multiliteracies approach in the classroom during their teaching practicum and to examine the degree to which pre-service teachers' stated cognition agrees with what actually happened in the classroom. Borg (2006) explains that observation provides evidence of what actually emerges in classroom. Therefore, classroom data allow the researcher to look at the implementation of a particular approach by a particular group of teachers by looking at what they are doing in the classroom. In addition to this, observation allows the chance to obtain rich, in-depth and detailed information that might not be accessible through interviews as pre-service teachers might have the potential to report only desired information or hide those that they are unwilling to tell (Patton, 2002). Moreover, it allows the researcher to verify whether pre-service teachers' behaviour aligns with what they express in interviews and make credible inferences about pre-service teachers' cognitive dimension as it supports or contradicts data from the stated beliefs collected through interviews (Borg, 2006). On another note, it is crucial for language teacher cognition research to understand teachers' instructional practices in the classroom and "not what or how they think in isolation of what they do" (Borg, 2003, p. 105). Borg (2006) asserts that "observation on its own permits inferences about cognitive processes... (and it provides) a concrete descriptive basis in relation to what teachers know, think and believe can be examined" (p. 231). Therefore, despite being able to acquire information about teachers' stated beliefs from interviews, observation is still necessary to comprehensively study language teacher cognition.

All lessons observed were naturally occurring and the researcher positioned herself at the back of the class to minimize interaction with the participants and classroom events and thus lessen

possible distraction (Goetz & LeCompte, 1984; Seliger & Shohamy, 1989). Lessons observed took place in pre-service teachers' usual classroom and in the normal way the students were usually taught together with materials and curriculum they were already following. The observations were unstructured without pre-determined categories, meaning that the researcher immersed herself in the social situation to understand the phenomenon in a particular context (Thomas, 2013) in order to enable rich description of the issue under study (Cohen et al., 2018). The focus of the observation was to capture how pre-service teachers implemented multiliteracies pedagogy and how they operationalised their multiliteracies lesson plan.

5.6.4 Documentary Data

Various forms of documentary data were gathered in order to understand pre-service teachers' learning and obtain additional information about the development of pre-service teachers' cognition and beliefs. Documents are defined as any form of data that were not collected through interviews or observation (Merriam, 2009). Documents as cultural artefacts help to increase the credibility of interpretations and findings, and in the case of this study it provides relevant data in relation to students' teaching experiences and their cognition (Cousin, 2009). These data have the potential to assist in seeing what the pre-service teachers took up in terms of knowledge, how much they have internalized and how far they understood what have been taught to them. In fact, it is helpful to strengthen the credibility of the results and analysis interpretations. Document data gathered include the lesson plans created by pre-service teachers during teaching practicum, photocopies of worksheets used for multiliteracies lesson and photocopies of textbook units used for multiliteracies lesson.

Another important form of data collected for this study was the research notes. The research note is a reflexive account of the researcher's observations, reactions, and reflections on what happened during the whole data collection process. The notes were written starting from the first day of data collection until the whole process has completed. Decisions, thoughts, activities, experiences, and emotions in relation to the research was recorded daily in order to allow the researcher to reflect on the data and the whole research throughout the whole process (Borg, 2001). In addition to that, any significant events including informal conversations had with the administrative staff and the participants; perceptions on participants attitude during interviews; comments made by school students during classroom observation; possible ideas for improvement or further investigation; judgement and evaluations on what happened during the workshop; as well as comments and feedback received were documented. The research notes were valuable source of information to further clarify phenomena under study (Creswell, 2013).

5.7 Data Analysis

This study used qualitative methods to gather three different types of data: interview transcripts, classroom observation data and documentary data. Data obtained were analysed using qualitative data analysis and the analytical process relied on the theoretical frameworks underpinning this study which are the conceptual frameworks of language teacher cognition and multiliteracies pedagogy. Since the objectives, research questions, literature reviews, research design and collection of data were the reflection of and shaped by these theoretical frameworks, the analytical strategy naturally followed and were guided by that theoretical propositions (Yin, 2014). The purpose was to allow the data to be reduced into key ideas and themes in order to answer the research questions posed in this study (Cresswell, 2013).

5.7.1 Semi-structured Interviews

This study mainly followed a fundamental approach to qualitative data analysis in order to capture pre-service teachers' beliefs, thoughts, knowledge and other information in relation to their cognition and practices (Miles et al., 2014). The analysis process of pre-intervention, post-training and post-practice interview transcripts were divided into three cycles of analytical activities. The first analytical move focused on data condensation, the second cycle involved data display and the final cycle aimed at drawing and verifying conclusions. The analysis process did not occur in a linear process but rather the three cycles were interwoven forming an interactive and cyclical data analysis process (Braun & Clarke, 2006).

In the first cycle, the data were reduced by retrieving the most meaningful materials, accumulating chunks of data related to each other, and further condensing the data into readily analysable units. Once the data were collected, each data set was read several times in order to gain insight of the main ideas articulated before being coded and going through the analysis process. All interviews were transcribed, and the transcripts were read repeatedly in order to make sense of and become familiar with the data (Creswell, 2009; Marshall & Rossman, 2006). All the data were then trimmed down into more manageable data through a coding technique from which patterns emerging from the data were identified as relevant to the research questions of this study. Having the research questions in mind, the transcription was coded line by line and for each piece of data, a code was written on the side. Codes were assigned to similar information by deep reflection of its meaning in accordance to the research questions posed, together with the theoretical frameworks underpinning this study. Some of the codes assigned were 'prior beliefs', 'learning experiences', 'perceptions on multiliteracies', 'multimodality', 'knowledge processes', and 'diversity'. The

researcher went through the transcriptions several times to ensure “consistency, refinement, modification and exhaustiveness of coding” (Cohen et al., 2018, p. 669).

During the second cycle, the analysis process worked on the resulting categories or themes. The organized and compressed data were organized into categories to identify emergent themes by looking for threads that tie the bits of data together. For example, the data from interviews showed several elements that characterize the practices of multiliteracies which could be attributed to pre-service teachers’ understanding of multiliteracies pedagogy and in so doing would answer the first research question posed in this study. The elements mentioned by pre-service teachers during the interview were knowledge processes, multimodality, student centred learning, diversity and incorporation of technology. These comments were grouped together as “understanding multiliteracies”. This category was further divided into before practice and after practice to see any improvement or changes in their understanding of the mentioned elements of the pedagogy. So, the reoccurring patterns were detected, and similar codes were clustered together creating a small number of themes. Following Miles et al.’s (2014) description of data display these themes were organized to ‘allow for conclusion drawing and action (p. 12-13). Therefore, all the themes emerged from the data in this study were ordered based on the theoretical frameworks and research questions of this study. Notes, general thoughts, pertinent codes and marked passages of particular interest or anything that was relevant to theoretical frameworks were also recorded.

Finally, the last cycle focused on verification and drawing conclusions. The main analytical activity during this cycle was to focus on the thematic relationship between categories, examine possible links and connections between themes and theories as well as to compare and contrast the themes emerged with theories (Bryman, 2016; Miles et al., 2014; Silverman, 2011). During this cycle, the cases were examined in depth using the theoretical framework. Then, the patterns in all examined cases were cut across cases to look for similarity and differences (Yin, 2009).

The analytical process utilized both computer software and a manual method. At the beginning of the process the researcher used NVivo 12 because it helped to code extracts under the same codes from all pre-service teacher’s data transcriptions in a same place with information about where the text came from. Given that there were six participants with three different interviews for each participant, it was quite easy to get lost or confused between them, but with the software coding this task was made less difficult and less confusing. Moreover, it was also easy to create, merge, rename, recode and decode the extracts from the texts because all data were organized and structured systematically. It is important to note that the researcher had pre-defined themes and categories from the theoretical frameworks and literature reviews. For example, themes such as ‘schooling experiences’, ‘prior beliefs’, ‘contextual factors’, ‘knowledge processes’, ‘multimodality’,

'technology', 'learner-centred learning' and 'diversity' were established in advance from both theoretical frameworks used in this study. These emerged themes from the theoretical frameworks and literature review were used to guide the analytical process as a focus and to construct further themes derived from the data. However, the data were later analysed manually since further analysis with the computer software required the researcher to attend additional training and this was not possible due to time constraints. Analysing the data manually was quite a tedious task yet it allowed the researcher to gain deeper insights into the analysis of the matter under investigation with greater depth.

5.7.2 Classroom Observation

The main objective of classroom observation data analysis was to investigate the implementation of multiliteracies pedagogy during a teaching practicum and to what extent pre-service teachers' practices were congruent with their stated cognition. Uncovering pre-service teachers' multiliteracies instructional practices in the classroom, the data were approached with an open mind to allow the data to "speak for themselves" (Li, 2013, p. 179). Nevertheless, the analysis of video recorded data was also informed by the theoretical framework of multiliteracies pedagogy in order to discover whether or not pre-service teachers' classroom practices portray multiliteracies teaching practices. For example, the researcher had some pre-defined codes and expectations about how practices could exemplify multiliteracies pedagogy such as the use of 'knowledge process' and 'multimodality', the diversity of the lesson and the role played by the teacher and students during the lesson.

Video-recordings of the six lessons observed were analysed by breaking them down into different classroom activities to serve as the basic unit of the analysis in order to get complete picture of the lesson. For every participant a list of activities was made with the help of their lesson plans, the video recordings and the research notes. Since the main purpose of this study was to examine their teaching practices implementing multiliteracies pedagogy, the main focus of the observation was more on looking at pre-service teachers' actions and activities employed in the classroom rather than the reaction of the students. Therefore, the analysis focusses less on the school students and the interaction between pre-service teachers and their students as such the video-recordings were not transcribed for the purpose of discourse analysis.

The observation data were also analysed through close examination of the themes generated and emerged from interview data in order to establish the relationship between pre-service teachers' cognition and their classroom practices in relation to multiliteracies pedagogy. The classroom observational data were used to triangulate the findings from the interviews and these two data

sources were compared and linked to shed light on the complexity of the relationship between pre-service teachers' cognition and their practices. The observation data helped the researcher to gain a better understanding of pre-service teachers' cognition as it served as evidence that both their actions and words were coherent.

For instance, the implementation of each of the knowledge process in the trainee teachers' lesson is considered primarily based on the description of the theory. So, for every trainee teacher the analysis of the activity chosen for each knowledge process is based primarily on the description and definition of every knowledge processes as offered by the New London Group members (please refer table 2). Besides, the evidence of every knowledge process during their lesson was gathered from the classroom observation and supported by the trainee teachers' lesson plan and their narratives during the interview. The pre-service teacher's cognition data about the multiliteracies pedagogy showed that they very clearly articulated the centrality of knowledge processes in multiliteracies pedagogy. To some extent, this could be supported by the framework for planning that they worked with. Investigating how the pre-service teacher operationalised such concepts will show their capacity for turning theory into practice and also shed some light on how they understood each knowledge processes.

5.7.3 Documentary Data

Apart from the observation data, a triangulation of findings was also done through documentary data. Various documents were used to corroborate and strengthen the validity of findings collected from the semi-structured interviews and classroom observations (Carcary, 2009). Lesson plans, photocopies of worksheet and textbook units used for multiliteracies lesson were analysed using the themes that emerged from both interview and classroom observation data as well as the theoretical frameworks of multiliteracies.

5.7.4 Transcription and Translation

Data from the audio-recorded semi-structured interviews were transcribed verbatim. Marshall and Rossman (2006) defined the process of transcribing as "transposing the spoken word (from a tape-recording) into a text (transcription)" (p. 100). The interview transcripts were typed in a Word format and divided into three files which were named pre-intervention interview, post-training interviews and post-practice interviews. General notes, observations and recurring patterns that emerged whilst transcribing was also jotted down (Duff, 2008). Prior to analysis the transcribed data were double-checked and reviewed several times to ensure accuracy (Easton et al., 2000; Marshall & Rossman, 2006).

Since this study was administered with TESL students in an international Malaysian university where the medium of instruction is English, some of the data was already in English while some was in Bahasa Malaysia and some other mixed between both English and Bahasa Malaysia. Therefore, certain excerpts from the interviews were translated from Bahasa Malaysia to English by the researcher. Discrepancy of meaning between the original text to the translated and transcribed texts were minimized because “failure to accurately portray the intended meaning of the participants’ words and actions renders data useless” (Esposito, 2001, p. 570). The accuracy of the translations was validated by asking a fellow postgraduate colleague to also translate the selected interview transcripts to see if there are any differences found.

5.8 Trustworthiness

Assessing the issues of validity and reliability is vital as it corresponds to the criteria of trustworthiness and determines the quality of the research under study (Denzin & Lincoln, 2005; Silverman, 2013). In order to enhance the rigor and the trustworthiness of this study, a few strategies were employed to ensure internal validity, reliability and generalizability.

Internal validity is the most important factor to establish the quality of a study as it is concerned with precision portrayals of the phenomenon under study. The notion deals with the congruency of the findings with reality, answering questions such as ‘do the findings match what is really there?’ or ‘does the researcher observe what he/she think what he/she is observing?’. A significant method mainly used to increase the credibility of findings of the phenomenon under study is known as triangulation which means using multiple data collection methods or analysing multiple sources of qualitative data to confirm emerging findings (Cresswell, 2013; Miles et al., 2014; Saldana, 2013). In the case of this study, data were collected from multiple methods namely semi-structured interviews, classroom observation and documentary data. The main purpose of using the three methods was so that the researcher could check one data against the other and thus ensure the validity of the findings. Since each data collection method has its own mechanisms and bias, having data from multiple sources could supplement and counteract biases thus generate more adequate data.

Utilising multiple methods of data analysis permits a rich, thick and in-depth understanding of beliefs, thoughts and knowledge held by pre-service teachers and can clarify how pre-service teachers implemented their knowledge of multiliteracies pedagogy in the classroom comprehensively. For example, the different data sources collected merit different perspectives and interpretation of events where the insights provided were not only from what the pre-service teachers said they do but also from the artefacts of what they did, the video recording of what they

actually do and the research notes noticing what they have done. Therefore, observing multiple and different aspects of reality provide clearer picture and the complexity of pre-service teachers' cognition. Besides, corroborating the data together increases the confidence of the findings found as the limitations of particular method can be compensated by the other methods employed.

In addition, triangulation was also done through analysing multiple sources of data which means data collected from different methods or data collected at different times or in different places were compared and cross-checked. For example, three kinds of interviews were carried out at three different times throughout the research project: at the beginning before the intervention, after the multiliteracies workshop (post-training) and finally after the practice of implementing the multiliteracies approach (post-practice). The rationale of having these different interviews at different stages of the data collection process was to gain comprehensive insight on pre-service teachers' cognition and to observe the relationship between their cognition and practices. The latter was done through verification of interview data with classroom observation data and documentary data. Triangulation of these data help stimulates reliable and solid interpretations because the credibility of interpretations and findings from each data increased every time one finding from one data source is found congruent with finding from another data sources (Cousin, 2009).

Reliability in qualitative research is concerned with the degree to which the research findings can be replicated (Merriam & Tisdell, 2016). Replication of data is less important in qualitative research and it is problematic to achieve owing to the nature of human behaviour and subjectivities of researcher's interpretations. For example, since human behaviour and experiences varied, the replication of the study might not be able to yield the same result and in fact it is possible to have numerous interpretations of the same data. Having said this, the results found were not necessarily invalid because the principal aim for qualitative study was to ensure the consistency of the results with the data collected (Lincoln & Guba, 1985). In other words, the question is not about demanding repetition of research to get the same results but to ensure that the results make sense with the data collected and that they are consistent. Reliability in this study is demonstrated through an explicit account of the research process in which all pertinent information mainly in regard to the methodological aspects of this study has been provided. This chapter in particular elaborates in detail the research paradigm, the selection of participants, the data collection methods and data analysis so that it could be transparent and for the reader to judge the consistency of the result with the data collected. For example, methodological descriptions together with excerpts from interview data were made available for readers and other researchers to personally scrutinize and make judgements about the capability of findings.

Clarification of the researcher's position or reflexivity is also important to ensure that reader could better understand how the researcher might have interpreted data and concluded the study. It is acknowledged that as a primary instrument for data collection and analysis, researcher could not escape the shortcomings and biases that might impact the study. Therefore, it is important that all subjectivities and biases to be identified and monitored throughout the process of data collection and analysis to maintain the quality of the research under study (Merriam & Tisdell, 2016).

In this study, the researcher's critical self-reflection about theoretical orientations, biases, assumptions as well as relationship to the study that may affect the research process were clarified at the beginning of this chapter. In section 5.3 the researcher acknowledged and addressed possible power issues particularly stances on theoretical judgement, biases and subjectivities in order to be transparent about the research process and the researcher involvement mainly the role of the researcher throughout the process. Apart from that, through self-reflection all limitations, mistakes or unexpected things that occurred throughout the research were recognized as an effort to make the findings and outcomes more credible and reliable. Researcher's self-reflexivity: realising what has been done and its rationale; confessing shortcomings; and offering suggestions for improvement was made explicit to prevent the research from being compromised.

Generalisability in qualitative study "involves leaving the extent to which a study's findings apply to other situations up to the people in those situations" (Merriam & Tisdell, 2016, p. 256). In other words, it is the responsibility of the reader or the user of the study to decide on the transferability of the findings to the context at hand. Researchers assert that generalisability can be realised through rich, thick descriptions of the context of the research under study in order to allow readers to scrutinise and compare the extent to which their situations match the contexts of the research under study and thus whether findings can be transferred (Cohen et al., 2018; Guba & Lincoln, 1994; Merriam & Tisdell, 2016). To achieve this, a detailed and adequate amount of information describing the settings and contexts of this study were presented in section 5.5.

5.9 Ethics of the Study

This study followed several procedural steps prior to the execution of the research project in order to commit to the ethical rules and guidelines. First, a letter together with the research proposal and timeline of the data collection process were submitted to the Deputy Dean of Academic Affairs, Faculty of Education, IIUM to obtain approval to conduct research in the institution. Secondly, a research permit is applied from the Economic Planning Unit, Prime Minister Office of Malaysia for the research project to be conducted in Malaysia and to have access to involve public secondary schools in this research. Finally, the official procedures in conducting research illustrated by the

Chapter 5

University of Southampton is followed through the application of ethical confirmation (ERGO). After all the approval letters mentioned above has been received, the data collection process began. Prior to this, an informal meeting with the participants was conducted in order to distribute the personal information sheet (PIS), to inform them about the purpose, procedures and significance of this study together with the potential risks and benefits as a participant (McKay, 2006). Additionally, the informed consent was also collected at the end of that meeting.

The participants' identities were protected as the anonymity and confidentiality of the data is guaranteed. Babbie (2014) explains that anonymity is achieved when the participants cannot be identified with the given findings while confidentiality is guaranteed when the participants identity is kept private. Therefore, all participants will be given pseudonym to ensure that they are unidentifiable if their responses need to be presented in the thesis and their identity will not be made public. Data collected will not be disclosed and are kept completely confidential in password protected devices and would only be used for research purposes. As per the policy of University of Southampton, publications and data of this study will be made available through the institutional repository and will be stored at a minimum of ten years.

5.10 Summary

This chapter has described the context of this study and discussed the research design, the breadth of data collection and data analysis which sought to answer the overarching research questions posed in this study. Multiple qualitative methods such as semi-structured interviews, classroom observations and document analysis were employed to examine pre-service teachers' cognition on multiliteracies pedagogy; their instructional practices during the implementation of the approach during teaching practicum; as well as the relationship between their cognition and behaviour. This chapter has also addressed the issues relating to trustworthiness and examined the ethical concerns of conducting the study with the aim to correspond to a valid, reliable and ethical research framework.

Chapter 6 Findings

6.1 Introduction

This chapter will provide the results and findings gathered from the various phases of data collection. The data gathered reveal findings about the pre-service teacher's cognition and practices on multiliteracies pedagogy. Data collected from semi-structured interviews, classroom observations and written documents such as lesson plans, research journals and observation notes were used to answer the overarching research questions posed in this study. The research questions that this study attempts to answer are:

1. What is pre-service teacher's cognition on multiliteracies pedagogy before and after a short, focused training held in their teacher education programme?
2. How do these pre-service teachers implement multiliteracies pedagogy during their teaching practicum?
3. What is the relationship between pre-service teacher's cognition and their practices with regard to multiliteracies pedagogy?

In this findings section, the cognition and practices of pre-service teachers about multiliteracies pedagogy are presented by main themes across cases. The rationale of looking at each research question across teachers is to allow readers to see the similarities and differences across cases in order to form more general explanations. This chapter begins with an introduction of pre-service teachers' profile which focuses on their awareness about the advancement of technology and its impact on literacy learning, followed by their learning experiences as language learners and pre-existing beliefs that they held. Following this, the next section focuses on pre-service teacher's thinking, knowledge and beliefs on multiliteracies pedagogy followed by a section that uncovers pre-service teachers' classroom practices implementing multiliteracies pedagogy. Finally, the influence of prior learning experiences on pre-service teachers' cognition about multiliteracies pedagogy as well as the relationship between their cognition and practices which answers the final research question of this study is explained and presented in the last section.

6.2 Pre-service Teacher Cognition – Prior Learning Experiences

This section explores the first aspect of the pre-service teachers' cognition which relate to the aspects of their prior experiences as a language learner. The literature review section 3.4.1 notes that, for all teachers, elements of their cognition are grounded in beliefs, understandings and

experiences that emerged during their time as language learners. So, this section begins with the exploration of their awareness on technological evolution then describes on what happened in their schooling years as well as their experiences during the professional coursework and how these experiences shaped their beliefs about teaching and learning.

6.2.1 Awareness of Technological Evolution

The pre-service teachers narrated that more and more people are frequently engaged digitally and virtually thus presumed that the younger generations are even more engaged with digital and social media. Aiman however, did not report much about his view on the younger generations yet his awareness of the evolution of technology can be seen through his regular personal engagements with technology. Aqilah, Iliana, Irfan, Din and Balqis reported that they assume that the younger generations are mostly engaged on social networks. Aqilah thought that it is common nowadays for social media to be a part of life especially for the younger generations as she said:

PI-IV-AQILAH I think the younger generations will not read books, but they are into social media. I mean their interests are a bit different than us. They are more into selfies and stuff...being on a social media, getting attention in social media.

Excerpt 1 Pre-intervention - interview – Aqilah

Iliana reported that the younger generations are mostly engaged on social media and concluded that social media has become the medium for the younger generations to improve their English literacy practices. She said:

PI-IV-ILIANA I think the younger generations typically read or write in English on social media. It is because...for example...most news...most were shared on social media? Yes. Then on Facebook for example...on Facebook...or posts on Facebook most of them were in English. So, I think they read...they spent most of the time on social media. So, I think they learn English from social media as well.

Excerpt 2 Pre-intervention - interview – Iliana

Irfan presumed the popularity of social media among the younger generations and how it has influenced their language use. He observed that the students use short forms and acronyms that were usually used in social media when they write academically, and he sees this as a particular challenge for accuracy and the use of formal academic language. He said:

PI-IV-IRFAN I think obviously the younger generations they are using digital...social media like WeChat and everything. They tend to write in social media in English but of course

they use short forms, and this does affect the students' writings. During School Observation (practicum 1) I made several activities, and it seems that some of the students tend to use short forms such as "LOL" and what not. So, I think this was influenced by the use of WeChat, WhatsApp, Instagram and everything. I think that is one of the challenges that the teacher needs to face.

Excerpt 3 Pre-intervention - interview – Irfan

Din believed that the younger generation's engagement with technology is inseparable, yet he seemed to suggest that the younger generation's engagement with technology can be counterproductive. He feels, for example, that they are "over exposed" to social media and uses the term "lunatic technology" which implies the bad influence of technology when there are no boundaries of what and how the younger generations used the technology for. He said:

PI-IV-DIN Younger generation I think...because it is all about technology. I think younger generations are overly exposed to social media and lunatic technology. The instances of Facebook, WeChat and other social media...allow them to write anything or even using vulgar words or explicit content.

Excerpt 4 Pre-intervention - interview – Din

Similar to Din, Balqis too presumed that it is impossible for the younger generations to escape from online engagement and that the easy access to the internet made it more irresistible thus that might have negative consequences. Perhaps since the younger generations might not yet have appropriate digital skills to cope with online challenges they might be easily influenced into risky behaviours as they interact with the online world and that worried her. She said:

RESEARCHER What do you think the younger generations, or your future students would typically read and write?

PI-IV-BALQIS It is kind or worrisome because most of them...read things on the internet that are sometimes not proper for their age.

RESEARCHER Things like?

PI-IV-BALQIS For example, things like entertainment magazines...about celebrities' gossips and sometimes watch movies that are not censored and inappropriate for their age. This is because on the internet everything is easily accessible. So, it is very dangerous for the younger generations.

Excerpt 5 Pre-intervention - interview – Balqis

Chapter 6

Apart from acknowledging that the technology has evolved rapidly through their perception on the younger generation's engagement with technology, the pre-service teachers also understood the role of technology in the current digital age and how the emerging technology influenced the changing nature of literacy practices. This is mainly evident in their own engagement with technology for English literacy practices. Aqilah reported that she mainly used English when she was on the internet. She said:

PI-IV-AQILAH I use English when I am surfing the internet...when I search for things on the internet of course I use English and when I watched YouTube videos most of them are in English.

Excerpt 6 Pre-intervention - interview – Aqilah

Similarly, Aiman, Irfan, Din, Iliana and Balqis too engaged with technology and they further add that their engagement with technology also serve as an opportunity for them to enhance their English literacy practices. Aiman's engagement with technology was often through reading English materials online and communicating with his course mates through social media such as WhatsApp. He was frequently engaged with the digital media for the purpose of learning and enhancing his English fluency. He reported that he always uses English when texting with his friends in WhatsApp and he saw that as a measure for him to improve his English fluency as it gave him more chances to practice the language. He said:

PI-IV-AIMAN I read quiet a lot of English materials online. I like to read mostly English news online but sometimes I read the newspaper too...the football section. I use English when using WhatsApp. With my friends from the same course. If I do not speak English with them, where else can I speak English? It is good for practice.

Excerpt 7 Pre-intervention - interview – Aiman

Irfan preferred to read and write using online English materials to improve his English literacy too. Whilst authentic paper comics can be easily obtained in bookstores, Irfan remarked that he prefers to use the free, online versions. He saw comics as an opportunity to improve his English whilst reading content that is interesting and motivating. So, he sought of see that technology and digital platforms as a freely available resources that could provide rich input for his learners. Irfan believed that he increased his English vocabulary through reading online comics. The urge to understand the language in the comic forced him to look up the meaning of the words that he did not understand. That was easily facilitated as he can type in words and translate them using the internet. The new words are then added to his vocabulary which, over time, helped to improve his English. He said:

PI-IV-IRFAN I love comics and I prefer to read online English “manga”. Previously, I bought books but now I only read them online and in fact online is faster and better. Sometime in the comics they use words that I do not know. So, in order to understand what have been said I need to google and find out the meaning of the words.

Excerpt 8 Pre-intervention - interview – Irfan

Din reported that he watches English drama series and movies as an opportunity to improve his English vocabulary. He reads news online too. It is interesting to note that he considers technology as providing an opportunity for free and accessible learning and so he often engaged with it as a support for his English literacy learning. He said:

PI-IV-DIN Normally I watched movies and dramas in English online to enhance my vocabulary that can be used later in my writing. Hold on. Erm...eventually I read newspapers a lot too. New Strait Times and The Stars. Those two are my favourite. So, I just open my handphone and read the news on the apps.

Excerpt 9 Pre-intervention - interview – Din

Iliana mentioned that her English literacy practices involved the use of technology particularly the use of the internet and social media. Instead of using books or paper she reported that she would typically reads and writes in English when searching on the internet and when she uses social media. She said:

PI-IV-ILIANA I often read or write in English especially when I go online...if I google something it will be in English. I rarely google something in Malay. Even news I would read English news online. Also, on social media...if I post something on social media, I use English as well.

Excerpt 10 Pre-intervention - interview – Iliana

Balqis narrated that she engaged with social media and used it as a space to improve her English literacy skills. She typically wrote in English on her social media and used it as an opportunity to improve her writing skill. Apart from that, she also watched English movies online to improve her English vocabulary. So, she saw the internet as an opportunity not only to improve her English skills but also as providing access to free, rich resources to support English literacy learning. For example, she learned new vocabulary through watching free English movies on the internet. The urge to understand what has been said forced her to find its meaning and that was easily done because whilst she was online, she just needs to type the word on the search engines. These constant additions to her vocabulary enhanced her English language proficiency. She said:

PI-IV-BALQIS I usually write in English in my social media because I use that medium to practice my English. I like to watch English movies online...the subtitles...I learn new vocabularies from it.

Excerpt 11 Pre-intervention - interview – Balqis

So, the pre-service teachers were aware of the advancement of technology and how it had impacted literacy practices. Some of them further highlight on the need to account for how literacy practices should be taught or how technology should be incorporated in English literacy classes. Irfan, Aqilah and Iliana acknowledged that technology as a support for learning is beneficial and vital for students and firmly believed that incorporating the new media technologies in English language classes could improve teaching and learning.

Irfan suggested that the use of new media technologies should be incorporated in English literacy classes. He did not specifically mention how but he thinks that it would be useful to incorporate the use of the new media in reconsidering how English literacy should be taught. He said:

PI-IV-IRFAN Personally, I think that they need to be taught to use these media in English literacy classes. For example, if they want to write on social media but their writing is confusing it might confuse others.

Excerpt 12 Pre-intervention - interview – Irfan

Aqilah acknowledged the impact of technology on literacy teaching practices, and she believes that there is a need for an integration of the new media in literacy learning. She is concerned with the appropriateness of the usage of social medias by the students. She thinks that it was a powerful platform and so the students should be taught on how to use it properly to avoid any negative impact on themselves and others. It is interesting how she valued the ethical aspect of using technology, its importance for students and how students can be made aware of this through language teaching and learning. Perhaps given that English is the lingua-franca of the world, it might be plausible to use English learning as a medium to teach students about social media use as well. She said:

PI-IV-AQILAH Well I think it is a need...to integrate the use of social medias in teaching and learning. Students need to be taught because maybe something that they write on Facebook or Twitter might offend somebody else. In social media you are kind of anonymous and you have like freedom to say anything that you want. You are not restricted like...to say what you want but using it inappropriately they might hurt somebody else.

Excerpt 13 Pre-intervention - interview – Aqilah

In addition to that, she also explained that language learning pedagogy should make use of the increasing variety of textual forms and teaching methods due to technology. She stressed that in this digital era students need engaging activities that go beyond lectures. Since the younger generations negotiate diverse text-types daily, their attention did not suit the traditional way of teaching. Instead, incorporating the use of new media technologies in English classes may be more beneficial. She said:

PT-IV-AQILAH Yeah. Because we are into visual. We are visual readers. So, the younger generations are into technology, so their attention span is quite short. So, we need to plan activities that are engaging...not just lectures because they will not be able to benefit from that.

Excerpt 14 Post-training - interview – Aqilah

Iliana was also aware of the impact of technology on literacy practices. Concerned with the advancement of the new media and the changes they bring, Iliana suggested that the use of new media technologies should be incorporated in English literacy classes. Aware of the benefit of doing something that the students could relate to, Iliana believed that incorporating the technology, specifically social media, in English language class could improve students' engagement because students tend to be more responsive to and engaged in technology-mediated instruction. She said:

PI-IV-ILIANA Since they spent most of their time on social media, I think it would be great if teachers can integrate something that is closely related to them...something that they can relate. I think it can motivate them to engage in the class lesson because that is something that they love to do.

Excerpt 15 Pre-intervention - interview – Iliana

6.2.2 Prior Experiences of Learning

All pre-service teachers experienced didactic, teacher-centred and exam-oriented learning as a learner. Most of them which are Irfan, Aqilah, Iliana and Balqis disliked and were frustrated with what they had experienced in school but Din and Aiman however had a different opinion as they do not mind going through those learning experiences and they seem to favour it.

Irfan described a largely teacher-centred classroom where he learnt through drilling as learner. Rather than taking into consideration the students' own interests, his teacher chose topics which were mainly based on questions from previous exams or predicted questions for upcoming exams. Students were expected to write on their own in class or as homework. As he recalled, his normal writing class consisted of the teacher coming into the class, giving topics and instructions, then

students would complete the essay on their own. He did not mention how this has impacted his writing proficiency, but he was clearly frustrated. He said:

RESEARCHER What do you like the least about learning to write in English?

PI-IV-IRFAN Perhaps when we have to do something that does not relate with us. We do not do many activities. But as students we need explanation first then proceed to the activities and everything. We need to get things clear first before we can proceed to write something. The teacher also gives us extra homework...like drilling...which we need to complete it or else we will be punished. The teacher will give question and then we just have to complete the essay on our own. In my secondary school, there is no such thing as mah-jong paper or anything but only writing on the books to the extend we need to change book every month. It is very frustrating.

RESEARCHER When she did the drilling what do you think the reason is?

PI-IV-IRFAN I think it is because exam-oriented because the topic that she gave is always basically based on previous exams or predicted questions for the upcoming exams.

Excerpt 16 Pre-intervention - interview – Irfan

Similarly, Iliana's language learning experiences were mainly teacher-centred, and she could only recall being given essay topics and writing on her own. She described her writing class as mainly about drilling for examination with students being passive learners and she revealed her frustration with her teachers' use of traditional methods. She disliked learning passively following the syllabus and the exam-oriented culture too. Instead, she believes that learning goes beyond passing the exam as it should perhaps promote lifelong learning too. She said:

PI-IV-ILIANA I remember that all of them used traditional method. I remember that there were no group activities. There were no such things like sitting in groups and discuss about the topic. No. There was no such thing. It was all about the teacher gives the topic and then asked us to write about the topic. The teacher focused on drilling by giving a lot of essay topics. That was it. And the teacher has all the authority in the class...teacher centred. I think teachers should not focus on things that are in the syllabus only. It can be beyond that because being a teacher is not just about getting student to pass in the examination but...not just in terms of academic but also in terms of other skills as well. Perhaps promote lifelong learning.

Excerpt 17 Pre-intervention - interview – Iliana

Balqis too described her experience with exam-oriented learning over the course of her years as a language learner. She recalled the times when learning was limited and that she did not learn much in school. Activities such as copying an essay from the board demonstrated that the students might not learn much in the class. She testified that her essay was written on the board, but she found the activity of very little use or benefit for students. It was not clear if it was the case that she was always chosen to write her essay on the board or how frequently this activity formed part of the lessons however, she does mention drilling for exams. She also emphasised that the teacher might not even follow the syllabus since the topics given were mainly based on past exams questions or activity book. So, perhaps the students did lots of practice writing in class with little guidance from the teacher. She did not mention how any of these experiences impacted her writing proficiency, but she was certainly not in favour of it. She said:

PI-IV-BALQIS During my Form 3, this one teacher used to pick a student with the highest mark and asked that student to write her essay in front on the white board and asked other students to copy it. I do not know whether this activity really benefits the students or not, but I do not prefer it. To be honest, at that time the essay chosen was my essay and I was the one who wrote on the board. But then I do not know whether other students learn anything from it or not.

RESEARCHER If you are to be the one who have to copy the essay do you think it would make any sense to you?

PI-IV-BALQIS I think I will just copy and then that's it. I do not think we would do much analysing.

RESEARCHER So, there is little chances of learning?

PI-IV-BALQIS Yeah. My teacher only taught us...like intensively if only there is an examination coming. In fact, we have never used the textbook. Basically, she will teach us based on exam papers or sometimes she will give us questions from activity books.

RESEARCHER That's like exam-oriented learning.

PI-IV-BALQIS Exactly!

Excerpt 18 Pre-intervention - interview – Balqis

Aqilah recalled that in her experiences it was rather teacher-centred where she received very little guidance from her teacher and mostly learned writing on her own. Her teacher provided very little guidance or scaffolding and many students in turn did not complete the tasks. While pretending to discuss points for the essay, students would usually end up talking to each other and discussing

Chapter 6

another topic. In her view, the discussion in class was pointless and the students learned very little.

She said:

PI-IV-AQILAH I remembered like when every time in English classes when it comes to writing the teachers ask to write for example a story. The teacher just like, “okay, I want you to write this, this, and this” and that’s it. But then we will not be completing the essay because we will be busy “discussing” the points and then we will like doing it at home. But then, the next lesson I was the only student in the class who finished the essay. So, mostly I learn on my own based on my readings because I read a lot...back in the days I read a lot...so maybe that helps me in my writing. The teacher gave less guidance. But of course, she will go to each student and ask the progress of...but still I think we need some kind of pre-writing activities.

Excerpt 19 Pre-intervention - interview – Aqilah

So, the classroom learning contributed little to Aqilah’s knowledge, rather it was her own initiative to learning autonomously that helped. For this reason, she believes that her English learning experiences mostly occurred outside of the classroom. She enjoyed learning English by reading and watching television. She said:

PI-IV-AQILAH Oh...oh...the best bit about learning English...that is really...because I think I learn English mostly outside of the classroom, so I do not think I really enjoy English in the classroom. I like reading books...watching television.

Excerpt 20 Pre-intervention - interview – Aqilah

Aiman portrayal of his language learning experiences too was of a typical traditional classroom which was teacher-centred and rote learning. It was rather passive, focused on memorization and drilling for exams. He said:

PI-IV-AIMAN For continues writing...the 350 words essay...teacher explained the format and discuss ideas for writing. We do a lot of essays...just for the sake of exam. The teacher tends to speak...not doing any activity or something like that. Just kind of traditional method. They told us to remember certain words or certain format for us to use in writing.

Excerpt 21 Pre-intervention - interview – Aiman

However, interestingly, when he talked about his favourite part of his learning experiences, he said he liked learning from a variety of content and of editing or revising the same piece of written work for various purposes. He was in favour of copying and editing from other sources without any critical and deep thinking which indicates the traditional way of learning. Perhaps this can be explained by

the prevalence of the traditional drilling methods of instruction (thought to be more efficient) he experienced in his own education. Not to mention that since the focus was on exams, perhaps this explains the lack of emphasis on thinking and learning and the value placed on repetition for mastery of the skill. He said:

PI-IV-AIMAN The best was when the students were given examples of essays as a guide to write about other topics. The students might use the same points but for different topics. You can use the sentences or something from the sample essay...you can use it for another writing. For example, if this is an example of an essay talking about school trips. But you have to write about a topic on holiday trips or something like that. So, you can use the way of writing from this example essay in your own writing.

Excerpt 22 Pre-intervention - interview – Aiman

Similarly, Din shared that he was mostly taught using the traditional method which he called chalk and talk which meant that during the lesson the teacher wrote on the board and talked whilst the students had relatively little involvement or engagement in activities or interactive discussion. Instead, lessons were centred around examination techniques where students were usually given a topic and expected to write an essay independently without guidance or learning activities. Basically, it was the opposite of student-centred learning and the students would mainly remain passive during the entire lesson. Interestingly, similar to Aiman, this type of teaching was favoured by Din. It was not clear why he liked it and the researcher did not attempt to ask further because the research notes suggested that the researcher was concerned about the duration of the interview and Din's reluctance to answer questions. He said:

RESEARCHER That's fine. Now, how were you taught perhaps in secondary school or primary?

PI-IV-DIN They used the traditional method. Just chalk and talk. But that's the way I prefer.

RESEARCHER Is there any reason why?

PI-IV-DIN I am not sure about that, but I prefer chalk and talk.

RESEARCHER Okay, alright. So, the role that your teacher took is teacher centred then?

PI-IV-DIN Yes.

RESEARCHER Are there any activities that you can remember in your teaching writing class?

PI-IV-DIN Teaching writing class...

RESEARCHER What did you have to do when the teacher comes in...what did you have to do in class?

PI-IV-DIN I am not sure, but I think in my time (xxx) just talk...I am not sure. We did not have activities.

RESEARCHER Is it the teacher just gave you a topic? And ask you to write?

PI-IV-DIN Yeah. Maybe it was because of examinations...like we did a lot of drillings on exam questions.

RESEARCHER So, the drilling bit...the teacher just gave you topic and ask you to write 350 words essay?

PI-IV-DIN Yes.

Excerpt 23 Pre-intervention - interview – Din

6.2.3 Prior Beliefs about Language Teaching and Learning

All pre-service teachers learning experiences shaped their beliefs about teaching and learning. This was evident as they dislike the teacher-centred learning that they had experienced thus believe that student-centred learning is more practical and effective. Apart from that, thanks to their teacher training programme, they had broadened their perspectives and developed their beliefs about teaching and learning. Attending the teacher training programme, the trainee teachers firmly preferred learner-centred learning, were aware of its value and seem committed to apply it in their teaching practices.

Irfan believed that it was important for students to be able to engage in activities. Irfan explained how these beliefs were derived from his experiences as a learner, have been concretised during the teacher education programme. Before starting his teacher training, Irfan had predominantly experienced teacher-centred provision and could not imagine a learner-centred educational experience. Half-way through the programme, when this research study started, his understanding of teaching developed, and he expressed the importance of learning where students participate actively. He said:

PI-IV-IRFAN What I will not do is teacher-centred learning. Here in KOED, all the lecturer who taught us teaching skill subjects does not prefer teacher-centred learning, so I think it is best for us to make the students do more activities.

Excerpt 24 Pre-intervention - interview – Irfan

Similarly, Balqis too had developed a preference for learner-centred learning. It seems that her language learning experiences have had an influence in how she saw teaching and learning. For example, initially before joining the teacher education programme, Balqis thought that the only way for teaching and learning was the way her teacher taught her when she was in school. She then reported that being a trainee teacher, she has learnt various instructional strategies that caused her belief to change. She became aware of the value of learner-centred learning and consequently favoured it over teacher-centred learning. She saw that learning in an environment where students were actively involved in the lesson perhaps through collaborative tasks, solving problems and interactive discussion was more effective. She said:

RESEARCHER Perhaps you might have certain beliefs about how to teach before. Do you think it has changed after almost going through the teacher training programme?

PI-IV-BALQIS I think so. It has changed because before this I thought that teaching and learning was only suitable to be taught in teacher-centred approach...because when I was in school, I was taught in this way. But then when I entered here, I was exposed to other ways of teaching. For example, I learned about student-centred approach. So, I was like, "this is good!". I prefer the student-centred approach because students learn by doing. I myself learn better by doing something rather than just listen passively.

Excerpt 25 Pre-intervention - interview – Balqis

Aqilah's learning experiences has shaped her beliefs about teaching and learning as she explained that in the future, she will use a more practical approach, so that her students could enjoy learning and have a more positive experience than she did. She has mentioned earlier that she was not in favour of students being passive and only listening in class, so her portrayal of an ideal class was one that is student-centred because she believes that it is important that the students take part in engaging activities, moving around and being active in the class. She said:

RESEARCHER Right. So, do you think the way you learnt previously would have influenced the way you will teach in the future?

PI-IV-AQILAH Like I said I learn English mostly outside of the classroom so the way I intend to teach my students maybe is more of the practical way instead of this teacher chalk and talk. So, I want them to like...to have fun when learning English! Because...when I was in secondary school especially I did not like going to school because I did not find learning in school was fun.

RESEARCHER Being more practical...more fun. Do you have any example how would that be?

PI-IV-AQILAH So, I would want like...I would use an approach that can make the students more curious about the knowledge because back in the days I did not get the opportunity...to do more engaging activities and stuff. Like taking the students out of the classroom. I mean like it...it improves the students' mood to learn. Or like asking the students to draw their own face. Then, ask all of them to look at each drawing and identify who is the person in the drawing and then like...list some positive qualities of that person. I think through that activity I can teach like...adjectives. So, I think these are the kind of activities that I will do. The students have to move around and not just sit.

Excerpt 26 Pre-intervention - interview – Aqilah

On the same note, Iliana was in favour of embracing learner-centred learning given her experiences being in a teacher-centred classroom as learner. Her learning experiences have shaped her views on the future of her teaching and her own teaching approach as she disliked lesson that followed the syllabus blindly and the exam-oriented culture and rather believe that education should promote lifelong learning. She further explained that in her view, constructive learning strategies where students actively participate, engage in discussions and work on collaborative task would make a good writing lesson. Given that all the strategies mentioned reflect learner-centred learning and the fact that she disliked the exam-oriented culture, it can be inferred that she values learner-centred pedagogies. Interestingly, she also mentioned about incorporating technology which means that she has a strong awareness of the advancement of technology, and how technological learning tools can benefit students in learning writing. She said:

PI-IV-ILIANA I become aware about the...like for example, as I said in my experience most of the activities were traditional...were teacher-centred so in the future...so in my teaching I would use...I would vary my teaching strategies. Instead of teacher centred I would do student-centred learning...and integrate technologies into the lesson...something like that. Like a good writing lesson should consist of constructive steps. It should start with formal introduction, content discussion, brainstorming collaboratively and applications. Teacher should encourage discussion and brainstorming and student's production. Also, incorporate technology...like there is an application called story board. Story board is a platform that allows people to create book, short story or poem. The apps provide picture so the students just need to choose which picture that they want to use and then they can write something about it. I think it would be more interesting if I can do that in writing.

Excerpt 27 Pre-intervention - interview – Iliana

After enrolling in the teacher education programme Din realised that there was more to teaching than transmitting knowledge and lecturing. Instead, he realised that teaching also involves the need to attend to the diverse students and understanding the application of varied teaching techniques. He was sure that the teacher training programme has helped him to understand about becoming a teacher, but it was unclear what was it that the training programme has done to help him for that matter. Excerpt below highlights this:

RESEARCHER Now, about your teacher education programme. How do you think it helps preparing you to become a teacher?

PI-IV-DIN It helps me a lot in terms of...to be a real teacher...not just a presenter but an educator. There is a difference between a presenter and an educator. I think TESL programme changed me a lot. Before this I thought that teaching is vomiting everything that you know. Before I enrol into TESL I just thought that if you have adequate knowledge then you can deliver. But...no. No. It is not about how much the amount of knowledge that you have but the way you deliver your knowledge...the skill.

RESEARCHER Example of the skills?

PI-IV-DIN Skills...now, I learn to enunciate word by word because previously when I talk, I just vomit...everything! Just vomit everything and I expect the students to understand. But now I know that we have different level of students. Some students need to be...cater based on their need. Also, I realized that teaching need techniques and proper instructions.

Excerpt 28 Pre-intervention - interview – Din

From the excerpt above it is understood that after almost completing the training programme Din has learnt that teaching does not solely rely on the teacher's knowledge on the subject or communication skills, but it is also essential for teachers to cater to the different needs of the students, understand the various teaching techniques for different subjects and give clear instructions during teaching and learning. So, his beliefs about teaching and learning differed from his didactic experience as a language learner and contradict his earlier preference on learning through traditional method.

Similar to Din, Aiman too after attending the training programme had beliefs about teaching and learning that differs from what he went through as learner which was didactic learning, and beliefs that contradict his preference on rote learning. Aiman has realised that teaching is about using approach that suits students' learning needs and styles. It seems that he deemed important that

teachers be selective in their teaching strategies in order to cater to the needs of every students rather than simply drilling the students for exam.

RESEARCHER So, how do you think...how is it that KOED will influence the way you will teach in the future?

PI-IV-AIMAN I know when this kind of approach will suit this kind of students. This kind of students they need something like this, so you have to do something like that. Some students they need a lot of guidance, some students they don't like or need guidance. For example, good (excellent in academic) students, if you give them a lot of guidance, they don't like it. They need more freedom to write. But some other students they need that...that guidance.

Excerpt 29 Pre-intervention - interview – Aiman

6.3 Pre-service Teachers Cognition about Multiliteracies Pedagogy

This section focuses on the second aspect of the pre-service teachers' cognition which explore their thinking, knowledge and beliefs about multiliteracies pedagogy. This section offers a full insight into the understandings of the pre-service teachers in relation to multiliteracies pedagogy prior to and following the implementation of the pedagogy during teacher practicum. This section begins with their interpretations and definitions of multiliteracies pedagogy followed by their understandings and perceptions of the main elements of the pedagogy which are knowledge processes, multimodality and learner diversity. Then the data presented describes their attitudes and engagement towards the pedagogy.

6.3.1 Definition of Multiliteracies Pedagogy

In the post-training interview conducted immediately after the multiliteracies workshop, the pre-service teachers defined multiliteracies as a pedagogy that helps learners to learn in various ways, a pedagogy similar to learner-centred learning, a pedagogy that caters to different students' learning styles and a pedagogy that include the use of multiple modes in making meaning. For example, Irfan described multiliteracies as a pedagogy that provides various ways that learners can learn something, through the effective use of the knowledge processes. He said:

PT-IV-IRFAN I think in terms of knowledge...there are several ways that the learners can learn something. It is either through something that we already know, concept or everything. So, there are many ways to learn something. So, I think that is what

multiliteracies is all about. We have several knowledge processes that we use to learn something.

Excerpt 30 Post-training - interview – Irfan

Din on the other hand defined multiliteracies as a type of student-centred learning pedagogy. Based on his understanding he saw multiliteracies as similar to other teaching pedagogies that promote learner-centred learning. He said:

RESEARCHER So, from your own understanding what do you think multiliteracies pedagogy means?

PT-IV-DIN Well I think to be honest multiliteracies is similar to what we have already learnt...like student-centred pedagogy. All that kind of term...student-centred learning. Mainly the teacher act as the facilitator...that's what it defines.

Excerpt 31 Post-training - interview – Din

Aqilah's definition of multiliteracies was a pedagogy that caters to different students' learning styles. Positively accepting the pedagogy as a good teaching practice, she considers the pedagogy as a comprehensive way of teaching since it addresses different kinds of learners. She said:

PT-IV-AQILAH I think multiliteracies...it is a...more comprehensive way of teaching because you have to address different kinds of learners. So, I think it is a good way of teaching.

Excerpt 32 Post-training - interview – Aqilah

Aiman too interpreted the pedagogy as a pedagogy that caters to different students learning styles. He thought that learners had different lifeworld experiences and ways of learning, so the purpose of the multiliteracies pedagogy is to address these diverse needs in learning. He said:

RESEARCHER From your own understanding, what does multiliteracies pedagogy means?

PT-IV-AIMAN Multiliteracies is something like...when you are going to teach different kind of students...which is from different background. Students have different background...have different learning styles.

Excerpt 33 Post-training - interview – Aiman

Similar to Aqilah and Aiman, Balqis also defined multiliteracies as a pedagogy that caters to different students' learning styles. Her interpretation was rather broad, but she grasped the idea that the

pedagogy attempts to include all students. She also relates the use of different modes to different learning styles. She said:

RESEARCHER Based on your understanding what do you think multiliteracies means?

PT-IV-BALQIS It is a pedagogy that include all learning styles. There is spatial, visual, audio and something like that.

Excerpt 34 Post-training - interview – Balqis

Similar to Balqis, Iliana's interpretation of the multiliteracies pedagogy narrated during the post-training interview was quite broad too and she also perceived multiliteracies pedagogy as a pedagogy that provide a capacity for the inclusion of multiple modes in a lesson. She said:

RESEARCHER In your own understanding what do you think multiliteracies pedagogy means?

PT-IV-ILIANA I think multiliteracies pedagogy means to include all those...audio, sensory, visual all those modes in a lesson.

Excerpt 35 Post-training - interview – Iliana

Interestingly, it can be seen that the pre-service teachers showed their ability to link new knowledge introduced with their existing understandings and knowledge gained through their teacher education programme. They were able to see the similarities and differences between multiliteracies pedagogy and other pedagogies that they have either experienced as learner or encountered during their teacher training and this has to a certain extent helped them in understanding and accepting the new introduced multiliteracies pedagogy. For example, Irfan described multiliteracies pedagogy as similar to other pedagogy as he noticed that multiliteracies pedagogy is somehow similar to Bloom's Taxonomy. He found similarities between both Bloom's Taxonomy and multiliteracies pedagogy in the sequencing of activities. He thought that both pedagogies encourage learning by starting off with simpler activities then moving towards more complex ones. He said:

PT-IV-IRFAN I think multiliteracies pedagogy is similar to Bloom Taxonomy in certain points and aspects like we need to sequence the activities accordingly. For example, we should not do something difficult at the beginning of a lesson but rather we should do it towards the end of the lesson.

Excerpt 36 Post-training - interview – Irfan

This continues after the implementation phase as he still saw multiliteracies pedagogy as another version of pedagogy that he has learnt but using different labels. He didn't specifically mention which pedagogies those are, but it helps him to learn the new pedagogy as he was able to link the new knowledge to the current knowledge he had. He said:

RESEARCHER So, comparing multiliteracies pedagogy with other pedagogy do you find any significant different between them?

PP-IV-IRFAN Personally, more or less I think they are the same. It is just like using different words or terms. So, it is not that hard for me to understand about this multiliteracies pedagogy.

Excerpt 37 Post-practice - interview – Irfan

Similar to Irfan, it was found in the earlier excerpt that Din too equated multiliteracies pedagogy with other pedagogies that he has learnt specifically the learner-centred learning. His conception of multiliteracies being similar to other pedagogies is also recorded after his experience implementing the pedagogy. During the post-practice interview, he continues to see the similarities of multiliteracies with other pedagogies as he commented that multiliteracies is similar to the 21st century concept but a bit more detail in staging lesson. He said:

PP-IV-DIN This pedagogy is beneficial for us. But I guess it is similar as the 21st century concept. In my opinion it is similar. It is quite the same but for multiliteracies it is more detail in terms of steps. It gets like very detail from known to new until the end. Because it has like...more teaching strategies.

Excerpt 38 Post-practice - interview – Din

Similar to Irfan and Din, Aiman also strongly viewed multiliteracies pedagogy as similar to other pedagogy which in his case, he even went as far as seeing no differences from the pedagogies taught in his teacher education programme. He did not identify which pedagogies, but he said:

PT-IV-AIMAN I think in general...they are the same thing. But the pedagogies I learnt in teacher education programme did not use the knowledge processes and something like that.

Excerpt 39 Post-training - interview – Aiman

Aiman maintained the beliefs about the similarity of multiliteracies and the other pedagogies even after he had implemented the pedagogy. He still thought that multiliteracies is not significantly different from other pedagogies, yet it helped him to plan to learn in a systematic with greater specificity in choosing activities aligned with the knowledge processes. He said:

PP-IV-AIMAN I believe that...I still believe that multiliteracies pedagogy is the same with other pedagogies, but it is...just help us to systematically planning the lesson. I think multiliteracies is more specific in terms of activities for each knowledge processes.

Excerpt 40 Post-practice - interview – Aiman

Similar to Irfan, Din and Aiman, Balqis described the pedagogy as similar to other pedagogies that she has learnt during teacher training programme too. It was not clear which pedagogy she thought it was related to, but she felt strongly that she had encountered something like the concept before. Even though it was not too obvious, but her last sentence suggests that she saw the resemblance in regard to the application of multiple modes during teaching and learning. She said:

PT-IV-BALQIS I think multiliteracies is almost the same as other pedagogies. Previously I thought when we designed lesson plan, I think I have encountered some of the terms in multiliteracies it is just that I do not know it is called multiliteracies. Like we also include in students' activities different things...the visual, audio and mixed them together. We have done that before.

Excerpt 41 Post-training - interview – Balqis

Apart from equating multiliteracies pedagogy with other pedagogies that they have encountered during teacher training, the pre-service teachers contrasted multiliteracies to traditional pedagogies. For example, Din contrasted traditional methods to multiliteracies pedagogy and defined it as a new teaching method that portrays the teacher as a facilitator, not an authoritarian, who assists students' learning and co-construct knowledge with students. He also added that in addition to being similar to other pedagogies, the multiliteracies pedagogy perfected the previous pedagogies. He said:

PT-IV-DIN Multiliteracies is just like...the core is teacher act as facilitator...to assist the students to learn. So, it contradicts with the traditional method...the teacher is the (xxx) of the stage. I mean, "okay students you need to listen from me. So, all the truth things will come from me". That is the old method. So, the new method including multiliteracies as a new term just like, "okay students I will help you to learn". So, just like...perfected the old one...make it more comprehensive.

Excerpt 42 Post-training - interview – Din

Aqilah also compared multiliteracies pedagogy with traditional pedagogy when she expressed how glad she was to be introduced with the new pedagogy. In her experience, intelligence is equated to getting good grades in exams, thus learning was always about memorizing or perhaps drilling for exams. By being introduced to multiliteracies pedagogy, she finally experienced other ways of

learning that do not necessarily need to be measured through exams. She believes that the pedagogy gave her hope and an opportunity for her students to learn in various ways, privileging active, student-centred learning over passive, teacher-centred, exam-driven learning. She said:

PT-IV-AQILAH Knowing the existence of this pedagogy...I mean like...it answers my question on the fact that like everybody can learn. When I was in school, they are always these perceptions that you are considered intelligent if only you get number top 1 to 5 in class. But it is not that simple! So, I think this pedagogy will address over like...help the other portion of students who are not doing good in exams or memorizing. Yeah, that will help them to learn.

RESEARCHER Interesting. When you say it is helpful for different learners to learn...how is it that it is helpful?

PT-IV-AQILAH The traditional...the pedagogy that is use in Malaysia is more like chalk and talk. So, more like passively listen...less...there's a bit visual but the least is spatial. I mean we do not really move around the class...and I think moving around is important!

Excerpt 43 Post-training - interview – Aqilah

Similar to Din and Aqilah, Iliana too contrasted multiliteracies pedagogy to traditional methods as she acknowledges that multiliteracies pedagogy includes the incorporation of various activities and that is beneficial for students to become more engage with the lesson. She said:

PT-IV-ILIANA I think it would be most beneficial for the students because it is like...the opposite of traditional method...traditional pedagogy. Students can engage more in the lesson by having that various activities.

Excerpt 44 Post-training - interview – Iliana

In addition to being able to see the similarities and had a clear idea of how the multiliteracies pedagogy differs from the other pedagogies especially the traditional ones, the pre-service teachers further highlight that the pedagogy is specifically more systematic, organised, explicit, detailed and specific. For example, in the excerpt 40 and excerpt 42, it was evident that Din and Aiman perceive that multiliteracies pedagogy in comparison to other pedagogies is more explicit and specific. Similarly, Aqilah also highlighted multiliteracies pedagogy as being more explicit about the learning process than other pedagogies. She said:

RESEARCHER Do you see any significant difference between this pedagogy and other pedagogies?

PP-IV-AQILAH There's different. Like I said, about the knowledge processes. The knowledge processes help me to know what to do at what stage and what the students can gain for each step. As for what I have been taught it is there, but you cannot really see as clear as this one.

Excerpt 45 Post-practice - interview – Aqilah

Like Din, Aiman and Aqilah, Iliana too perceives that in comparison to other pedagogies multiliteracies pedagogy is more systematic in designing lesson. She said:

RESEARCHER Do you see any significant difference between this pedagogy and other pedagogies?

PP-IV-ILIANA I think the difference is...for multiliteracies pedagogy it is more organised because it has from step one to next step and so on. But for the pedagogies that has been taught by our lecturers in KOED, they don't have that steps. They don't have the specific steps that we need to follow in writing a lesson plan.

Excerpt 46 Post-practice - interview – Iliana

Finally, similar to Iliana and Aiman, Balqis also mentioned that multiliteracies pedagogy is more organised and specific in designing lesson than other pedagogies. She said:

RESEARCHER Based on your understanding what do you think multiliteracies means?

PT-IV-BALQIS The difference...like I said, when I use this pedagogy, I can see the organization of the lesson but in my usual lesson plan I can't see it clearly. Also, multiliteracies lesson plan specify what the teacher will do and what the students will do but in my usual lesson plan I only focus on what the teacher does and not the students.

Excerpt 47 Post-training - interview – Balqis

6.3.2 Knowledge Processes

Data from the post-training interview held right after the workshop and the post-practice interview conducted after the implementation of the pedagogy suggest that all pre-service teachers were aware of the knowledge processes. All of them showed significant awareness of the element as the structure of their multiliteracies lesson and they explicitly reported it during the interviews. Irfan awareness of the knowledge processes is evident from his definition of the pedagogy in excerpt 30 as he described the knowledge processes as the learning process for a multiliteracies lesson. Besides, data from research notes taken during the post-training interview illustrates that Irfan's understanding of the knowledge processes is developing and he was enthusiastic when explaining

them. He continued to report about the element even after the implementation phase as he focused on the knowledge processes as the main feature he learnt from the whole process. He said:

RESEARCHER Alright. My final question is what have you learnt from this whole experience?

PP-IV-IRFAN I learnt a new term... multiliteracies which I have never heard of it before. I also learnt about the activities that I can use through the variation of knowledge processes. This...for example, the known part...even in this part we can do a lot of activities. So, for me I can have the variations and more things that I can do in the class.

Excerpt 48 Post-practice - interview – Irfan

Aqilah's strong awareness and understanding of the knowledge processes was evident as she explicitly recalls knowledge processes as one of the elements of multiliteracies pedagogy and listed all of the knowledge processes during the post-training interview. She said:

RESEARCHER Okay. What are the elements of multiliteracies pedagogy that comes to mind?

PT-IV-AQILAH The knowledge processes. Experiencing, conceptualising, analysing and applying.

RESEARCHER That's fine. Do you know how it works?

PT-IV-AQILAH Oh yeah. Haha. The experiencing part you get into the students...you are going to know what the students know about the topic...the topic of the writing. The knowledge processes it helps to...it guides the teacher to teach step by step.

Excerpt 49 Post-training - interview – Aqilah

Her awareness continued after she had implemented the pedagogy as there was evidence in excerpt 97 that Aqilah was aware of the inclusion of all knowledge processes in her lesson, and she was able to describe them in detail. Iliana showed awareness on the knowledge processes as she reported that she vaguely remembered the knowledge processes and she also needed scaffolding to describe the element. She said:

RESEARCHER Do you remember the elements of multiliteracies pedagogy?

PT-IV-ILIANA I remember a little bit about the process of writing lesson plan in conceptualising...what else?

RESEARCHER Experiencing, conceptualising, analysing and applying.

PT-IV-ILIANA Haa...yes! All those things. The knowledge processes.

Excerpt 50 Post-training - interview – Iliana

However, evidence in excerpt 100 showed that Iliana awareness of the knowledge processes deepen as she was able to report the inclusion of all knowledge processes in her lesson and she was able to describe them in detail. Balqis mentioned that she remembered knowledge processes and interestingly held the view that the knowledge processes resemble Bloom's Taxonomy. She explicitly reported that she remembered knowledge processes and the fact that it bears a resemblance to Bloom's Taxonomy helped her to remember the element. Similar to Irfan and Din, Balqis also thought that both concepts suggest that designing learning should start from basic learning strategies then moving forward to more complex ones. She further described what the knowledge processes were and suggested that the knowledge processes provide a framework for designing lesson which led the learning activities to be in a systematic order. She said:

PT-IV-BALQIS I remembered the four knowledge processes. Because it starts from the very basic ones to the...similar like the bloom taxonomy...from understanding to the higher bit...more complex. The knowledge processes it starts from experiencing then conceptualising then analysing and finally applying. So, it follows the order and makes the activities more organised.

Excerpt 51 Post-training - interview – Balqis

Balqis's awareness continued until after the implementation of the pedagogy as it is evident in excerpt 98 that Balqis was aware of the inclusion of all knowledge processes in her lesson, and she was able to describe how she utilised them in detail. Recalling the elements of multiliteracies pedagogy, Aiman was aware of knowledge processes as one of the elements of multiliteracies. He elaborated that it was the process that the students need to go through to get knowledge and understood that students acquire knowledge and understanding as they go through all the activities situated in knowledge processes. Then he further elaborated that it helped to sequence and plan activities towards achieving the learning objectives of the lesson. He said:

RESEARCHER So, can you recall any elements or characteristics of multiliteracies pedagogy?

PT-IV-AIMAN I remember knowledge processes. We have experiencing, conceptualising, analysing and applying. The process that the students need to do to get the knowledge in class.

RESEARCHER So, how is it based on your understanding that these knowledge processes help the students to get knowledge?

PT-IV-AIMAN Okay. In the knowledge processes we have different phase...the example of process that they need to go through during the lesson. For example, focusing on experiencing we want them to recall...in analysing we want the students to analyse...so students should analyse and what not.

Excerpt 52 Post-training - interview – Aiman

Aiman's awareness of the knowledge processes is maintained after he had implemented the pedagogy as excerpt 60 showed that he highlighted and stressed the importance of knowledge processes in his multiliteracies lesson. Finally, Din also showed awareness on knowledge processes as he reported that he remembered the knowledge processes and elaborated how he came to understand the knowledge processes as he equated the knowledge processes to Bloom's taxonomy. Similar to Irfan and Balqis, he expressed that he thought that the knowledge processes compliment Bloom's Taxonomy and this helped him to understand knowledge processes. Comparing and contrasting the two concepts helped Din contextualise the two and develop a clearer understanding of the knowledge processes. He said:

RESEARCHER So, can you recall any elements or characteristics of multiliteracies pedagogy?

PT-IV-DIN Characteristics? The thing that I can recall is knowledge processes. I always (xxx) okay, this is the knowledge process and what I have in my schema (pointing to his brain) is Bloom's taxonomy...so, I put it side by side. So, I try to look for similarities and differences.

RESEARCHER Why?

PT-IV-DIN Because...it's similar...for example with the experiencing in the knowledge processes. Experiencing I try to connect to the knowledge (xxx)...it is almost similar because experiencing you have the known and the new. So, almost similar to the knowledge step. Then I move to one more step. So, after experiencing we have conceptualising...and we have knowledge comprehension...so, I try to align that.

RESEARCHER So, you are able to kind of understand when you compare between knowledge processes and bloom's taxonomy?

PT-IV-DIN Ah-ha. Yes.

Excerpt 53 Post-training - interview – Din

Din maintained his awareness on the knowledge processes after he had implemented the pedagogy as it was evident that he was aware of the inclusion of all knowledge processes in his lesson, and he was able to describe them in depth.

Apart from being able to describe their awareness of the element, the pre-service teachers also articulated their perceptions of the knowledge processes during the interviews. All of them agreed that the knowledge processes are a distinct, detailed and systematic framework to design learning and it facilitates the process of designing learning. Irfan perceived that the knowledge processes have the potential to provide a framework for including different ways of learning in a lesson. Commenting on designing multiliteracies lesson activities in the workshop, he recalled that the knowledge processes facilitate the process of designing a lesson. He reported:

RESEARCHER Do you think the knowledge processes facilitate in planning a lesson?

PT-IV-IRFAN I think through knowledge processes when we design our lesson plan...it gives us more options. So, we can do the activities through applying or conceptualising or everything. By doing so, I think that basically...we will get more options for our activities in creating a lesson and opportunities to do more activities.

Excerpt 54 Post-training - interview – Irfan

Similarly, Aqilah noticed that she could distinctly stage her lesson through knowledge processes because it provides a framework for her to plan her lesson step by step. Aqilah perceived that the knowledge processes open new realms of possibilities to design learning as she expressed that the pedagogy gives teachers new opportunities to design learning. She said:

PT-IV-AQILAH Oh. Multiliteracies is a new way of looking things. I mean in terms of planning your lesson starting from experiencing, conceptualising and so on. I mean the traditional version... the version that we are used to do is not that clear...which part is which...and usually we are always out of ideas. But with the knowledge processes...it gives us ideas and helps us to plan more activities.

Excerpt 55 Post-training - interview – Aqilah

It is understood from her comments above that she considers designing lessons through the knowledge processes framework innovative because the framework encourages new ideas for learning activities and facilitates a systematic lesson design process. Comparing it to her previous experiences of designing lessons, she indicates that the framework of knowledge processes helped to make her current experience more expansive and straightforward. She further testified that

based on her experiences designing multiliteracies lesson with her peers, the knowledge processes helped to provide a clear structure to design lesson. She said:

PT-IV-AQILAH When we are doing lesson plan based on multiliteracies pedagogy it is clear. Oh, this part is experiencing, this is conceptualising, analysing...so, it is a...I think it is more systematic...framework.

Excerpt 56 Post-training - interview – Aqilah

Iliana perceived that the multiliteracies pedagogy and specifically the knowledge processes were helpful as she particularly views that the knowledge process framework provided a systematic method of planning lessons where she could begin by identifying and planning activities in accordance with every knowledge process following sequence in a logical manner. She said:

PT-IV-ILIANA The knowledge processes are helpful. Before this when we...in other teaching skills classes when we create a lesson plan the process is different to this one. So, I think it is helpful because we know first what are the things that we need to include. For example, like experiencing the new and the known. So, we can identify which activity that we should incorporate for the new and also for the known. Then we can start sequencing them for the lesson plan.

Excerpt 57 Post-training - interview – Iliana

Balqis has a strong perception that multiliteracies pedagogy helps to systematically design learning. There were few instances that suggest she believes that the pedagogy provides a systematic framework for designing lessons. The first instance was when she described her understanding of knowledge processes in the excerpt 51 and suggested that following the order of the knowledge processes helped to sequence activities in an orderly manner. The second instance was after she had implemented the pedagogy as she continued to agree that the use of knowledge processes made her lesson systematic because she could see a clear connection between the activities planned. In fact, she found that her multiliteracies lesson was more structured and organized than her previous lessons. It seems that she was trying to say that the knowledge processes framework gave her a clear sense of direction towards achieving the goals of the lesson. This is another instance to show that she deeply believed that multiliteracies pedagogy was a systematic way to design lessons and evidence of the consistency of the belief from the initial training to the implementation of the pedagogy. She said:

RESEARCHER So, you said using the knowledge processes helped you to achieve your learning objectives?

Chapter 6

PP-IV-BALQIS Yes because when I planned the lesson according to the knowledge processes, I find it clearer and more systematic. I can see clear connection between the stages of the lesson. When I organized the activities according to the knowledge processes, I find it very organized...more organized compared to the other lesson I did. Perhaps this is because the knowledge processes help us to map activities starting from exposing the students to their own background knowledge and progressing towards applying what they have learnt.

Excerpt 58 Post-practice - interview – Balqis

During post-training interview, Aiman thought that sequencing the activities systematically using knowledge processes posits higher chances and possibilities to achieve learning objectives set for the lesson:

PT-IV-AIMAN When we have that knowledge processes, we can sequence activities to achieve our learning objectives. So, this should be the first, this is second...or something like that. This is after...and that is after that. I think it helped us to...planning the activities.

Excerpt 59 Post-training - interview – Aiman

Then after implemented the pedagogy, he confirmed that by using the knowledge processes, his lesson was more organized and systematic towards achieving the aim of the lesson. He said:

PP-IV-AIMAN I think knowledge processes is important. It is easy to achieve the learning objectives because the activities are organized. It is specific...okay this one...we will do this one first and then move to the next according to the knowledge processes. You cannot put the hardest at the beginning of the lesson. Start with the easiest first and then moving on to the more difficult.

Excerpt 60 Post-practice - interview – Aiman

Din's perception of multiliteracies was that he believed that the pedagogy was helpful in providing a detailed sequence for designing lessons and assisting teacher to plan their lesson thoroughly. He said:

PT-IV-DIN The advantage of multi is it details out what you should do in class. This is the new, this is the known...detail. And it is more organized.

Excerpt 61 Post-training - interview – Din

This belief is also recorded after he had implemented the pedagogy as he said:

RESEARCHER Alright. Do you think multiliteracies pedagogy is helpful for your teaching?

PP-IV-DIN Yeah, it is very helpful. It helps me to sequence my teaching...it provides us with detail sequence, and it allows teacher to plan the lesson plan appropriately.

Excerpt 62 Post-practice - interview – Din

So, it seems that he maintains the belief that the pedagogy helped him in staging his lesson, however, later he claimed that the lesson was too detailed and had too many activities which caused him frustration as his students only managed to complete one small part of the essay. He outlines this here:

RESEARCHER So, how do you think this pedagogy helps the students to write?

PP-IV-DIN The thing is...I allow them to write a formal complaint letter for 30 minutes. Even in that time they have chance to write only one effect and one suggestion.

RESEARCHER What do you think that is? Advantage? Disadvantage?

PP-IV-DIN That's the disadvantage because if we go too detail like, "okay let's allow the students to brainstorm, let's allow the students to think of the ideas on their own". Your final objective is to get a formal complaint letter and that will take time. So, if these activities consume too much time you would not have enough time for the students to actually write the letter. For me, if that did not happen you are not achieving your learning objective for that lesson.

Excerpt 63 Post-practice - interview – Din

From excerpt 63, it seems that Din has this perception that students should be able to produce a complete essay before the lesson ends. For him, achieving the outcome at the end of every lesson was important, so pre-writing activities such as brainstorming, evaluating ideas, writing the essay, check it and write it again were perhaps unnecessary. Therefore, from his perspective, multiliteracies pedagogy was not helpful because it does not help students to achieve outcomes in a single lesson. Later on, during the same interview, he further confirmed his perceptions and rationale for thinking this. He said:

RESEARCHER So, for you the importance is the product itself and not the pre-writing or other stages of writing?

PP-IV-DIN Yeah.

RESEARCHER But why?

PP-IV-DIN I will allocate more time for them to write during the class because I am afraid if I allow them to do the writing after the class they'll copy from somewhere else.

Excerpt 64 Post-practice - interview – Din

Excerpt 64 suggests that his expectations that students should have a polished essay by the end of every lesson were mainly due to his doubts that his students are not going to be honest in writing their own essay. He thought his students would cheat and just copy their essay from other sources. Therefore, in his view, giving the students enough time to write during the lesson and getting it done in a single lesson is important to prevent this. However, multiliteracies pedagogy and the application of the knowledge processes does not require that everything is completed in an hour lesson. During the workshop the pre-service teachers were told that it was not compulsory to include all knowledge processes and that the knowledge processes do not necessarily have to be sequenced chronologically. The application of the knowledge processes mainly depends on the goal of the lesson and student's learning abilities, learning preferences and learning styles. This has been regularly explained and reiterated during the workshop and there was evidence that other participants were aware of this. Perhaps Din was confused and thought that a multiliteracies lesson requires the application of all knowledge processes and must be sequenced chronologically. Evidence of this might have been revealed in the following excerpt:

RESEARCHER So, are you saying that actually this pedagogy is kind of limit you in certain ways to get the students to write something?

PP-IV-DIN I have to say yes but of course this pedagogy is not all bad. But when you are too rigid...so yeah. The thing is for multiliteracies it is challenging to integrate all the knowledge processes in a single class. It takes time.

Excerpt 65 Post-practice - interview – Din

Excerpt 65 reveals that he thought that the multiliteracies lesson required all knowledge processes to be included in a lesson as he expressed that it is difficult to include all knowledge processes in a lesson. This contradicts the concept of multiliteracies pedagogy and what was explained during the workshop. The misunderstanding coupled with his belief that each lesson should have an outcome might have result in the confusion. Nevertheless, even though he thought that applying all knowledge processes was required and he wanted to show all knowledge processes during the lesson, the observation and lesson plan data suggest otherwise. He, in fact, did not incorporate all knowledge processes in his lesson.

Apart from believing that the knowledge processes work as a systematic framework to design lesson and that it facilitates the designing process, the Aqilah Balqis and Aiman also believed that

the knowledge processes help to plan learning objectives of a lesson and track the achievement of the learning objectives. Adding to that, Aqilah and Iliana believe that the knowledge processes also help to monitor the progress of their students during the lesson. Balqis believe that the knowledge processes could determine the achievement of the set learning objectives of the lesson. She believed that by sequencing the activities according to the knowledge process framework, teachers could see the compatibility between selected and sequenced activities against the learning goals decided for the lesson. She said:

RESEARCHER Okay. Which bits on multiliteracies pedagogy that you think is beneficial?

PT-IV-BALQIS The knowledge processes.

RESEARCHER How is it beneficial?

PT-IV-BALQIS It helps the teacher to specifically organize their lesson. For example, I can see whether the learning objectives can be achieved or not based on the knowledge processes because when we sequence the activities, we could see whether the activities we have matched to the learning objectives that we want to achieve or not.

Excerpt 66 Post-training - interview – Balqis

Similarly, Aqilah testified that the knowledge processes helped her to achieve learning objectives set for the observed lesson. She stated that it was easier to achieve learning objectives because the knowledge processes make it easy to track the achievement of the learning objectives throughout the lesson. She said:

PP-IV-AQILAH it was easier to achieve learning objectives because we can see which part...when you follow the knowledge processes it is easier to track like...this part the students are doing this in order to achieve this aim.

Excerpt 67 Post-practice - interview – Aqilah

She further added that the knowledge processes also helped her to keep track of her students' progress throughout the lesson. The pedagogy provided her with a clear framework to observe her students' participation and developments during the lesson and she deemed that to be very helpful. She said:

PP-IV-AQILAH The knowledge processes help me to know what to do at what stage and what the students can gain for each step. So, it is a clearer framework to plan the lesson and to keep track the progress of your students during the lesson. The pedagogy is helpful!

Excerpt 68 Post-practice - interview – Aqilah

Iliana also reported that going through the knowledge processes framework allowed her to monitor her students' development during the learning. Not only could she see their progress, but the activities following the knowledge framework guides the students to build sufficient input for the final writing task. She said:

PP-IV-ILIANA I think...compared to the other lesson that I have taught, this lesson is more organized because it has from step one to next step and so on. I could see how students participated in these steps. How they are learning something from these steps. For example, for the first one...I asked them to recall about birthdays and their experiences also I explained the format based on the example. That's the first step. The second step is where they need to brainstorm reasons of why they want mobile phone for their birthday. All these steps help students to have sufficient input for the writing task at the end.

Excerpt 69 Post-practice - interview – Iliana

6.3.3 Multimodality

Pre-service teachers had awareness on the element of multimodality in multiliteracies pedagogy except for Din. It was evident that all of them except Din were able to talk about the element either during the post-training interview conducted right after the workshop or the post-practice interview conducted after they have implemented the pedagogy. During the post-training interview, only Aqilah explicitly defined and described the element while Iliana and Balqis associate the element through their interpretation of multiliteracies pedagogy. Aqilah's definition of the element and the possible modes associated to it was aligned with the theory even though it was quite brief, but she affirmed her understanding of the element as she associated multimodality with her definition of the pedagogy which was evident in excerpt 70 as she perceived that the pedagogy has the potential to cater to different learning styles because of the use of different modes in a lesson. Connecting the element of multimodality with catering to learners' learning styles suggests that she was aware how the element functions in multiliteracies pedagogy. During the interview she defined multimodality as ways of making meaning and she recalled some of the modes associated with the element of multimodality. She said:

RESEARCHER Okay. Can you recall other elements of multiliteracies pedagogy?

PT-IV-AQILAH The...multimodal bit. Haha.

RESEARCHER Do you know what multimodality means?

PT-IV-AQILAH Ways of making meaning.

RESEARCHER Yes. Different multiple modes of making meaning. What do you think the modes are?

PT-IV-AQILAH Visual, audio, spatial and what not. I like the way that...multimodal...it addresses the needs of...I mean like diverse learning style. I like that bit because...it gives you more options to cater students of different abilities...it's fair for the students as well. You do not only address...one type of learning style. So, all students get to learn.

Excerpt 70 Post-training - interview – Aqilah

Unlike Aqilah, Iliana and Balqis were not explicit in defining and describing the element during the interview but similar to her it was evident that they associated multimodality with their definition of the pedagogy. This shows that they had some awareness and understanding of the element through their interpretation of the pedagogy, yet they were not able to articulate and relate to it during the interview. In the excerpt 35 Iliana interpreted the pedagogy as an inclusion of multiple modes for teaching and learning. From her definition it seems that she understood the different modes related to the pedagogy and the need to incorporate these modes in a lesson, but she did not realise it. She also said that she understood that the use of the different and multiple modes in teaching and learning such as the use of images, colours or movement helps to attract students' attention. This strengthens the earlier point that she has some understanding of multimodality but perhaps is not aware of it. She said:

PP-IV-ILIANA I realised that some students tend to lose attention when you only talk in class. When you only talk in front of the class...the students especially at the back will usually play with their pen or drawing something instead of focusing on you. So, that's why teacher should bring something in class like any materials or teaching aids that...you can attract the students...using visual, audio or moving around something like that.

Excerpt 71 Post-practice - interview – Iliana

Similarly, Balqis too did not explicitly talk about multimodality during the post-training interview but it seems that she had some understanding about it through her interpretation of the pedagogy. Firstly, in the excerpt 34 she defined multiliteracies as a pedagogy that addresses different learning styles and secondly, in excerpt 41 she thought that it was similar to other pedagogies that she encountered particularly in regard to the application of multiple modes in teaching and learning. These findings suggest that she had some awareness on multimodality even though she was not able to relate to it during the interview.

On the contrary, during the post-practice interview it was evident that all pre-service teachers except Din showed significant awareness of the inclusion of multimodality in their lesson, its

importance and were able to explicitly describe how they utilise it in detail. It was evident from excerpt 103 and excerpt 105 that Irfan and Aqilah reported about the application of multimodality in their lesson. Similarly, Iliana confidently reported that she included the element of multimodality in her lesson as she used an authentic material as teaching aid. She said:

RESEARCHER Alright. Is there any other multiliteracies elements in your lesson apart from the knowledge processes?

PP-IV-ILIANA Multimodality. There is...the use of different modes. In the manila card I have used colours, images...the visual mode.

Excerpt 72 Post-practice - interview – Iliana

Balqis too mentioned that she applied multiple modes in her lesson and was aware of why the different modes were incorporated. She was confident that she has incorporated multimodality in her lesson, was aware of how she used it and was conscious of how the use of different modes could benefit her students. She said:

RESEARCHER Alright. So, do you think this lesson has incorporated multiliteracies pedagogy?

PP-IV-BALQIS Yeah, yes. First, I asked them to recall by pasting the format on the white board, so I think that is visual. The answers strips are in pieces of coloured paper. So, it looks more interesting, and the students want to look at the answers on the board. Also, I asked them to do the mind map, so I think that is somehow the elements of visual too. Since they have to move to the front to put the answer and all I think that's kinesthetics.

Excerpt 73 Post-practice - interview – Balqis

Aiman was aware of the multimodality element in multiliteracies pedagogy and its importance for learning. He believes that the element is vital and beneficial particularly in order to engage students during the learning process as the use of multiple modes gives opportunity for students to learn and make meaning in a way that they prefer. He said:

PP-IV-AIMAN Multimodality is necessary so that the students will engage with the lesson. Some students love this one...some students learn through this...some students learn better this way.

RESEARCHER Why is it that more students can understand or learn better when using multimodality?

PP-IV-AIMAN Multimodality is using the different technological tools, right?

RESEARCHER Different...multiple modes of making meaning.

PP-IV-AIMAN So, some students they learn better through this one...visual. Some students learn better through the other one...movement. So, I think it's like we give them chance to learn and express themselves in way that they prefer.

Excerpt 74 Post-practice - interview – Aiman

Given that multiliteracies pedagogy put significant importance on the use of technology as part of its multimodality element, the pre-service teachers were concerned with the technological facilities and its availability in schools. Din for example, pointed out the insignificant of using technology when it is not even available at school. He said:

RESEARCHER So, does it make sense for the pedagogy to be applied in this digital age?

PT-IV-DIN It is. It is the same (similar to other pedagogy) but the different is technology. You need to...see if you want to use the technology...is the technology available for you? My school...we only have black board and chalk!

RESEARCHER What about the computer lab?

PT-IV-DIN Yes, we have but very slow internet connection!

Excerpt 75 Post-training - interview – Din

Pre-intervention interview data suggest that the pre-service teachers were aware of the evolution of technology in this digital age and deemed it is important that the use of technology becomes part of the teaching and learning process. However, they argue about the practicality of the use of technology in teaching and learning given the lack of technological facilities in schools which will obviously impede the incorporation of technology itself.

6.3.4 Learner Diversity

Aqilah and Aiman had some awareness on the element of diversity in multiliteracies pedagogy while the rest of the pre-service teachers had not. Both Aqilah and Aiman did not explicitly describe and define the element during the interviews but it was noticed that they associated learner diversity element with their interpretation of the pedagogy. In excerpt 32, Aqilah defined the pedagogy as a way of teaching that addresses different kind of learners which suggests that she actually understood that every student is different, and that they bring with them diverse backgrounds. In addition to that, she further elaborated that the pedagogy inclusively caters for students' different learning styles which supports the idea that all students should be included in teaching and learning.

Chapter 6

This is a clear reflection of the diversity element in multiliteracies pedagogy and therefore this tells us that Aqilah had some understanding and awareness of the element conceptually, even if she does not recognize it by name.

Aiman's definition in excerpt 33 shows that he had some understanding and awareness of the learner diversity element in multiliteracies pedagogy even though he couldn't relate to it during the interview. His interpretation of the pedagogy was similar to Aqilah as he saw multiliteracies pedagogy as a pedagogy that provides opportunities to address the diverse needs of learners during teaching and learning. So, they had some awareness and understanding about the element but were not able to articulate and relate to it during the interview. On the other hand, for the rest of the pre-service teachers, at no point during the interviews either during the post-training interview or the post-practice interview that they were able to articulate about the element.

6.3.5 Attitude

Pre-service teachers' attitude towards the pedagogy was positive as they expressed positive feelings about the pedagogy and anticipated the use of the pedagogy in their future practice. All of them showed positive attitudes towards the pedagogy during the post-training interview and it continued until the post-practice interview conducted after they have implemented the pedagogy. Irfan described his excitement to use multiliteracies pedagogy in order to vary his lessons and create interesting activities. He said:

RESEARCHER Right. So, do think you will give it a try...to use the multiliteracies during your teaching practice?

PT-IV-IRFAN Yeah. I think yeah. I can do it and I can try to do it. After this during my practicum I will try to do some of the activities and vary my lessons so I hope that the students will love it...so that the lesson does not seem boring.

Excerpt 76 Post-training - interview – Irfan

Apart from that, research notes suggest that Irfan has always been positive about learning the new pedagogy and was very participative during the workshop.

28.11.17: Positive reactions by the students particularly Irfan. He contributed a lot during whole class discussions, and he seems motivated!

Excerpt 77 Research Journal - Multiliteracies Workshop - Week 1 - Lesson 1 - Session 1

There was no shift in his positive attitude towards the pedagogy as his anticipation to use the pedagogy after implementing it was still the same. During the post-practice interview, he testified that he would continue to use the pedagogy for his future lessons. He said:

RESEARCHER Alright. So, will you continue using this multiliteracies approach in your teaching in the future?

PP-IV-IRFAN Perhaps I will use some part of it which I think that it is good for my lesson...like the knowledge processes. It will give me more options and perhaps give me ideas to conduct a lesson. multiliteracies is very good... it is student-centred. So yeah, I might use multiliteracies for my future lesson.

Excerpt 78 Post-practice - interview – Irfan

In fact, he had strong beliefs on the potential of this pedagogy to improve current teaching methods and its importance in teacher education. He urged that the pedagogy should be spread and taught to other teachers in schools. He said:

PP-IV-IRFAN Teachers might need to know about multiliteracies pedagogy so that they have variation of activities and do not just stick to presentation and lecture. It's good for the next generation teacher to know. Perhaps you should...those who know about multiliteracies should go to school and at least share the knowledge about multiliteracies. Perhaps we should introduce this to the teacher especially and obviously the student teachers in the faculty of education.

Excerpt 79 Post-practice - interview – Irfan

Similarly, Din showed anticipation towards using the pedagogy too as he anticipated the implementation of the pedagogy during his teaching practice. He said:

RESEARCHER Will you give this pedagogy a try during teaching practice?

PT-IV-DIN Yeah, I will try my best.

Excerpt 80 Post-training - interview – Din

His enthusiasm for the new approach was also recorded in the post-practice interview as he expressed his anticipation to use the approach in the future. Even though he intended to use the approach in his future teaching career, Din wanted to amend it according to his preferences. He said:

RESEARCHER Okay. So, will you continue to use this approach in the future?

Chapter 6

PP-IV-DIN Yeah. But I will amend the activities accordingly because I think it should not be too rigid.

Excerpt 81 Post-practice - interview – Din

Aiman too was willing to implement the pedagogy during the teaching practice as he expressed that he is willing to try implement the pedagogy because he thinks that the pedagogy is important. He said:

PT-IV-AIMAN Of course! I will give it a try. I think this pedagogy is important. If not in every class maybe I will implement it sometime. I want to try to use it. Success, I am not sure, but I will definitely try.

Excerpt 82 Post-training - interview – Aiman

His positive attitude was maintained after he had implemented the pedagogy as he said in the post-practice interview that he is willing to use the pedagogy again as it is helpful for him. He said:

RESEARCHER Alright. Okay. Will you continue using this approach in your teaching career?

PP-IV-AIMAN Sure, no problem. It helped so I think I want to use it. Yeah.

Excerpt 83 Post-practice - interview – Aiman

Aqilah also expressed her anticipation and excitement to implement the pedagogy during the teaching practicum and she was confident in her ability to do so. She said:

RESEARCHER Do you think you will use it later in your teaching practice?

PT-IV-AQILAH Oh yeah. Sure. Because it seems...for me it seems easier. I can clearly see where the students are doing...at this point what they are supposed to do. What is the purpose of having them to do this kind of activity? So, yeah.

RESEARCHER How do you feel?

PT-IV-AQILAH Erm...can I say that I feel excited? Haha.

RESEARCHER Yeah...sure! Haha.

Excerpt 84 Post-training - interview – Aqilah

Her positive attitude continues even after she had implemented the pedagogy as she commented during the post-practice interview that she has the intention to use it in the future. She said:

RESEARCHER So, will you continue to use this approach in your teaching of writing class in the future?

PP-IV-AQILAH Yeah...yeah, I plan to.

Excerpt 85 Post-practice - interview – Aqilah

Iliana too was excited with the new experience and the new things she learned, and she expressed that she thought the pedagogy was fun. She said:

RESEARCHER Okay. So, how do you feel about planning multiliteracies lesson?

PT-IV-ILIANA It is actually fun. Yes...because you introduced us to new things. It was a new experience! So, it was really fun.

Excerpt 86 Post-training - interview – Iliana

Apart from that, later on during the same interview she further declared her enthusiasm to implement multiliteracies pedagogy during teacher practicum. She said:

RESEARCHER Okay. Would you use multiliteracies pedagogy during teaching practicum?

PT-IV-ILIANA Yes, sure! yeah, I would use multiliteracies pedagogy.

Excerpt 87 Post-training - interview – Iliana

She maintained her positive attitude after implemented the pedagogy and during the post-practice interview, she explains that she will continue using the pedagogy in her future teaching career because she strongly believes that the pedagogy will benefit her. Convinced of the pedagogy's benefits, she was happy to use the pedagogy with different students. In short, there was no shift in her enthusiasm and attitude towards the pedagogy which suggests that she was truly passionate about the pedagogy. She said:

RESEARCHER Alright. Okay. Will you continue using this approach in your teaching career?

PP-IV-ILIANA Yes, I think I will because...I can see how effective it was for my students and how my learning objectives were achieved. So, I love to practice using this pedagogy again. Maybe for Form 2 students...I could try this with Form 2 students. Yeah.

Excerpt 88 Post-practice - interview – Iliana

Similar to the rest of the pre-service teachers, Balqis also portrayed positive attitude as she anticipated the implementation of the pedagogy during the teaching practicum and was confident in her ability doing so. She said:

RESEARCHER Going through the workshop and designing multiliteracies with your peers do you think you have the confidence to teach it in school? Would you use it in your teaching practice?

PT-IV-BALQIS Yes. Sure, I will. I have confidence to do it.

Excerpt 89 Post-training - interview – Balqis

Then following her implementation of the pedagogy, she reported during the post-practice interview that she was willing to continue using the multiliteracies pedagogy and that she was interested to integrate the knowledge processes in her teaching practice. She said:

RESEARCHER Alright. Will you continue using this approach in your teaching career?

PP-IV-BALQIS Yes! I think I will. I will try to integrate the knowledge processes.

Excerpt 90 Post-practice - interview – Balqis

Besides the positive attitude and anticipation that the pre-service teachers had towards the pedagogy, it is interesting to notice that some of the pre-service teachers went extra miles to understand and comprehend the multiliteracies pedagogy. Irfan, Aqilah and Balqis showed willingness to learn more about the pedagogy through their personal dedication and positive engagement which was by putting extra effort to have a better understanding of the pedagogy after the workshop ended and before the implementation during teaching practicum.

Irfan showed dedication towards learning the concept as he is willing to take initiative to spare some time before the implementation to revise and practice in order to gain deeper understanding of the concept especially on the aspects where he was less confident. This is seen in his narratives in excerpt 91 that shows how he thinks proper preparation is necessary before implementing the pedagogy in real teaching practice. After the workshop, he continued and showed willingness to continue to work on developing his understanding by experimenting with multiliteracies pedagogy which indicates that he is proactive and his additional efforts to understand the concept show positive attitudes towards the pedagogy. He said:

PT-IV-IRFAN I will adapt it, but I still do not have the chance to look at all the activities because it is too many. I am still trying to understand so before I go for teaching practicum, I will try to make several lesson plans.

Excerpt 91 Post-training - interview – Irfan

Similarly, Aqilah had taken initiative to learn alone, to understand the concept and to arrive at the conclusion that she struggled to plan activities according to the knowledge processes. So, she did her own reading and revision before implementing the pedagogy. She said:

PP-IV-AQILAH I read some of the articles in the file that you have given us during the workshop, and I questioned myself, do I really understand this pedagogy? It was...I find it hard when...to plan the activities for the knowledge processes. When I look at the handouts...I do not know which activity I should choose for this knowledge processes...for writing class. For me...that is quite challenging but other than that it's fine.

Excerpt 92 Post-practice - interview – Aqilah

Balqis too showed positive engagement during the workshop through her dedication towards learning the concept. In the post-training interview, she revealed that she sought for her friend's help to understand the concept. She took the initiative to learn from her peer to have better understanding of the concept rather than relying absolutely on the instructor or perhaps just remaining confused. She said:

RESEARCHER Right. Your friend helped you to understand the concept?

PT-IV-BALQIS Yes. I asked and she explained to me about the knowledge processes and that helped me a lot.

Excerpt 93 Post-training - interview – Balqis

In addition to that, her comments during the post-practice interview suggest that she personally revised all the notes and lecture slides given during the workshop in order to implement the pedagogy during teaching practice. This shows her commitment towards the pedagogy given that she took extra efforts on her own to get better understanding of the concept. She said:

PP-IV-BALQIS In terms of planning I need to revise about the concept again to gain better understanding. I remembered before I start planning this lesson, I revised all the notes and slides about this concept especially about the knowledge processes.

Excerpt 94 Post-practice - interview – Balqis

6.4 Pre-service Teachers Implementation of Multiliteracies Pedagogy

This section explores how the pre-service teachers operationalised multiliteracies pedagogy during their teacher practicum. This thesis aims to explore the links between developing teacher cognition and its link with practice, in this case how the pre-service teachers develop novel practical

applications of pedagogic theory. Therefore, this section describes the instructional practices of the pre-service teachers during their teaching practicum following their attendance of the multiliteracies workshop. This section begins with their implementation of knowledge processes followed by multimodality, learner diversity and their roles as teacher as well as the roles of their learners.

6.4.1 Knowledge Processes

Description of lesson for every pre-service teacher is attached in appendix I where their lesson plan is presented in a table and a detailed description about their lesson is provided. The table presented is a lesson plan template created by the researcher as an initiative to simplify the original lesson plan created by the participants for the purpose of data presentation. It is important to note that the table is similar across participants to show the reader how the pre-service teachers utilize knowledge processes in their lesson with regards to the selection of activities for every knowledge processes. The table or the design of the lesson template relates closely to the structure of multiliteracies pedagogy which is the knowledge processes because the knowledge processes is the core framework in designing multiliteracies lesson that serves as a prompt to guide teachers to design learning and widen their pedagogical repertoires. In fact, during the workshop especially the session on developing multiliteracies lesson plan, the pre-service teachers were encouraged to view their planning in terms of the inclusion of knowledge processes in each lesson. Data gathered in the table in appendix I shows what activities were chosen for what knowledge process but unfortunately the researcher did not further inquire about why the activity was chosen for the specific knowledge processes. In other words, the decision-making process behind each activity selected could not be analysed and considered because the researcher only focuses on inquiring the availability of the knowledge processes and which activity was assigned for it.

All pre-service teachers were aware of the inclusion of knowledge processes in their lesson as they articulated the application of the element and described how they utilised the framework in their lesson during the post-practice interview. Aqilah, Balqis, Iliana and Din described that they incorporated 'experiencing', 'analysing' and 'applying' while Irfan and Aiman only narrated that they incorporated the 'experiencing' and 'analysing'. Irfan reported that he used 'experiencing the known' when asking students to recall about festivals celebrated in Malaysia and 'analysing' when he instructed students to identify the characteristics and purpose for every festival. He said:

RESEARCHER Okay. When you plan this lesson did you incorporated knowledge processes?

PP-IV-IRFAN I have 'the known' part like I mentioned just now where they recall about festivals in Malaysia, and it is something that they have schemata about it. After that I proceed to this activity (identify characteristics and purpose) which is quite...might be harder...the analysing.

Excerpt 95 Post-practice - interview – Irfan

Similarly, Aiman also reported that he incorporated 'experiencing the known' by making the students discuss about their experiences and 'analysing' by asking the students to analyse possible effects and solutions for the main issue. He said:

RESEARCHER Okay. Alright. Do you think you have incorporated knowledge processes in that lesson?

PP-IV-AIMAN Yes. I believe so because during the first activity...the class discuss about the thing that they know (experiencing the known). I asked them about what they know about disable people, who is considered as disable people, have you seen them and what not. So, those kinds of questions inform students' knowledge background of the topic and share it with the whole class. After that...the effect (his second LO). So, they think, analyse...the same with the solution...possible solution (his third LO). They analyse what are the possible solutions and also what are the effects of the inadequate facilities.

Excerpt 96 Post-practice - interview – Aiman

Unlike Irfan and Aiman, Aqilah highlighted that she uses 'experiencing the known' when asking the students to recall their past experiences, 'analysing' when the students have to brainstorm options and 'applying' when the students compose an email. She said:

PP-IV-AQILAH I think I have included the...knowledge processes. I have them in my lesson.

RESEARCHER Okay. Can you highlight the knowledge processes that you have included in your lesson?

PP-IV-AQILAH This one when I asked them to recall what are the things that make them feel stress. So, for that they will recall their past experience about the situation when they feel stress. So, that is experiencing the known. And then, I asked them to brainstorm. In the handout I gave them like three options so that's the bit where they have to analyse which option do, they think the best for relieving stress. So, that's analysing. And then the last part is applying where there have to write an email.

Excerpt 97 Post-practice - interview – Aqilah

Chapter 6

Similarly, Balqis also mentioned that she incorporated 'experiencing the known' by asking the students to recall what they have learnt, 'analysing' by making the students analyse options and 'applying' by asking them to compose an email. She said:

PP-IV-BALQIS I included all the knowledge processes such as experiencing the known...through the first activity where they have to sort out the format that was not in the correct order by recalling what they have learnt in the previous lesson. And then I also have analysing because I asked them to choose two activities where they have to discuss and compare which activity is better. Finally, the applying is when I asked them to write an email.

Excerpt 98 Post-practice - interview – Balqis

Din also reported that he utilised 'experiencing the known', 'analysing' and 'applying' in his lesson but compared to Aqilah and Balqis his explanation was less detail. He said:

RESEARCHER That's good. Do you think you have incorporated multiliteracies pedagogy in your lesson?

PP-IV-DIN Yes! Well, I think I have the knowledge processes...the sequence activity is the known part. And then I think this one analysing and the last one applying.

Excerpt 99 Post-practice - interview – Din

Iliana too incorporated 'experiencing the known' as she asked her students to recall their life experiences, but she also included 'experiencing the new' as she introduced the format of writing postcard. She also utilised 'analysing' by making the students brainstorm reasons for their decision and 'applying' when the students were asked to compose a postcard. She said:

PP-IV-ILIANA I have included the knowledge processes. For this one...when I asked them to recall...for this part this is experiencing the known. And then when I introduced the students the format...this is the new. The next one is when they need to brainstorm...I think this one is analysing because they need to brainstorm the two reasons. For applying is when they have to write their own postcard.

Excerpt 100 Post-practice - interview – Iliana

Even though all pre-service teachers articulated the inclusion of knowledge processes in their lesson and were able to describe it in detail, yet the application of each knowledge processes should be examined further. Therefore, sub-sections below will discuss the implementation of each knowledge processes by all pre-service teachers gathered from classroom observation data, lesson plan data and research notes.

6.4.1.1 Experiencing

It was evident from classroom observation data that all pre-service teachers successfully incorporated the 'experiencing' knowledge processes. This is also supported by their narratives during the post-practice interview and their lesson plan. There are two types of experiencing which are 'the known' and 'the new'. 'The known' is bringing in what the students know and the experiences that they have into the lesson and building the topic of the lesson based on this information while 'the new' is to introduce students new and unfamiliar knowledge yet not too far from what they know.

According to the theory, 'the known' revolves around teachers making the students to reflect on their own experiences, views or interests so that they could bring their own knowledge, preferences and experiences to the learning process. Therefore, the activities that teachers could engaged students in should build upon their everyday life and familiar learning resources such as their personal interests, prior knowledge as well as their individual perspective and motivation. Classroom observation data suggests that all pre-service teachers incorporated 'experiencing the known' as all of them began their class by asking students to recall their prior knowledge and share their experiences about the topic of the lesson. For example, Irfan started his class by asking students to recall familiar festivals and built on their background knowledge of festivals celebrated in Malaysia by asking volunteers to list festivals celebrated in Malaysia on the board individually. Malaysia is a multicultural country with various celebrated festivals annually such as Eid, Christmas, Chinese New Year, Thaipusam and many more. Since Irfan's class is multiracial and the students have had experiences celebrating these festivals themselves, the discussion of celebrated festivals in Malaysia tapped into their knowledge of their own and others' culture and connected to their lifeworld.

Din also began his lesson by bringing in the students' background knowledge on the subject matter. Based on excerpt 99, Din reported that he incorporated the 'experiencing the known' through the sequencing activity whereby the aim for the sequencing activity was to help students to recall the format of writing a formal letter since they have learnt how to write formal letter from the previous lesson. He also engaged students in spoken discussion to share their experiences with disable people or how they feel towards disable people. These shows that he attempted to utilise the students' background knowledge and to connect to their lifeworld experiences. Observation data suggested that the students were able to sequence the format accordingly and were enthusiastic in sharing their opinion and experiences on the topic.

Chapter 6

Similar to Din, Aiman also brought in students' knowledge and experiences with disabled people to the class. He posed questions that made the students think about the topic and he explained this in the post-practice interview. He said:

PP-IV-AIMAN During the first activity...I asked them about what they know about disable people, who is considered as disable people, have you seen them and how do they feel when they see people without limbs. So, the answers were informed by students' background knowledge and they can share with the whole class. I also asked them what if you yourself are missing some limbs? How will you walk? So, I asked their feelings about being disable themselves...the difficulties that they might face in such condition.

Excerpt 101 Post-practice - interview – Aiman

Attempting to bring in the learner's prior knowledge and experiences into the lesson, he also asked them to imagine life with a disability as observation data suggest that he asked the students to raise their hands and legs and imagine suffering from illnesses or accidents in which they lost their limbs. Perhaps he was aiming to raise empathic feelings and getting the students to feel closer to the topic at hand.

Based on excerpt 97, Aqilah explicitly mentioned that she asked her students to recall things that contributed to their stress. Observation data suggest that prior to this activity she started the class with a discussion about the students feeling on the upcoming exam too. The students were very eager to share their feelings about the upcoming test and mainly said that they were feeling stressed and pressured to study and pass the exam. It seems that they took the opportunity to let go of their suppressed feelings, concerns and worries. As the students were all excited to express their feelings, Aqilah then took the advantage of the students' active participation to expand the discussion by asking them to list on the board other things that made them stressed. Almost all students went up to write on the board and some of them wrote more than one thing that contributed to their stress. The students' response suggests that they brought in what they know and feel into the lesson and Aqilah's initiative to use this as the foundation for the lesson suggests that the implementation of this knowledge process was a success. Not only did she managed to attract the students' attention, but she also tapped into and connected the students' background knowledge to the lesson. Congruent with the theory, her lesson build upon learner's lifeworld experiences and their everyday life learning resources.

Iliana too builds her lesson on students' life experiences as she asked the students to share their favourite birthday experiences and gifts with the class. Engaging learners mainly through their personal interest, she encouraged learners to bring their own preferences and stories about their life in order to connect to the topic of the lesson. Observation data and the research notes suggests

that the students were very excited to share their experiences and since they were so eager to share, the class became chaotic and therefore almost all students were given opportunities to share their experiences and birthday gifts they have got. Balqis on the other hand started her lesson by asking her students to underline the correct format of an email in the handout and arrange the format of email in correct order on the board given that her students have learned how to write an email in a previous lesson. She has effectively utilised her learner's prior knowledge before she developed the topic further and this merit the incorporation of 'experiencing the known' as suggested by the theory. Observation data support that the students were very participative, and they managed to correctly arrange the cards following the format.

Based on the theory, 'the new' involves in exposing learners with new or unfamiliar knowledge and context which to a certain extent is making sense to them. It could be about reading an unfamiliar text, listening to a new information or gathering or observing new information where learners could expand their knowledge, but it has to be within their zone of intelligibility yet potentially sufficiently new for learning to occur. Among the pre-service teachers, only Iliana explicitly mentioned that she incorporated the 'experiencing the new' in her lesson and this is supported by the classroom observation data and her lesson plan. From excerpt above, Iliana mentioned that she utilised 'the new' by introducing the format of writing a postcard to her students and observation data supports that after she got all her students' attention, she pasted a huge postcard on the board and introduced the format of writing postcard while her students listened attentively. Apart from that, instead of being the only one doing all the talking, she also asked volunteers to read aloud what was written on the postcard then she asked the students to share their opinions about the text. It was evident that Iliana has introduced something new or unfamiliar given that when she asked what a postcard is, then most of the students replied it was a letter. This shows that they were unfamiliar with a postcard and perhaps this is because people rarely send postcards anymore. So, the students were exposed to a new information and in fact, at the end of the lesson observation data shows that the students were able to produce a postcard.

The rest of the pre-service teachers did not report the use of 'the new' during the interviews and in the case of Din, Aiman and Balqis classroom observation and lesson plan data support that there is no evidence where learners were immersed in an unfamiliar or new information. Most probably, this may be because the lessons were a continuation lesson and that the topic chosen revolved around the learner's prior knowledge so there is nothing relatively new or unfamiliar to the students. However, in some cases, it was evident from observation data that the learners had encountered new information or experiences and that they had learned something new even though the pre-service teachers did not mention about it or perhaps were not aware of it.

For example, in the case of Aqilah it was evident that she introduced a new or perhaps less familiar knowledge which is the format of writing an email even though she did not articulate it during the interview. Both lesson plan and observation data showed that Aqilah introduced and explained the format of writing an email where she pasted colourful cards on the board to imitate the components of an email. There is also evidence from observation data that she asked the students whether they have sent an email before and some of them answered no. Arguably, some of the students might have had experiences writing an email in daily life but perhaps some of them might not have had the chance. Also, recognizing the format of an email as required for exam might be new to some of the students. So, that was something new that the students learned during the lesson and it merits 'experiencing the new' as suggested by the theory. Similarly, in the case of Irfan it was evident that some of his students had learned something new which merits 'experiencing the new' even though he neither record this in his lesson plan nor articulate it during the interview. Analysis on his classroom practices shows that the students are actually learning something new during the class as there is an evidence where a Chinese student from a group asked an Indian student from another group about the food that Indian people eat when they celebrate Deepavali festival. This suggests that even though Irfan believe that he did not introduce anything new yet interestingly some of the learners may have found out new knowledge through peer learning. So, he has actually implemented 'the new' without necessarily labelling it.

6.4.1.2 Conceptualising

Conceptualising or conceptual knowledge process involves students develop their understanding systematically, analytically or consciously by building metalanguage and vocabulary of the topic and it occurs in two ways which are 'conceptualising by naming' and 'conceptualising with theory'. In 'conceptualising by naming' learners learn to use explicit language to group things into categories, apply classifying terms or naming and giving meaning to key concepts while in 'conceptualising with theory' learners make generalisations using concepts, connect terms in concept maps or theorize to understand how concepts connect to theory. None of the pre-service teachers reported the inclusion of this knowledge process during the post-practice interview but interestingly it was evident from classroom observation and lesson plan data that 'conceptualising by naming' occurred spontaneously in all of the pre-service teacher's lesson. Nevertheless, the 'conceptualising with theory' which focuses on learners making generalisations using concepts or theorising to understand how concepts connect to theory was hardly evident in the pre-service teachers' lesson. Irfan incorporated the 'conceptualising by naming' in his lesson as he expanded his students' meta-language in relation to the topic by asking them to identify characteristics for every festival in an affinity diagram. According to the theory, some of the activities that merit 'conceptualising by

naming' includes compare and contrast between ideas or categorizing with labels in order to further develop ideas or concepts learned. Congruent with the theory Irfan's activity provided opportunity for his students to move away from their experiential knowledge and invited them to expand their knowledge by identifying and categorizing the characteristics for every festival in preparation for the writing task. In fact, the activity potentially increases and further develop the students' vocabulary and ideas particularly about the attire associated with the festival, activities done during the celebration and food eaten during the festivals by drawing upon their own meaning-making resources. Researcher notes showed that the pupils were engaged and focused during the activity and they did not seem to struggle doing the task. The activity is particularly successful perhaps because of the multicultural nature of the class in which perhaps, Irfan deliberately chose the topic "festival" knowing the nature of his class and that such opportunity would generate a range of examples in a multicultural classroom.

Similar to Irfan, Din and Aiman also incorporated the 'conceptualising by naming' given that the spoken discussion activity they included in their lesson where the students discussed their experiences and feelings by talking about empathy, disability, social needs and values helped to build metalanguage and relevant vocabulary for the topic. In fact, the activity also focuses on learners defining the terms individually which promotes deeper understanding of the ideas from lesson content. Besides, following that, collaboratively Din and Aiman also encouraged their learners to identify and categorize the effects and solutions of inadequate facilities on the assigned disability. Congruent with the purpose of 'conceptualising by naming', these activities expanded student's language and vocabulary in relation to the topic and it also build the developments of ideas in preparation of the writing task at the end of the lesson.

In the case of Aqilah, Iliana and Balqis it is evident from observation and lesson plan data that students were required to 'conceptualising by naming' the purpose and features of the topic. For example, in Aqilah's lesson students were asked to compare all the options for ways to cope with stress and only choose one with reasons provided. Students learned the purpose of finding various ways to cope with stress, the different ways that they could use to cope with stress and came to know the benefits of the way they selected. Similar to Aqilah, Balqis and Iliana also engaged learners in comparing available choices and finding purpose for the choice made. In doing so, Balqis's learners learned various beneficial activities that they can do during leisure time, the motivation to do such activities and its benefits while Iliana's learned the features of a mobile phone, its usefulness and its necessity in their life. Generally, there was evident that pre-service teachers implemented the 'conceptualising by naming' even though they were not able to articulate about it during the post-practice interview. Observation and lesson plan data showed that all of them engaged learners in abstracting and defining concepts from lesson content and also categorizing

and grouping particulars together based on their similarities, despite also having differences. These activities as suggested by the theory merit the 'conceptualising by naming'.

6.4.1.3 Analysing

The analytical knowledge process of 'analysing' develop deep and critical understanding and knowledge as students think of the purpose, implications, reasons, effects or solutions about the topic at hand. This critical literacy enables students not just to answer questions but to problematise context, situation or text and ask critical questions because this knowledge process require learners to reason, explain and argue. So, learners will purposely focus on either examining the relationship, identifying function or interpreting the underlying rationale of ideas, action or piece of knowledge. 'Analysing' takes two forms which are 'analysing functionally' and 'analysing critically'.

All pre-service teachers reported during the post-practice interview that they had implemented the 'analysing' knowledge process in their lesson and this is supported by the classroom observation and lesson plan data. None of them mentioned specifically which form of the 'analysing' they applied yet it was evident from observation and lesson plan data that Irfan, Aqilah, Balqis and Iliana implemented 'analysing functionally' while Din and Aiman incorporated 'analysing critically'. According to the theory 'analysing functionally' focus on examining the function, purpose, rationale or objective of a concept, idea, action or object while 'analysing critically' interrogates the world of subjectivity such as intentions, interests and perspectives with regards to thinking about implications, impacts and effects or potential solutions for issues. So, the distinction was due to the fact that the activity done in Din and Aiman's lesson focused more on evaluating perspectives specifically about the implications and effects of issues discussed while the rest of the pre-service teachers mainly aimed towards finding purpose or rationale in decision making.

Both Din and Aiman aimed to develop deep understanding and knowledge about the topic by involving their students in brainstorming the effects and solutions of inadequate facilities for disabled people during their lesson. The students were asked to discuss collaboratively and presented their ideas in a circle map on a large paper. So, they were assigned into groups and each group was given a different type of disability, but all had the same issue which is the inadequate facilities at Taman Melawati rail station. They were expected to discuss the kind of facilities needed for the type of disability assigned to them, how inadequate facilities could impact these people, and what solutions could they proposed to overcome the issue at hand. Congruent with the theory, Din and Aiman engaged learners in 'analysing critically' by examining the implications of inadequate facilities towards disabled people as their learners learned to interrogate from a different point of view, to represent the perspectives, experiences and interests of others as well as to evaluate

critically the consequences and potential solution for the issues raised. However, observation data suggest that even though the students managed to come up with some ideas and completed the task, they looked quite puzzled and confused. Perhaps the students needed more opportunity to search, analyse, understand and evaluate information from various sources. For example, researching through the internet, learning more about the assigned disability from books in the library or even researching from a person experiencing the assigned ability. However, it was evident that there was lack of resources for the students to work with because observation data suggest that none of the learners were given the opportunity to utilize additional resources such as magazines, the internet, media articles or actual real-life experience to gain information.

Irfan, Aqilah, Balqis and Iliana on the other hand implemented 'analysing functionally' given that in general their lesson focus on analysing the structure, function, objective and purpose of an idea as part of the reasoning process in order to make sound decision. All of them presented their learners with multiple choices or options and asked them to choose one that is the best for them by analysing every option and thinking deeply about the choices that they are making. For example, Irfan grouped students and asked them to identify the characteristics and analyse the purpose of celebrating every festival, then the final task was to choose one festival and write an article about it in pairs. Aqilah too presented her students with options on ways to best relieve stress and they were ought to choose one and provide three reasons. Similarly, Iliana also instructed her students to choose a birthday present and come up with two reasons for it while Balqis asked her students to choose two activities to do during leisure times with appropriate reasons. So, rather than examining implications or interrogating causes and effects Irfan, Aqilah, Balqis and Iliana focus on establishing chains of reasoning and investigating underlying rationale for a particular piece of knowledge.

6.4.1.4 Applying

The 'applying' knowledge process is a stage for transformation where learners apply the newly acquired experiential, conceptual and critical knowledge. It emphasises on the practical application of knowledge which can occurs in two ways which are 'appropriately' or 'creatively'. According to the theory, 'applying appropriately' is testing knowledge in a typical way based on its context which means that learners apply knowledge in a predictable or expected way such as producing something conventional. Commonly applying knowledge 'appropriately' entails activities such as writing, drawing or problem solving. 'Applying creatively' on the other hand means realizing knowledge through active intervention in order to create something entirely novel. Learners put together the newly acquired knowledge they gathered from one setting and adapt it to a different setting by means of creating something which is truly innovative and creative. For example, learners are

engaged in activities such as transferring knowledge into a different context, transforming knowledge into a different combination of modes of meaning or even going beyond solving problem by suggesting a new one. During the post-practice interview, all pre-service teachers reported that they implemented the 'applying' knowledge process in their lesson except for Irfan and Aiman but observation and lesson plan data suggest that all of the pre-service teachers successfully implemented the knowledge processes in their lesson. So, even though Irfan and Aiman did not mention the application of the knowledge process in their lesson but it was evident that they have applied it in their lesson.

Classroom observation and lesson plan data show that all pre-service teachers implemented the 'applying appropriately' given that all of them instructed their learners to write an essay with regards to the topic at the end of the lesson. Transforming the knowledge learnt and ideas discussed and gathered collaboratively from previous activities, the students in the final stage of the lesson embarked on independent writing task. This is supported by interview data as all pre-service teachers except for Irfan and Aiman mentioned that the application of 'applying' knowledge process in their lesson is through the final writing activity. For example, in Irfan's lesson learners were instructed to write an article about a festival celebrated in Malaysia based on the ideas and vocabularies gathered collaboratively in the previous activities. Similarly, Aqilah and Balqis also engaged their learners to write an email in the workbook based on ideas brainstormed collaboratively throughout the lesson. Din and Aiman also asked their students to apply the knowledge built throughout the lesson appropriately by writing a formal complaint letter individually based on the main points and contents gained through discussion and collaborative work. Finally, it is also evident that Iliana too instructed her students to apply the knowledge built throughout the lesson by writing a postcard in their writing workbook. So, none of the pre-service teachers attempted to make their students to apply the knowledge learnt into a different setting or even into a mixture of multiple modes of meaning.

6.4.2 Multimodality

Multiliteracies pedagogy encouraged teachers to use multimodal texts as it is a very important aspect of the pedagogy. The main emphasis of the pedagogy with regards to the use of multimodal texts is via the use of new media technology given that in increasingly digitally dependent societies, most youth today have ready access to technology and digital devices such as mobile phones, tablets, laptops and computers. They were overly exposed to these devices with accessibility anywhere and at any time. Besides, it is no longer aliened to use digital texts as part of teaching and learning due to the changing digital environment. Students are mostly familiar with the use of digital texts such as blogs, webpages or online presentation which are multimodal in nature as part

of their learning tools, and they seem to have less difficulties in engaging with it. Nevertheless, other texts around us too are multimodal in nature given the involvement of complex relationships among various modes like oral, visual, aural, gestural and spatial is often than not, integral. So, even though the use of digitally multimodal texts is encouraged but the use of multimodal texts could go beyond the digital domain particularly for students with limited access to technology.

This is particularly significant for the case of this study given that all pre-service teachers in this study implemented the element of multimodality without using any digital multimodal texts due to the lack of technological facilities. All pre-service teachers except Din were aware of the inclusion of multimodality during the post-practice interview but observation data suggest that all them including Din implemented the element in their lesson. So, even though Din did not talk about multimodality during the interview, but he applied it in his lesson. The rest of the pre-service teachers mentioned the application of the element and they were able to explain how it was utilised in their lesson.

The use of multimodality in the pre-service teachers' lesson is found in the use of multimodal texts such as affinity diagram, images, tree map, mind map, circle map, postcards and colourful cards. Congruent with the theory, these texts incorporated the use of multiple design modes mainly the linguistic, written and visual modes as there is not only alphabetical representations to make meaning but together with images, shapes and colours. Iliana, Irfan and Balqis used multimodal text for both as teaching aid and for students' production while Aqilah, Din and Alman only focused on the students' production. For example, Iliana reported that she incorporated multimodality in her lesson through the use of a huge size postcard which was real and authentic as a teaching aid. She said:

PP-IV-ILIANA I think I have multimodality because I showed them the exact example of a postcard...an authentic material. Even though it is not the small one and it is on a manila card. It is actually the same except bigger.

Excerpt 102 Post-practice - interview – Iliana

Observation data supports that the postcard reflected a real postcard and was multimodal because apart from the linguistic text, it has interesting shapes, pictures and colours in it. So, Iliana took the initiative to bring into the class a multimodal text in order to make meaning to her students so that she could help the students to visualise as they discussed the differences between a letter and a postcard. Observation data show that her students seemed to have no idea what a postcard looks like and thought that it was similar to a letter but having the multimodal text which is the real postcard as a teaching aid has helped them to recognize the differences better. Apart from Iliana, her students were also asked to produce a postcard to be sent to their mother requesting for a

Chapter 6

mobile phone in which the postcard should also reflect the real ones in which they need to have the text, the stamp and even some pictures if necessary. So, it was evident that the use of multimodal texts and multimodality in Iliana classes was congruent with theory and was beneficial for teaching and learning. Irfan also reported during the post-practice interview that the use of multimodality in his lesson was through the drawing of pictures during the introduction part of his lesson. He said:

RESEARCHER Okay. That's interesting. So, do you think there is multimodality in any part of this lesson?

PP-IV-IRFAN The picture I drew for my set induction because the students expecting something when I draw something. So, they visualize what I am drawing and try to guess the meaning of that drawing.

Excerpt 103 Post-practice - interview – Irfan

Observation data suggests that this happened at the beginning of his class where Irfan drew a large picture of a Christmas tree on the board and asked his students to guess what it was, what festival it is related to, who celebrated the festival and when do people celebrated the festival. He used a multimodal teaching aid which utilize visual mode such as images alongside the linguistics modes to make meaning. Apart from that, even though he did not mention this during the interview, but Irfan also asked his students to produce an affinity diagram to identify characteristics and purposes of the festivals mentioned. Doing so, he encouraged his learners to visualize the ideas and language used so that it could facilitate the brainstorming task. So, not only that he himself is using a multimodal text to make meaning but he also engaged his learners to produce a multimodal text by producing an affinity diagram to make meaning during the lesson.

Similar to Irfan and Iliana, Balqis too reported the use of multimodality in her lesson as stated in excerpt 73 and she also uses multimodal text as a teaching aid. She said:

PP-IV-BALQIS In terms of the modes it is helpful because the students are not only focussing on one particular mode thus the class will not be boring. The students can move around and there are colourful visual aids that are interesting for the students.

Excerpt 104 Post-practice - interview – Balqis

Observation data suggests that she used colourful cards to help learners to visualize the format of an email in which the cards had different colours and were large enough to be clearly visible when pasted on the board. Instead of teaching the format of an email based on a printed text, Balqis used a multimodal text instead to make meaning to her students because she believed that multimodal

teaching materials could help to stimulate her learners' interests and made the lesson more fun. Apart from that, similar to Irfan, even though she did not mention this during the interview, but she also instructed her students to produce a multimodal text by presenting their ideas for the collaborative task in a mind map on a large-scale paper. The students were able to map their ideas and see the bigger picture in order to complete the task.

Multimodality in Aqilah, Aiman and Din's lesson is seen through the production of their students where they engaged learners in producing mind map, tree map and circle map. Aqilah explicitly reported that she instructed her students to present ideas discussed collaboratively during the brainstorming task in mind map on a large-scale paper. She said:

RESEARCHER Alright. Is there multimodality element of multiliteracies that you incorporated in your lesson?

PP-IV-AQILAH In terms of visual design because they have to do mind map so they can visualise what they want to write.

Excerpt 105 Post-practice - interview – Aqilah

Aiman in the excerpt 74 showed that he was aware of multimodality and its benefits for learning during the post-practice interview. Observation data indicated that similar to Aqilah, Aiman instructed his students to produce a multimodal text which was a tree map on large size paper, when they identified the effects and solutions of inadequate facilities for disabled people. It was evident that the multimodal product utilised the visual mode alongside the linguistic mode has helped the students to organize the ideas and see the ideas clearly. Similarly, Din also utilised the visual and linguistic mode in his lesson because he asked his students to brainstorm ideas and asked them to present the ideas in a circle map on a large size paper. The student production was multimodal because the huge circle map involved different shapes alongside different coloured words which offered students visual elements to organize and see their ideas clearly.

As mentioned earlier in this section, multiliteracies pedagogy emphasizes the use of multimodality particularly through the use of technology such as the new digital media. However, observation data suggest that the use of technology and digital media was absent in all pre-service teachers' lesson and this was justified by each of them during the post-practice interview. Irfan avoided the use of technology because of students' behaviour, his lack of confidence to control students in the lab as well as difficult and limited access to computer lab. He said:

RESEARCHER Okay. Is there any reason for why there is no incorporation of technology in your lesson?

PP-IV-IRFAN The first reason is because I still do not know about the students...how good are they, how active are they. I did take one class to the ICT lab, but this is Form 2 and the class is the third last class so most of the students were not proficient in English. Whenever they enter the lab, they became too active, excited and uncontrollable. So, for the students in this observed lesson I have not yet bring them to the lab, but I think they will be uncontrollable also. Another reason is in our school to use the ICT lab each class have their own schedule. Each class can only enter on the allocated time only. So, we cannot simply just go, and we need to follow the schedule. It's now quite difficult to access the lab. Other than that, I think it is too early for me. I just entered the school and in the first week we did not teach at all due to the administrative stuff, so we got relief classes instead. So, personally I do not have the confidence to control the students because controlling the students while they are at the ICT lab is quite difficult. We want them to use the computer appropriately but then whenever we go to the front the students at the back are doing something else like open YouTube or anything.

Excerpt 106 Post-practice - interview – Irfan

Absence of technology in Din's lesson was due to the lack of technological facilities in the classroom and the difficult access of the computer lab. Due to these, he deemed it was not practical to incorporate the use of technology in his lesson and thus impeded his decision. He said:

RESEARCHER I notice there is no integration of technology in your lesson. Is there any specific reason for that?

PP-IV-DIN Well, if you could remember in the class you observed there were no LCD, projector, speaker or any technological facilities. If I would like to do that then I will have to bring my own equipment and that would be quite...not practical.

RESEARCHER Why not bring the students to the lab?

PP-IV-DIN Oh well! About that! We have only one lab in the school and that lab need to be shared with all classes. So, if you want to use that lab you have to book two weeks earlier something like that.

RESEARCHER So, in terms of accessibility into the lab is quite difficult.

PP-IV-DIN Exactly!

Excerpt 107 Post-practice - interview – Din

Aqilah expressed her concerns about the technological aspects in her school as she reported that the facilities and accessibilities of technology in her school and classroom was discouraging. The option to utilise technology by conducting classes in computer lab was impeded by the difficult access into the room, while the option of bringing in the technology into the classroom was not practical. She said:

PP-IV-AQILAH Regarding the technology...of course the...it was kind of hard to book the computer lab. Previously I tried to do a listening task in class, but the speaker was not loud enough to be heard by the whole class, so I still need to go to the computer lab. Using technology in that particular class is quite hard...useless.

Excerpt 108 Post-practice - interview – Aqilah

Iliana despite having strong belief about the positive impact of technology in teaching and learning mentioned in excerpt 15, justified that the non-existence of technology in her lesson was due to the difficulty accessing the computer lab, inadequate facilities to cater to a large number of students and a slow internet connection. She said:

RESEARCHER So, is there any specific reason why the use of technology was not in your lesson?

PP-IV-ILIANA Okay. First is because in my class there are 37 students. And also, for computer lab...when we want to book for the computer lab, we need to talk to the morning session teacher because there is no evening session teacher that holds the key for the computer lab. I think that is because for evening session are only Form 1 and Form 2 and perhaps the school think that they do not need IT. That is the first one. And then for the second one...there are 37 students that the computers...are not all useful. And also, the internet connection is not that good. I think the technology in that school is not practical.

Excerpt 109 Post-practice - interview – Iliana

The use of technology was absent from Aiman's lesson due to the lack of technological facilities and limited time. It is understood that as a new teacher, taking the students and controlling them in the lab is quite a difficult thing to do and would take a longer time, and he lacked the confidence to do so. He said:

RESEARCHER Okay. Why is that in your lesson there was no incorporation of technology or digital tools?

PP-IV-AIMAN The thing is...my main concern was the time. And also, in the school...you can see my class...there was no LCD...no technological facilities. So, I have to go to the ICT lab, but this will take time. So, I would not use it. It is a bit risky. I can bring the students to the ICT lab, but I have to eliminate one activity. Because it will take time. Sometime the students...they are hard to control when they...in ICT lab...to get their full attention.

Excerpt 110 Post-practice - interview – Aiman

Balqis reported that she has purposely omitted the use of technology in her lesson because she has lack of confidence to control the students, inadequate technological facilities and inappropriate class timing. She said:

RESEARCHER I can barely see any use of technology in your lesson. Was there any reason for that?

PP-IV-BALQIS One of the reasons was because I have not tried to take them to the lab yet, so I am not confidence to bring them there. Secondly, there were no slides no projector no everything in the class. Finally, this lesson was during the first and second period. The students have just arrived at school, they came into class quite late so that took some time. So, if I want to bring them to the lab that will take more time...like forever. Haha.

Excerpt 111 Post-practice - interview – Balqis

6.4.3 Learner Diversity

Learner diversity and inclusivity in Multiliteracies pedagogy highlights the importance to address sociocultural differences between learners in the process of teaching and learning. According to the theory, the impact of learning relied on two conditions which are the engagement of learner's identity and subjectivity; and that the learning can widen their knowledge and capability. So, for learner to learn they need to feel that the learning is designed for them as such that the content of learning is relatable to them, they need to feel a sense of belonging and they need to be motivated by what they are learning. Apart from that, learning should also take them to a journey away from the familiar, encouraging them out of their comfort zones but within their zone of proximal development and towards new frames of understanding. The more these conditions are met, the more likely it is for learning to occur. Therefore, some of the ways that teacher can use to address learner diversity as suggested by the theory are creating learning based on learners' lifeworld or interests, differentiating instructions through the integration of various knowledge processes and encouraging responsibility towards active learning in order to manifest learner identities and subjectivities.

All pre-service teachers' lesson addressed learner diversity congruent with the theory and their implementation was through the topic of the lesson, the use of knowledge processes and the orientation towards active learning. Firstly, in all cases observation and lesson plan data suggest that the designed lesson or the topic chosen was particularly created based on the learners' everyday lifeworld, interests and concerns. For example, Irfan's lesson focused on the cultural aspect of his class where he chose to engage his multiracial learners on writing an article about festivals celebrated in Malaysia. The topic allowed the students to reflect on their own and their friends' experiences celebrating different festivals in a multiracial country and also allowed them to bring in their lifeworld experiences to the lesson. Aqilah chose a lesson on managing stress as she took into consideration the stress and pressure that the students might experience due to the upcoming exam. The topic does not only prepare the students for the standardized exams, yet it was specifically relatable to every learner and could serve as an opportunity for the learners to apply the knowledge learnt in their lives. Iliana's topic was about celebrating birthdays and getting gifts while Balqis's was about activities that can be done during leisure time. These topics obviously connect to the learner's lifeworld experiences and relevant to each and every one of them as it is what the students always experience in their daily life. Din and Aiman chose to engage their learners to write about disabled people. The topic manifested diversity and inclusion as the students share their experiences and concerns about disabled people.

Secondly, all pre-service teachers vary their instructions and the way their learners could learn through the incorporation of the knowledge processes thus brings diversity into the learning experience of their learners. It is found that their lesson promoted diverse learning and inclusive teaching as their pedagogical practices incorporated different emphases and activity types. There was evidence that during the lesson the pre-service teachers bring in learners' experiences and lifeworld; widen their knowledge within their intelligibility; evaluating interests and perspectives; and also applying what they have learnt back to their own world and everyday experience. Besides, they also vary their instructional practices as they included spoken discussion, collaborative and individual work together with the use of multiple modes to make meaning. These activities focused on different learning outcomes, provide various entry for learning to take place and apparently address the different styles of learning.

Finally, observation data suggest that the direction of learning in all pre-service teachers' lesson were moving towards active learning. The knowledge flows and responsibility between teacher and learners are in the direction of creating an active environment where learners' identities and subjectivities become apparent. In all cases the lesson was designed for self-managed group learning where learners worked collaboratively and make their own knowledge and be responsible for their learning. For example, Irfan, Aqilah, Iliana and Balqis gave freedom for their students to

choose what they want to write about based on the ideas and discussions gained throughout the lesson. This perhaps provided a sense of belonging in the students' work as they allow students to do bring in their interests, identities and subjectivities by adding their own voices and values in completing the task which then would be highly likely to increase the chances of learning.

6.4.4 Role of Teacher and Learner

The theory advocated that the role of teacher is critical in designing learning as such that they need to be mindful and deliberative designers rather than just being a curriculum implementer. Teachers in multiliteracies pedagogy should actively and purposefully design learning based on the assessment of learners' knowledge, skills, their diverse needs and interests. Apart from that, teacher's role according to the concept is to empower learner agency, to expand their pedagogical repertoires, to be equipped with necessary ICT skills and to be able to be an authoritative rather than being authoritarian. The roles of learners on the other hand, according to multiliteracies concept is to become the agents for their learning by being the active recipient of knowledge and active producers of multimodal texts. Learners were expected to be multiliterate by being comfortable in multimodal and digital knowledge creation such as combining the use of written-linguistics modes together with other modes of meaning making such as visual, audio, gestural and spatial. They were also expected to be responsible in connecting their identity and agency into their learning as such that they should include their experience, interests and voice into the learning task at hand. Learners are encouraged to be autonomous and be able to draw upon a range of available knowledge resources such as working collaboratively and engage in peer learning.

It was evident that the pre-service teachers were actively engaged in a reflective thought-through process when designing their lesson as the lesson observed was designed based on students' background knowledge and to address the diversity of the learners. For example, Irfan, Aqilah, Iliana and Balqis selected a topic by following the theme and syllabus mandated by the MoE, but the topic was also carefully tailored to connect to their students. Irfan chose the topic festival to suit his multiracial class, Aqilah focused on the topic stress given that her students' exam is near the corner, Balqis selected the topic on activities that can be done during leisure time while Iliana picked a topic on celebrating birthdays and creating postcard. This indicates that the pre-service teachers were critical in their role and showed agency as they took initiative to choose and be creative in making the lesson relevant to their students and ensuring that the learning activities become meaningful and relevant to her students' lives. In fact, Aqilah explicitly mentioned during the interview that even though following the syllabus is compulsory since the students is going to sit for exam soon, but she also considered the potential stress and pressure that the students might experience thus decided to address the issue. She said:

PP-IV-AQILAH I have to relate to the syllabus because the theme was supposed to be health and environment. So, the previous lesson I did the listening task about how to describe their pain and symptoms when they go to the doctor. So, when I planned for this observed lesson that's why I chose this topic. Somehow it relates to the stress management...to the health and it relates because their exam is around the corner...so, maybe they feel stress. And because of the test...the students might need to write an email, but they have not learnt how to write an email yet.

Excerpt 112 Post-practice - interview – Aqilah

So, it seems that the pre-service teachers in this study act as a purposeful learning designer as they chose to tailor learning to suit the needs of their students rather than passively following the syllabus in the textbook and make context appropriate decisions about their practice. Apart from choosing specific topic for the lesson, findings suggest that the pre-service teachers also make meaningful choices about what is learned and how learning takes place too. For example, their narratives on the incorporation of knowledge processes, the use of multimodality and addressing learner diversity presented in the previous sections show that the rationales behind every decision they made were sound and informed.

It is also evident that the pre-service teachers provide sufficient opportunity and space for their learners to be the agent of their learning. For example, students talked about something that they choose, wrote what they felt was important to them, chose their own group members for group task as well as completed tasks collaboratively and independently with guidance from the teacher only when necessary. The pre-service teachers have proven to create enough opportunities and direction to empower learner agency as they did not restrict the learners but to give them freedom and let them to explore all the choices available and make decisions collaboratively among themselves and individually in which will likely to also allow them to consider their experiences, identities, interests and voices. So, not only that they were able to empower agency, but they also managed to highlight learners' identities and subjectivities.

The pre-service teachers were also comfortable engaging learners with multimodal texts and encouraging them to create multimodal texts even though it was not technologically based due to the contextual constraints. For example, all pre-service teachers incorporated the use of multimodal texts in their lesson either as a teaching aid or as student's production. In some cases, this is supported by their narratives as they highlight the implementation of multimodality in their lesson, how they incorporated it and the benefit of using such multimodal texts for their learners. Despite being confident and comfortable to use various technological tools and digital media for

learning yet their practices were impeded by the lack of accessibility and availability of technological facilities.

Besides, it also seems that the pre-service teachers recognize the role and responsibility between teacher and learners and were seen to allow learners to take more responsibility for their own learning. In fact, the observation data suggest that in most cases, the balance of agency between the teacher and learners were evident as the pre-service teachers had little influence in all student activities. As such, the pre-service teachers have given up some control to increase the agency among the students by giving them freedom and power to choose. In fact, there is also an evident of role switching in Din's lesson in which learners become teachers and vice versa because a student bravely corrected Din's mistake and he acknowledged it. A female student corrected and reminded Din about one particular format of a formal letter that he missed during the sequencing format of formal letter activity and he right away acknowledged his mistake and added in the date in the format presented on the board.

In short, these instances indicate that despite not being able to articulate about their role as a teacher and the role of their learners during the interview, yet the pre-service teachers have successfully portrayed the role of a multiliterate teacher and encouraged learners to be autonomous as well as be the agent and take responsibility for their own learning.

6.5 Findings Summary

6.5.1 The Influence of Prior Learning Experiences on Pre-service Teachers Cognition about Multiliteracies Pedagogy

6.5.1.1 Prior to the Workshop

It is evident that all the pre-service teachers had experienced didactic, traditional and teacher-centred learning as learners during their schooling years. For example, their past learning experiences include chalk and talk (Din), drilling for exams (Aiman, Balqis and Irfan) and learning passively with lack of guidance from the teacher (Aqilah and Iliana). Most of the pre-service teachers had general rejection of their past learning experiences as they disliked what they have gone through during their schooling years; they declared that teaching should not be anything like their experiences; and they expressed that they would avoid it in their teaching practices. It was not clear why they rejected the approach but perhaps they have seen how ineffective it is for their teacher and learning. Nevertheless, interestingly Aiman and Din have no issue with what they had experienced and in fact, they seem to like it. Din mentioned that he likes chalk and talk as he prefers

to learn passively while Aiman reported that he likes drilling for exams as he favours to learn to write through copying and editing sample essays.

Apart from their experiences as learners during schooling years, becoming a trainee teacher the pre-service teachers had broadened their perspectives on teaching methods and their experiences during the training programme had provided them with initial conceptualisations about teaching and learning too. Their beliefs about teaching and learning were mainly shaped by their prior learning experiences because findings show that their beliefs are broadly anti-didactic and evidently favoured learner-centred learning, active learning, integration of technology and the promotion of lifelong learning. For example, in the case of Irfan, Aqilah, Iliana and Balqis, attending the teacher training programme has helped to strengthen their beliefs about teaching and learning being learner centred as they were aware of its value and they were committed to implement it in their practice in the future. In the case of Din and Aiman, even though they were in favour of didactic learning, their professional coursework has helped them to realise that learning should cater to students needs and include various teaching techniques. They might prefer to learn passively but they also believe that learning should be learner-centred, and that active learning is important.

In general, the pre-service teachers had some ideas on how learner-centred learning works particularly with regard to addressing different learning styles, engaging learners with various activities, making learners actively involved in the learning process and being aware of their role as a facilitator and a guide rather than a total authoritarian. These elements are actually equivalent to the elements embedded in the concept of multiliteracies pedagogy. In fact, given that multiliteracies elements are somewhat similar to the learner-centred approach and the fact that the concept was built from pedagogical theories such as the Bloom's Taxonomy and Kolb's Model of Experiential Learning means that the pre-service teachers have actually had some ideas about multiliteracies pedagogy. It is just that perhaps they were not aware of the different labelling these elements have in multiliteracies pedagogy. For example, the knowledge processes are similar to the Bloom's Taxonomy and the Higher Order Thinking concept so the ideas of 'experiencing', 'conceptualising', 'analysing' and 'applying' could be familiar to them. Besides, based on their narratives during the pre-intervention interview it also seems that they have had some ideas about accommodating different learning styles and addressing diversity as such that it is important to engage learners with different kind of learning activities such as collaborating and peer learning as well as to involve the use of different modes such as visual, audio, spatial or gestural. Basically, they understood that learning should involve different types of activities for different types of learners and should not unduly privileging the use of pen and paper. Learning should also be active, cooperative and interactive with the use of various and multiple modes to make meaning.

Data from the pre-intervention interview show that the pre-service teachers acknowledged the advancement of technology and were aware of its impact on literacy practices and language learning. Most of them were aware that more people are engaged with technology and they also recognized that they too are inseparable from using the technology. For example, most of them presumed that the younger generations are more engaged with digital and social media and in fact all of them reported that they too personally are mostly engaged with the new media technologies. From this awareness, all of them realised the impact that technology has on literacy practices particularly for language learning. Some of them argue that the use of technology can have negative consequences such as being counter-productive or impede the accuracy of using academic language but all of them agreed that the technology helped them to enhance their English language proficiency and it provided them with an opportunity for free, rich and accessible resources for English language learning. Furthermore, Irfan, Aqilah and Iliana further suggested the need to integrate the use of technology in language teaching and learning as they acknowledged that technology as a support for learning is beneficial and integration of new media technologies in English classes could improve teaching and learning.

6.5.1.2 After the Workshop

Findings show that the pre-service teachers had some understanding of multiliteracies pedagogy, and the principles embedded in it such as the knowledge processes, multimodality and learner diversity. The degree of their understanding differed across participants but in most cases their interpretations of the pedagogy were in line with the theory and what was presented during the workshop. Congruent with the theory, the pre-service teachers defined multiliteracies as a pedagogy that helps learners to learn in various ways, a pedagogy similar to learner-centred learning, a pedagogy that caters to different students' learning styles and a pedagogy that include the use of multiple modes in making meaning.

Besides, all pre-service teachers reported on knowledge process element in multiliteracies pedagogy during both post-training and post-practice interviews. They also further highlight their perceptions about the element in their narratives as they believe that the element serves as a systematic framework to design lesson, facilitates designing learning process which include the planning and tracking of learning objectives and the monitoring of students' progress. These viewpoints are aligned with the tools used in the multiliteracies workshop therefore the pre-service teachers seem to show strong awareness on this element. This might be because they were able to link their existing knowledge with the new knowledge introduced as it was evident that Irfan, Din and Balqis specifically equated the knowledge processes with Bloom's Taxonomy, and they reported that the similarities have helped them to understand the new pedagogy.

With regards to the element of multimodality, the pre-service teachers' interpretation of multimodality was congruent with the theory but only Aqilah, Iliana and Balqis reported about the element during both the post-training and post-practice interviews. However, after the implementation of the pedagogy it was evident that Irfan and Aiman articulated about the element during the post-practice interview. Din on the other hand, was not able to articulate about the element during both the interviews. While Aqilah were able to define and describe the element in detail during both the post-training and post-practice interviews, Iliana and Balqis could not. During the post-training interview, Iliana and Balqis narratives about the element were evident through their definition of the pedagogy yet they were not able to relate it to the element of multimodality. This shows that they have some understanding about the element but were not able to articulate and relate to it during the interview. Nevertheless, during the post-practice interview, similar to Aqilah, Iliana and Balqis articulated and described about the element in their lesson explicitly. This is similar to the case of Irfan and Aiman as they too after implemented the pedagogy were able to report their application of the element in their lesson. This suggests that the pre-service teachers had some awareness and understanding of multimodality and it seems to deepen after they have implemented the pedagogy.

None of the pre-service teachers were able to articulate about learner diversity during the post-training interview but Aqilah and Aiman talked about inclusion and addressing different needs and learning styles of students when they defined the pedagogy. So, they had some awareness and understanding about the element which was congruent with the theory but were not able to specifically relate it to learner diversity during the interview. This continued after the implementation of the pedagogy as none of the pre-service teacher talked about the element during the post-practice interview.

The fact that the pre-service teachers were able to interpret and articulate multiliteracies pedagogy in line with what was suggested by the theory and what was taught during the workshop was because they were able to link the new knowledge introduced during the workshop with their existing understandings and knowledge. Given that they were equipped with the understanding of learner-centred elements which were quite similar with the elements of multiliteracies pedagogy, the pre-service teachers were able to build connection between the new and the old knowledge thus helping them to understand and make sense of the new knowledge introduced. For example, Irfan and Din believe that multiliteracies pedagogy bears resemblance to other pedagogies such as Bloom's Taxonomy, learner-centred learning approach and the 21st century learning concept while Aiman and Balqis firmly believed that the pedagogy bear resemblance to other pedagogies that they had encountered during their teacher training programme, yet they did not clarify specifically which pedagogy they were referring to. This finding substantiates the origins of multiliteracies as

being mapped against pedagogical theories such as Bloom's Taxonomy and Kolb's Model of Experiential Learning and as being similar to other pedagogies such as learner-centred approach and 21st century learning concepts particularly with regards to the application of higher order thinking skills, active learning, encouraging learner's agency, collaborative learning and technology. They were able to see the similarities and differences between multiliteracies pedagogy and other pedagogies that they have either experienced as learner or encountered during their teacher training.

Apart from equating multiliteracies with other pedagogies, the pre-service teachers also contrasted multiliteracies to traditional pedagogies and this too has certainly helped them in embracing the new pedagogy. Given that they generally rejected the traditional approaches that they had experienced as learner, their experiences with multiliteracies which was a total opposite of traditional learning have actually promoted the acceptance of the new ideas and encouraged the adoption of the new practices. So, their ability to see the similarities and differences between multiliteracies pedagogy and other pedagogies that they have either experienced as learner or encountered during their teacher training has influenced the learning process of embracing the new pedagogy.

The findings also show that the pre-service teachers reported positive attitude towards the multiliteracies pedagogy during the post-training interview and this was maintained during the post-practice interview conducted after the implementation. They viewed the pedagogy positively, has strong beliefs on the potential of the pedagogy, were motivated and highly anticipated to continue using the pedagogy. The pre-service teachers' strong beliefs about multiliteracies and their positive attitudes were perhaps influenced by their existing beliefs about teaching and learning shaped by their experiences as learners and their attendance during the teacher education programme. Their strong beliefs and values on learner-centred learning has shaped their beliefs and attitudes towards multiliteracies thus increase their understanding and adoption of the new pedagogy. In fact, in some cases it was evident that the pre-service teachers were proactive and motivated to learn and adopt the pedagogy as they took extra effort personally after the workshop to increase their understanding before they implemented the pedagogy. Due to this data suggest that the development of the cognition for some of the pre-service teachers increased after they have implemented the pedagogy. For example, Irfan, Aqilah and Balqis showed dedication to learn the pedagogy through their personal engagement after the workshop and before they implemented the pedagogy. They did extra revision and seek help to further understand the multiliteracies after the workshop and prior the teaching practice. This showed their willingness in embracing the new pedagogy and it was certainly helpful because findings showed that they

showed improvement in their awareness and understanding of multiliteracies pedagogy after its implementation and their implementation of the pedagogy were more comprehensive.

6.5.2 The Influence of Pre-service Teachers Cognition about Multiliteracies Pedagogy on their Practices of Multiliteracies Pedagogy

The pre-service teachers adopted multiliteracies practices in their teaching practicum, but the level of application varied among pre-service teachers as well as the principles of the pedagogy. It was apparent that their cognition was reflected in their actual teaching but there was also evidence that their practices did not reflect their cognition and their practices exhibited more than their reported cognition.

Firstly, there are evidence that pre-service teacher's cognition is central in shaping their teaching practices because their cognition was reflected in their practices. In other words, their understandings of multiliteracies elements articulated during the interview were translated into practice during the implementation of the pedagogy and their teaching practices were consistent with their professed beliefs. For example, the elements of knowledge processes, multimodality and learner diversity were found in their practices during the observed lesson which were mainly congruent with theory.

Secondly, there are also instances where their classroom practices were not consistent with their stated beliefs as such that the elements mentioned during the interview were not found in their practices. This is mainly with regard to the non-existence of the use of technology in their lesson. The pre-service teachers' beliefs prior to the workshop indicate that they were aware of the significant of technology in the digital age, its importance in teaching and learning and how they personally use technology and other media to learn and enhance their English language fluency. In other words, they understand technology and embrace it in their private lives but not in practice. In fact, findings show that they were aware of technology being one of the major principles of multiliteracies pedagogy. So, they recognize how important technology is, how beneficial it is for them and other people specifically for teaching and learning and how multiliteracies emphasis on the use of technology in teaching and learning yet contextual constraints they faced has impeded their intention to put their beliefs into practice. Therefore, the application of technology is nowhere to be found in any of the pre-service teachers' lesson during the teaching practicum. Findings showed that the contradiction between their beliefs and practices was due to the influence of contextual factors such as lack of accessibility to computer lab and inadequate technological facilities in school.

Chapter 6

Finally, it was found that the pre-service teachers exhibited more practices of multiliteracies pedagogies in their classroom practices than their professed beliefs. The incongruity between knowledge and belief is observed particularly for the element of learner diversity and the role of teacher and learners as most of the pre-service were not able to articulate about the elements during the interview, but classroom observation data suggest that they implemented it successfully in their lesson. It is also interesting to note that the degree of implementation among the pre-service teachers varies and the impact of the pre-service teachers' cognition on their practices also differs across participants. For example, it was found that Aqilah has more awareness and understanding than the others were found to implement the pedagogy comprehensively and the cognition of Irfan, Aqilah and Iliana deepen after the implementation of the pedagogy. This is perhaps owing to the strong beliefs about multiliteracies pedagogy gained from their prior experiences as learners and from attending the workshop as well as their dedication and motivation to embrace the pedagogy.

In short, all pre-service teachers were able to adopt a multiliteracies pedagogy during teaching practicum, but their practices varied. It is also found that their cognition and practices were congruent with the principles and practices of multiliteracies pedagogy. Findings showed that the link between their cognition and practices were complex, vary across participants but mutually informing as it was found that their beliefs match their practices, their beliefs did not match their practices and their practices depicted more than their beliefs. Therefore, the pre-service teachers' beliefs have shaped their practices, their beliefs have no influence on their practices and in fact their practices portrayed more than their stated beliefs.

Chapter 7 Discussion

7.1 Introduction

In this chapter, key findings are discussed, organised and presented in connection to answering the research questions that guided this study. This study aims to understand pre-service teacher's cognition and how it develops following an introduction to multiliteracies pedagogy. The discussions are based on the theoretical frameworks underpinning this study which are the language teacher cognition framework by Borg (2006) and multiliteracies pedagogy by The New London Group (1996; 2000) as well as the literature in the field. It begins with a discussion of pre-service teachers' cognition prior to the workshop and after the workshop particularly on the principles and practices of multiliteracies pedagogy. Then the discussion moves on to how teachers implemented the new pedagogy during their teaching practicum and finally, the discussion focuses on the relationship between their cognition and classroom practices as well as the mediating factors that influence their cognition and practices. This chapter will show how this study contributes to the field as well as to the understandings of language teacher cognition and also describes a novel pedagogic approach for pre-service teachers who possess little or no teaching experience in the context of a short-focused training.

7.2 RQ 1: What is pre-service teacher's cognition on multiliteracies pedagogy before and after a short, focused training held in their teacher education programme?

7.2.1 Prior to the Workshop

7.2.1.1 Prior Learning Experiences

It seems that the pre-service teachers' prior language learning experiences were influential in shaping their cognition about the new approach introduced (Almarza, 1996; Borg, 2003; Borg, 2005; da Silva, 2005; Lortie, 1975; Numrich, 1996). Numrich (1996) found that pre-service teachers' positive or negative language learning experiences as learners determined whether they would accept or reject specific instructional strategies introduced to them. Similar to Numrich, in the case of the current study, the pre-service teachers' language learning experiences were clearly influential in the formulation of their beliefs as it encourages the acceptance of the new approach. Pre-service teachers in this study mainly stated that as learners, they have experienced teacher-

centred learning, which they did not favour. For example, they expressed a general rejection of the didactic teaching approach of their past learning experiences which were teacher-centred, chalk and talk, drilling for exams with lack of guidance from the teacher. They did not mention how these impacted their language proficiency, but they certainly disagree with it. They further mentioned that they dislike the approach, they declared that teaching should not be anything like their experiences and expressed that they would avoid it in their teaching practices. So, their beliefs are broadly anti-didactic, they were not in favour of what they have been through and insisted on not following the same practices. Therefore, when they were introduced to multiliteracies pedagogy, which was the complete opposite of teacher-centred learning, their adoption of the new pedagogy became easier. The experiences they encountered with teacher-centred learning have actually promoted the internalization of the new ideas and encouraged the adoption of the new practices.

The pre-service teachers' prior language learning experiences firmly influence their cognition and practices as their cognition and practices did not reflect what they have been through as learners, but rather provided them with initial conceptualisations about teaching and learning. For example, their experiences as learners in a teacher-centred context meant that they were determined to become learner-centred teachers and really valued its importance. This finding is supported by Borg (2003) who makes it clear that "teachers' prior language learning experiences establish cognition about learning and language learning which forms the basis of their initial conceptualisation of second language teaching" (p. 88). Therefore, the results of this study confirm that mental images of pre-service teachers learning experiences appear to function as an existing framework that guides and influences the process of adopting and accepting the new teaching method introduced during a short and focused training programme.

7.2.1.2 Beliefs about Teaching and Learning

The pre-service teachers' prior beliefs shaped their cognitive development, awareness and practices of multiliteracies pedagogy as adopting multiliteracies pedagogy is in line with their beliefs about language teaching and learning. Findings suggest that pre-service teachers' prior beliefs about language teaching and learning are similar to multiliteracies pedagogy which facilitate the acceptance of the concept. Given that they were in clear rejection of didactic approaches to teaching, they evidently favoured learner-centred approach and seem to be well-versed about the approach. Attending the teacher training programme had equipped them with knowledge and understandings of learner-centred learning which then allowed them to build connection between the new knowledge and their existing knowledge thus helped the internalization of the new idea. Similar to learner-centred learning, multiliteracies pedagogy too discourages traditional didactic pedagogy and puts importance on encouraging learner's agency, active learning and addressing

learner diversity. Therefore, the new concept affirmed their prior beliefs, and the link has allowed the teachers to understand the new concept by drawing from their existing knowledge thus it seems as though the pre-service teacher has readily valued and embraced the aspects of multiliteracies pedagogy.

This finding suggests that beliefs have crucial impact on how teachers perceive new pedagogy and their adoption of the introduced approach (Almarza, 1996; Calderhead, 1996; Calderhead & Johnson, 1994; Pajares, 1992; Richardson, 2003; Robson, 1991). The workshop has provided a ground for pre-service teachers to reinforce their prior cognition and allowed them to develop and implement teaching practices that are consonant with their belief and knowledge. The finding of this study is supported by the case study by Michaela Borg (2005) that looked into the development in pedagogic thinking of a pre-service teacher. The teacher in her study held strong pre-course beliefs which remained, elaborated and deepened after the training programme ended because the approach introduced during the training programme was in line with the teacher's pre-course belief. Michaela reported that the interaction between the teacher's prior beliefs and her experiences during the training programme allowed growth in her understanding of the new ideas introduced. Furthermore, this result is also in line with the congruence hypothesis (Tillema, 1994). The hypothesis puts forward the idea that "the more congruence there is between a teacher's cognition and the teaching approach advocated by the trainer, the more a training design is consistent with existing cognition, the better the training results will be" (p. 603). Proven in his study, Tillema found that teacher learning was influenced by the consistency between teacher's belief and the new idea presented because teacher's cognition filtered the knowledge acquisition process.

7.2.2 After the Workshop

The data show that the pre-service teachers had some understanding of the principles of multiliteracies pedagogy, since they were able to articulate some principles and characteristics of multiliteracies pedagogy. The findings of this study suggest that when the pre-service teachers thought of multiliteracies pedagogy, they thought about the knowledge processes, multimodality, learner diversity and technology along with the roles played by the teacher and the students. These features are commonly cited in the literature, both in mainstream education and in language teaching (Arvanitis & Vitsilaki, 2015; Burrows 2016; Cope & Kalantzis, 2000; 2009; 2015; Doucette-Vanhuynne, 2016; Kalantzis & Cope, 2004; 2005; 2010; Neville, 2016; Pandian & Balraj, 2016; Pishol & Kaur, 2015; The New London Group, 1996; 2000; van Haren, 2015; 2016; Yelland, 2015; Yelland et al., 2008). The data also reveal that the degree of understanding varied across participants as well as the elements of multiliteracies. For example, pre-service teachers showed significant

awareness on knowledge processes, some awareness on multimodality, yet limited awareness on learner diversity. All pre-service teachers were able to articulate about knowledge processes before and after practice while only Aqilah, Iliana and Balqis were able to articulate multimodality before and after practice. Irfan and Aiman could only articulate about multimodality after the practice while Din could not articulate about it at all. Only Aqilah and Aiman talked about learner diversity before the practice but none of them talked about it after the practice. So, among the pre-service teachers, Aqilah has more awareness of the elements of multiliteracies pedagogy as she was able to articulate all the elements during the interviews while Din has the least awareness as he was able to only articulate about the knowledge processes during the interview.

7.2.2.1 Definition

Congruent with the theory and what was presented during the workshop, the pre-service teachers defined multiliteracies pedagogy as a type of learner-centred learning pedagogy (Din); a pedagogy that provides different ways of learning something (Irfan and Balqis); a pedagogy that address diversity (Aqilah and Aiman); and a pedagogy that include the use of multiple modes in making meaning (Iliana). The pre-service teachers in both situations before and after the teaching practice, agreed that the multiliteracies pedagogy allows teachers to diversify their teaching strategies so that the learning process is not biased to a particular learning strategy. This is reflected in Cope and Kalantzis' (2009) assertion:

“A pedagogy of multiliteracies allows alternative starting points for learning...such as the varied experiences that need to be brought to bear on the learning, the different conceptual bents of learners, the different analytical perspectives the learner may have on the nature of cause...and the different settings in which they may apply or enact their knowledge” (p. 188).

The pre-service teachers also viewed multiliteracies pedagogy as an approach that focuses on addressing different kinds of students and different student's learning styles. This view is similar to that of Kalantzis and Cope (2016) who suggest that the multiliteracies pedagogy addresses diversity and negotiates differences due to “any number of factors, including culture, gender, life experience, subject matter, social or subject domain” (p.3). Besides, results of this study found that the trainee teachers also perceived similarities between multiliteracies and other literacy practices that they have carried out in the class (Kaur, 2010; Rowsell et al., 2008). Data suggest that the pre-service teachers deemed that multiliteracies pedagogy bears resemblance to other pedagogies such as Bloom's Taxonomy, the learner-centred approach and the 21st century learning concept. One popular opinion among participants was that multiliteracies is similar to the abovementioned pedagogies and that it is comprehensive because it perfected the old pedagogies. This finding

substantiates the origins of multiliteracies as being mapped against pedagogical theories such as Bloom's Taxonomy and Kolb's Model of Experiential Learning (Kalantzis & Cope, 2004; 2010; 2016). In fact, this finding also suggest that the pre-service teachers were able to link the new knowledge introduced with their existing understandings and knowledge gained through their teacher education programme.

7.2.2.2 Knowledge Processes

The pre-service teachers in this study have shown significant awareness of the knowledge processes and articulated positive perceptions relating to the usefulness of the element during the interviews. Their strong awareness of this element might be due to their ability to connect the new knowledge with the existing knowledge they had as Irfan, Din, Aiman and Balqis reported that the similarities between the knowledge processes with Bloom's Taxonomy and other pedagogies that they have learned assisted their understanding of the element. The pre-service teachers believe that the knowledge processes are a systematic framework that expand their teaching strategies and facilitates the process of designing lesson. This result is consistent with research involving pre-service teachers as participants which found positive perceptions about multiliteracies pedagogy because they felt they had developed new understandings about pedagogical strategies and they appreciated a more detailed approach to planning lessons (Arvanitis & Vitsilaki, 2015; van Haren 2016). Similar to the participants in van Haren's study, the participants in this study felt that the structural aspect of knowledge processes for lesson planning was helpful and thought that this knowledge processes framework was linear and sequential. In other words, they viewed knowledge processes as a systematic framework to design learning and they found it helpful to identify, plan and organize the sequence of learning strategies when designing a lesson. Aqilah, for example, pointed out that the framework was a new way of planning lessons and at the same time addressed different learning styles.

Additionally, findings of this study also suggest that pre-service teachers perceived the knowledge processes as an expansion to their teaching repertoires and helped them to achieve the learning objectives of the lesson. All pre-service teachers agreed that the organized sequence of their activities, based on the knowledge processes, clarified how to achieve learning objectives in a systematic way. In line with Burrows (2016), the multiliteracies pedagogy provided a framework against which the teaching and learning process could be reflected upon. In short, these findings align with the claims of Kalantzis and Cope (2016) that multiliteracies pedagogy "aims to make teachers more mindful and conscious of what pedagogical processes they are employing, both to ensure it fits the learning goal and to be inclusive of diverse learners who come to know things in different ways" (p. 57).

Beliefs and understandings about knowledge processes in multiliteracies pedagogy appeared relatively well understood before and after the practicum segment of the teacher education intervention. However, some teachers remained confused about the implementation of knowledge processes, Din, for example, believed that all the knowledge processes should be included in one lesson and that they should follow a sequence of 'experiencing' followed by 'conceptualizing' then 'analysing' and finally 'applying'. Even though the incorporation of all knowledge processes is essential to be beneficial (Doucette-Vanthuyne, 2016), the teacher should select particular knowledge processes and should not necessarily follow a sequence (or hierarchy) (Kalantzis & Cope, 2012). In fact, application should depend on the suitability of content of the lesson, the readiness of the students and the learning needs of the students (Kalantzis & Cope, 2016). A review of other studies that have looked at the implementation of multiliteracies pedagogy suggests that most lessons were done in the course of a few lessons (Kaur et al., 2012; Pandian & Balraj, 2016; van Haren, 2015; 2016; Yelland, 2015).

7.2.2.3 Multimodality

Pre-service teachers showed some awareness on multimodality as they were able to articulate the element during both the post-training and post-practice interviews. Only Aqilah, Iliana and Balqis were able to report about the element during both interviews while Irfan and Aiman could only talk about it during the post-practice interview. Din on the other hand did not mention about it in any of the interviews. Compared to Aqilah, Iliana's and Balqis's interpretation of the element were not as explicit because they could not relate their interpretation to the element. It was only during the post-practice interview that they were able to articulate and relate their interpretation specifically to the element. This shows that their understanding has somehow deepen and they become more aware of the element. This is similar to the case of Irfan and Aiman as their awareness of the element is evident only after the practice.

Congruent with the theory, the trainee teachers emphasised multimodality as ways of making meaning (Aqilah) through the use of multiple modes in a lesson (Irfan, Iliana, Balqis, Aiman). This is in line with Cope and Kalantzis' (2015) assertion that the use of multiple modes can be linguistic, audio, visual, gestural, and spatial designs for meaning-making process. This is integral in multiliteracies pedagogy since literacy learning and the negotiation of meaning-making process does not only depend on the use of language or words as the transporter of meaning. Multiliteracies pedagogy puts special importance on the use of technology and technological tools as part of teaching and learning (Cope & Kalantzis, 2009; The New London Group, 1996; 2000). Before the teacher workshop, the pre-service teachers were aware of the changing nature of literacy practices due to the advancement of technology, either through their personal engagement or the

engagement of the younger generation. For example, they agreed that instead of using books or papers, their reading and writing were mostly done digitally and in fact, it became their medium to practice using English. They further identified how media technology was changing social interaction as people engage more in virtual social network and how it has potentially impacted language learning too. For example, Irfan, Aqilah and Iliana specifically mentioned that due to a shift in the importance of media technology, language learning should incorporate the use of digital practices. These teachers recognised that multiliteracies pedagogy and the use of technology is suitable for the digital era, yet they were concerned with the lack of technological facilities in schools.

7.2.2.4 Learner Diversity

Findings suggest that pre-service teachers have some awareness of the importance of learner diversity as an underlying element in multiliteracies pedagogy. However, none of the pre-service teachers mentioned learner diversity during the post-training and post-practice interviews. Aqilah and Aiman showed some awareness through their definitions of multiliteracies pedagogy during the post-training interview as Aqilah defined the pedagogy as a comprehensive way of teaching different types of learners, while Aiman interpreted it as an inclusive pedagogy that addresses different learning styles. This reflects Kalantzis and Cope's (2004) assertion that learning should affirm to learner identities and create a sense of belonging by building on their knowledge, interests, experiences and motivation. Nevertheless, they did not explicitly relate the element to learner diversity. So, they showed understanding that multiliteracies pedagogy address diversity, which was congruent with the theory, yet they were not able to label it specifically.

7.2.3 Beliefs about Multiliteracies Pedagogy

Pre-service teachers in this study have strong beliefs about the principles and practices of multiliteracies pedagogy and its potential. All pre-service teachers in this study reported positive attitude towards the pedagogy in both post-training and post-practice interviews and it was evident that Irfan, Aqilah and Balqis put extra personal effort to further learn the pedagogy after the workshop and before they implemented it during the teaching practicum. The pre-service teachers perceived the pedagogy positively as they believe strongly on the potential of the pedagogy, were inspired and anticipated to implement it in their practice, but compared to the other trainee teachers, it seems that Irfan, Aqilah and Balqis were more proactive, motivated and enthusiastic to increase their understanding and embrace the pedagogy.

The pre-service teachers' positive attitude is perhaps due to their beliefs about teaching and learning shaped by their experiences as learners and their teacher education programme. Upon

entering the multiliteracies pedagogy workshop, they stated that they were exposed to various teaching approaches for teaching and learning, favoured learner-centred approaches and the incorporation of technology in teaching and learning. In fact, they valued learner-centred approach because they dislike their learning experiences in schools and believe that teachers should not just be a knowledge transmitter in the classroom and students should not passively receive knowledge but to be active during lesson by engaging in different activities. Given the similarities between the learner-centred approach and multiliteracies pedagogy, it seems certain that their attitudes towards learner-centred approach is reflected towards multiliteracies too as they also valued the pedagogy and this might lead to the progress in the development of their cognition during and after the intervention workshop (Borg, 2003; 2006; 2015).

7.3 RQ 2: How do these pre-service teachers implement multiliteracies pedagogy during their teacher education programme?

One of the aims of this study is to examine how pre-service teachers experiment with multiliteracies pedagogy during teaching practicum. It is evident that the pre-service teachers adopted multiliteracies pedagogy in their teaching practicum as a range of multiliteracies pedagogical practices were observed in their lesson which include the knowledge processes, multimodality, learner diversity as well as teacher and student agency. For example, it was evident that during the observed lesson the learning experiences were diverse; the combination of knowledge processes emphasized different types of activities; teaching and learning involved multiple modes of meaning-making; learner identities and subjectivities were manifested; learners were engaged actively during learning; teacher agency were evident; and agency among learners were empowered (Cope & Kalantzis, 2009; 2015; Kalantzis & Cope, 2012; 2016; The New London Group, 1996; 2000). However, whilst teaching practices tended to exhibit the principle and practices of multiliteracies pedagogy, the degree of the application varied amongst pre-service teachers as did the range of elements of multiliteracies pedagogy. The pre-service teachers did not show any problems implementing the pedagogy because none of them reported about any issues experienced during the observation and observation data suggest that they did not show any difficulties during the observed lesson. Din, Aqilah, Balqis and Aiman mentioned that planning the lesson was a bit tricky particularly when designing against the knowledge processes framework, but it was fine during the implementation. Irfan on the other hand did not mention any challenges with regards to the pedagogy. This is perhaps due to the fact multiliteracies is quite similar to what they have learned and done in their teacher education programme, so they do not find it difficult to put the theory into practice.

7.3.1.1 Knowledge Processes

Observation and lesson plan data suggest that the ideas of ‘experiencing’, ‘conceptualising’, ‘analysing’ and ‘applying’ of the knowledge processes framework were present in trainee teachers’ lessons, and interview data suggest that these were also mentioned in their narratives when they talked about their lesson plans. This shows that their cognition of the multiliteracies concept were aligned to their classroom practices. Nonetheless, the question of how they implemented those ideas deserves further discussion.

All pre-service teachers reported the inclusion of ‘experiencing’ in their lesson during the post-practice interview and it was evident that they began their lesson by establishing a baseline knowledge, raising an awareness of the topic by asking their students to recall, communicate and reflect upon their experiences and prior knowledge (experiencing the known) as well as introducing the format of an essay through a lecture (experiencing the new). These practices are the fundamental theory of multiliteracies that experiential learning should be built based on students’ knowledge, experiences and interests as well as immerse them in a new knowledge that makes enough sense to them for learning to occur (Cope & Kalantzis, 2015; The New London Group, 2000).

None of the pre-service teachers reported the inclusion of ‘conceptualising’ but classroom observation and lesson plan data suggest that all of them implemented ‘conceptualising by naming’ during the observed lesson. It was evident that the pre-service teachers provided opportunities for the learners to expand relevant vocabulary for the topic. This practice has helped the learners to use their experiential knowledge to expand their understandings and built meta-language of the topic by drawing upon their own meaning-making resources (van Haren, 2015; 2016).

All pre-service teachers reported the implementation of ‘analysing’ and it was observed that their lesson engaged students to be critical in examining purposes and making decisions with rationales (analysing functionally) as well as identifying effects and solutions of an issue (analysing critically). This reflects how analytical knowledge process develops through deep understanding and knowledge (Cope & Kalantzis, 2009; 2015; Kalantzis & Cope, 2012; 2016; The New London Group, 1996; 2000). Nevertheless, the observation data suggest that the learning activities were quite limited for the students to inquire critically because in most cases, there were fewer opportunities for the students to search, retrieve, manage and understand information from a variety of sources. None of the pre-service teachers mentioned anything in the interviews that could explain why this was absent in their lesson. Teachers’ implementation of this element in other empirical studies encouraged learners to utilize various resources such as using the magazines, media articles, books, actual real-life experience, photographs and the internet to gain information (Kaur et al., 2012; Neville, 2016; Pandian & Balraj, 2016; van Haren, 2015; 2016; Yelland, 2015).

Pre-service teachers (except Irfan and Aiman) reported the application of 'applying' knowledge process in their lesson but observation and lesson plan data suggest that all of the pre-service teachers provided an opportunity for learners to transform from responding to knowledge to becoming knowledge producers (van Haren, 2015; 2016). It was evident that learners apply the knowledge that has been taught appropriately (Cope & Kalantzis, 2009; 2015; Kalantzis & Cope, 2012; 2016; The New London Group, 1996; 2000). Drawing from ideas and contents built through spoken discussions and collaborative work, learners in all pre-service teachers' lessons wrote an essay (applying appropriately) which shows that the pre-service teachers created opportunities for the learners to apply the knowledge appropriately. It is interesting to note that all the pre-service teachers in this study did not have their students 'applying creatively' and this finding is similar to Cloonan's (2016) findings where none of the teachers in her study applied 'applying creatively' in their lesson too. In other empirical studies teachers did extend applications of learning into the creative realm by engaging students to film video clip, produce a clay animation, write song lyrics, create brochure for a campaign, create web pages for a project and create a model of a dream town (Kaur et al., 2012; Neville, 2016; Pandian & Balraj, 2016; van Haren, 2015; 2016; Yelland, 2015).

It is also evident that some of the sub-knowledge processes were absent from their lesson such as 'conceptualising by theory' or 'applying creatively' and none of the pre-service teachers in this study justified the exclusion of some of the knowledge processes. While it is not compulsory for them to include all knowledge processes what more the sub-knowledge processes, yet it is possible that they might lack an understanding of the knowledge processes or they find it challenging to differentiate between all the knowledge processes. Adding to that, it could also be possible that the teachers rejected the inclusion of specific knowledge processes as they might not be aligned with the learning objectives, lesson content or students' needs (Kalantzis & Cope, 2016). Cloonan (2016) suggests that the categorization of the knowledge processes is somehow a "slippery area" and that the "interpretations of the knowledge processes are, to a large extent, context-bound" (p. 204).

7.3.1.2 Multimodality

Multiliteracies pedagogy significantly recognizes the use of new media technologies: as such, that studies have focused on the use of multimodal texts such as animation, songs, film, video and PowerPoint presentation in a multiliteracies lesson (Kaur et al., 2012; Neville, 2016; Pandian & Balraj, 2016; van Haren, 2015; 2016; Yelland, 2015). However, findings clearly show that all the pre-service teachers opted out the use of technology in their lesson. The pre-service teachers were aware of the evolution of technology, how it impacted and supported literacy learning and practices and its relevance in multiliteracies pedagogy, but they avoided the use of technological tools in

their lesson due to inadequate technological facilities and the difficulties in accessing computer labs in their contexts. The pre-service teachers understood technology, were familiar with it and embrace it in their private lives but apparently not in practice. This finding is similar to that of Ajayi (2010), who examined pre-service teachers' knowledge and perceptions of their teacher education preparation to teach multimodality/multiliteracies. Participants in his study showed awareness of the changing literacy practices based on their own life experiences and recognized that new media technologies support learning and led to a new way of communication and gaining information but were concerned with the challenges of the new technologies in the classroom. They showed anticipation to implement multiliteracies pedagogy in schools but were constrained with the fact that there were no computers or technological facilities in the classroom. They acknowledged inadequate technological facilities in the classroom as a challenge to teaching multimodality/multiliteracies in schools even if the students were responsive to technology-mediated instruction.

It is evident however that all pre-service teachers in the current study adopted multimodality in their lesson and they were aware (except Din) of the inclusion of multimodal texts in their lesson as they reported its inclusion and how they utilised it during the post-practice interview. Observation data suggest that the pre-service teachers did not unduly privileging the use of alphabetical representations to make meaning but alongside oral, aural, linguistic, written and visual modes. They use multiple design modes such as affinity diagram, images, tree map, mind map, circle map, postcards and colourful cards were evident during the lesson. In the absence of technology, the teachers were creative in experimenting with other sources of multimodality in order to assist the literacy development in the classroom (Lopez-Gopar, 2007).

7.3.1.3 Learner Diversity

Multiliteracies pedagogy put significant importance in addressing learner diversity through engagement with learner identities and learner differences in terms of gross demographics and lifeworld attributes (Kalantzis & Cope, 2004; 2016). Findings suggest that pre-service teachers addressed learner diversity in a number of ways and their practices, to a certain extent, adhered to the theory. Firstly, the lesson created were based on the everyday lifeworld, interests and concerns of the students. For example, some of the topics involved were about engaging students in managing stress, requesting birthday presents, deciding on activities to do during holidays and describing celebrated festivals in their country. Additionally, all lessons included finding the solutions to real-life problems, oral interactions, substantive group discussions and application of knowledge for authentic purposes. These efforts show that pre-service teachers had taken the capacity to support the diverse range of students' life experiences, improving their basic literacy

skills and developing new potentials to real-life problem solving and collaborative group work. Thus, by supporting familiar contexts and content for students learning, pre-service teachers have closely connected to the diverse life experiences of their students.

Secondly, the pre-service teachers addressed learner diversity through a mix of knowledge processes applied in their lessons focusing on different learning outcomes and types of activity appropriate to address the students' different learning styles. Kalantzis and Cope (2016) suggest that one of the ways to address learner diversity is through the use of knowledge processes where differentiated learning activities and learning orientations are encouraged to advocate learner identities and subjectivities. Similar to van Haren (2015) and Arvanitis and Vitsilaki (2015), it seems that the pre-service teachers in this study differentiated their instructions and made purposeful pedagogical choices through knowledge processes to address the diversity of their students. They differentiated their instructions during the lesson with collaborative work supplemented by the use of a variety of stimuli such as audio, visual and tactile materials to urge students to express themselves in variety of modes. For example, all pre-service teachers engaged their students in whole class spoken discussion, group spoken discussion, group writing and independent individual writing. Aiman mentioned that he engaged his learners in group work in an effort to vary his instructions and so that his learners could learn from each other, while Aqilah reported that her method of engaging her learners in different activities in an effort to consider their personalities and cognitive interests. Consistent with their prior beliefs and interpretation of the pedagogy, they believed that not all learners could learn in the same way and that varieties of activities during lesson are needed in order to address different learning styles.

Finally, the direction of the knowledge flows and the balance of responsibility for learning in pre-service teachers' lesson were towards active learning. Students were actively engaged during learning and their identities and subjectivities become more apparent. For example, in most lessons pre-service teachers gave students freedom to choose their own group members, collaboratively choose their own solution for a given task and decide individually what they want to write for the final task at the end of the lesson. These activities reflect that the pre-service teachers encouraged the students to have their say during the lesson and add their voice in the writing which congruent with the theory, would increase sense of belonging and promote learner diversity (Kalantzis & Cope, 2004; 2016).

7.3.1.4 Role of Teacher and Learner

Data suggest that pre-service teachers showed some awareness on the role of teachers and learners in multiliteracies pedagogy. None of them explicitly articulate the role of teacher and learners in relation to multiliteracies; instead, they did so through their practices implementing the

pedagogy during teaching practicum as observation data suggest that both teacher and learner agency were evident. Burrows (2016) proposes that “the framework prompts teachers to reflectively consider the diverse needs of their students....and to make context appropriate decision about their practices” (p. 149). So, the teachers are expected to design the learning and teaching materials based on the learners’ diverse needs by critically assessing and being attentive to them. Pandian and Balraj (2016) also suggest that “the agency of the teacher is of paramount importance in ensuring that the learning activities become meaningful and relevant to learners’ daily lives” (p. 262). Most of the pre-service teachers in this study showed agency through their creation of topic for the lesson and their application of the knowledge processes. As discussed earlier, it is evident that they reflectively assessed and took the initiative to relate learning to manifest learners’ identities and subjectivities as well as to address learner diversity. For example, Aqilah mentioned that she carefully considered the topic of her lesson due to the fact that examinations season is near and doing something on stress management could relate to the students. Even though the pre-service teachers followed the syllabus, most of the topics were chosen based on their careful assessment and consideration of students’ needs, rather than just relying on textbooks for topics.

Substantially, in regard to empowering learner agency, there was a balance of agency from the teacher to the students as the pre-service teachers gave up some control and raised student’s agency by allowing some freedom and power to the students through the knowledge processes. For example, there was evidence of learner autonomy such as in Aqilah’s lesson where learners wrote more than required and role switching in Din’s lesson where the role of teacher as learner and learners as teacher was evident when a student pointed out Din’s mistake and corrected it, which Din then acknowledged and corrected himself. Apart from that, all pre-service teachers provided opportunity for students to participate actively. For example, most of the students were given opportunity to construct knowledge, ask questions, initiate ideas as well as teach and learn from each other during teaching and learning. Their practices are congruent with the theory because students were given choices and worked collaboratively, enjoying more agency and being more engaged and intrinsically motivated (Kalantzis & Cope, 2016).

7.4 RQ 3: What is the relationship between pre-service teachers’ cognition and their practices with regards to multiliteracies pedagogy?

This study investigated pre-service teachers’ cognition about multiliteracies pedagogy, their implementation of the pedagogy in classroom, and the relationship between their cognition and practices. The findings of this study suggest that pre-service teacher’s cognition on multiliteracies

pedagogy is developing because they interpreted multiliteracies pedagogy as suggested by the theory and had developing awareness on the principles of multiliteracies, such as the knowledge processes, multimodality and learner diversity. Data also show that the pre-service teachers adopted multiliteracies pedagogy in their classrooms because they incorporated the knowledge processes, utilised the elements of multimodality, addressed learner diversity and their role as well as the students reflected multiliteracies teachings. The findings further indicate a complex relationship between the pre-service teachers' cognition and practices such that there were instances where their cognition was portrayed in their practices, their cognition contradicted their practices and their practices depicted more than their cognition.

One remarkable finding of this study which advances our knowledge on pre-service teacher's cognition is their ability to adopt new pedagogy introduced in a short, focused training introduced during the teacher education programme. It seems that this is owing to pre-service teachers' cognition on multiliteracies pedagogy that is likely to be central in guiding their classroom practices because their accounts revealed that they had some understandings of multiliteracies pedagogy, which were translated into practice. For example, their understanding of multiliteracies elements such as the knowledge processes, multimodality elements and learner diversity were observed in their multiliteracies lesson. Their cognition of the principles of multiliteracies pedagogy were portrayed in their practices which may facilitate the application of this pedagogy because their classroom practices were mainly consistent with their professed beliefs.

There is also evidence to suggest that the pre-service teachers stated beliefs were not reflected in their actual practices. Their cognition of multiliteracies pedagogy to a certain extent do not exert influence on what they do in their classrooms as data suggest that the characteristics of multiliteracies which were stated by the pre-service teachers during the interviews were not evident in their teaching practices. For example, all pre-service teachers agreed that technology supports literacy learning and they mentioned the significant use of technology in multiliteracies pedagogy during the interviews but none of them integrated the use of technology in their lesson. This finding shows that their practices did not match their beliefs. However, all of them justified their negligence with the main reason that impeded them from incorporating technology in their lesson which was the lack of access to adequate technological facilities in the classroom and school computer lab. Data analysis showed that the inconsistency between their cognition and practices resulted mainly from the contextual factors which hampered pre-service teachers from applying what they believed into practice. This result is in line with findings from previous studies as similar findings have been widely reported in other teacher cognition research (Borg, 2003; Basturkmen, 2012; da Silva, 2005; Graham et al., 2014; Jamalzadeh & Shahsavar, 2015; Lim & Chai, 2008; Roothoof, 2014; Tsui, 1996). Borg (2003) asserts that contextual factors are an important mediator

between teacher's cognition and their practices. Therefore, the lack of implementation of technology in the pre-service teachers' lessons was due to the constraint of contextual factors instead of them contradicting their own stated belief.

Another important finding in this study is that pre-service teachers exhibited more elements of multiliteracies pedagogies in their actual practices than their stated beliefs. This finding is similar to Gutierrez Almarza's (1996) who found that trainee teachers who took PGCE (Postgraduate Certificate Course in Education) course behaviourally adopted the particular teaching method taught during the course and implemented it during teaching practicum, yet their cognition in embracing the approach differ. Findings of the current study suggest that the characteristics of multiliteracies instruction that were not stated by the pre-service teachers in the interviews were present in their pedagogical practices. For example, observation data suggest that pre-service teachers addressed learner diversity when they did not mention it explicitly in the interviews. They did not mention learner diversity directly during the interviews, yet their observed lessons showed engagement with learner identities and learner differences. In addition to that, they did not articulate anything about their role as a teacher and the students' role specifically in the interviews, but during the lesson, the teacher and student's role mirrored multiliteracies teaching. For example, as a teacher, they showed agency and provided opportunities for students to engage in constructing knowledge collaboratively, expressing opinions in different modes and engaging in interactive discussions at different stages of the lesson. These opportunities were seen to empower learner's agency, which is highly encouraged in the multiliteracies concept. Nevertheless, they did not articulate any of these in the interviews. There are several possible reasons for this.

Firstly, perhaps these might have been owing to their "lack of any metalanguage to describe what they do what they do" (Naruemon, 2013, p. 226). Alternatively, there is also the possibility that the training is insufficient to prepare them to adopt this approach. The degree of their understanding of multiliteracies could perhaps increase if they attended more training to fully understand and be aware of the principles underpinning the theory. Given the short training period, their understanding might be superficial in that they have yet to internalize the concept fully but rather were reflecting what was needed just to get things done. It is important to note that even though it is not impossible for the pre-service teachers to be able to integrate or be impacted by a short training programme, there is also the possibility that they may be influenced by the fact that the researcher is part of the university rather than reflecting their own beliefs about how to teach. Since this study was conducted in the context where the researcher is also the teacher educator it is therefore possible that the pressure to conform to the expectations of the training programme influenced the pre-service teachers' behaviours. Perhaps as soon as the external pressure no longer exist, they might abandon the practices. Another reason is that the pre-service teachers' stated

preferences may have been a result of the desire to impress the researcher, which might disappear once they begin their teaching career and become accustomed to the school culture (Chang et al., 2009). In fact, even though the pre-service teachers in this study were not assessed formally, the finding is similar to that in Almarza's (1996) mentioned earlier. She reports that even though trainee teachers in her study were able to adopt and implement the specific teaching method taught during the training programme, cognitively, their acceptance of the introduced approach varied. Therefore, she argues that the successful adoption in her case was partly because the trainee teachers need to conform to a certain standard since their teaching practice was assessed and their ability to put the theory into practice was part of the course assessment.

Another striking result emerging from the analyses of the link between the pre-service teachers' cognition and their pedagogical practices is the degree of implementation among participants and the factors that may have influenced this. For example, what made Irfan, Aqilah and Balqis more capable of embracing multiliteracies and putting it into practice than Din, and the factor that influenced their adoption of this pedagogy. Studies recognize that the extent to which teachers put ideas into practices tend to be affected by cognitive, affective, experiential and contextual factors (Borg, 2006; 2015; Phipps, 2009). Following Phipps (2009), this study found that it is possible that an "affective factor" (p. 185) mediated pre-service teacher's uptake of the new approach during the short, focused training programme. Irfan, Aqilah and Balqis showed willingness to learn more about the pedagogy through personal engagement after the workshop ended and before the implementation during teaching practicum. For example, Irfan mentioned doing revision and practice; Aqilah mentioned doing revision; and Balqis mentioned seeking her peers' help to understand some aspects of the pedagogy, while Din did not mention anything in regard to this during the interviews. Therefore, most of them showed willingness to accept the new pedagogy, since they put extra effort to have a better understanding, which may influence their successful adoption of the new pedagogy. This finding supports other studies that looked into teacher learning and motivation regarding innovations (e.g., Ghaith & Yaghi, 1997; Shulman & Shulman, 2004; Van Eekelen et al., 2006) that suggest teacher's willingness to learn, and that positive perceptions towards the new ideas are the basic features for effective implementation of the new the instructional practices.

The findings of this study suggest that the impact of the intervention on pre-service teachers embracing multiliteracies pedagogy is varied. It is found that the pre-service teachers who had stronger beliefs and a better understanding of multiliteracies pedagogy than the others are more likely to implement the pedagogy successfully. For example, Aqilah, who has more awareness and better implementation of the pedagogy, was identified to have stronger prior beliefs brought in to the workshop such as: teaching should be learner-centred, students should be active in class and

the inclusion of every student is important. Adding to that, she also explicitly mentioned that she was glad and happy that the pedagogy existed because it answered her overarching question of how everybody can learn. She has high hopes in multiliteracies and sees the pedagogy as having the potential to move learning from the traditional methods and actually making difference in students' learning. Aside from holding strong beliefs, she also had a better understanding and more successfully adopted this pedagogy. Unlike Aqilah, Din were limited in his understanding of the principles and practices of multiliteracies pedagogy. His lack of awareness and limited implementation of the pedagogy were perhaps due to their contradicting prior beliefs he had, which favoured chalk and talk and rote learning, despite valuing learner-centred learning, which can be seen in excerpt 23. Since his existing cognition were contradicting and were not congruent with the idea presented during the training, his acceptance of the new idea was hampered. Consequently, his limited understanding and misconceptions about multiliteracies pedagogy might have led to the discrepancy between his cognition and practices as well (Almarza, 1996; Carless, 2003; Karavas-Doukas, 1995; Li, 2001; Pajares, 1992; Richardson, 2003; Shihiba, 2011).

In short, the relationship between the cognition and practices of pre-service teachers in this study was not straightforward (Borg, 2006; Li & Walsh, 2011). To illustrate, the relationship of both constructs in the current study can be concluded as:

I understand the multiliteracies pedagogy, and I apply it to teaching.

I understand the multiliteracies pedagogy, but I do not apply it to teaching.

I probably do not understand the multiliteracies pedagogy, but I apply it to teaching.

This finding is supported by scholars in the field of teacher cognition that teachers' beliefs influence practices as their beliefs are correlated with their practices (Farrel & Ives, 2015; Farrell & Kun, 2008; Kuzborska, 2011; Pajares, 1992; Richards et al., 2001) and their beliefs are disconnected with their practices as there is lack of congruence between their stated beliefs and actual practices (Borg, 2003; Basturkmen, 2012; da Silva, 2005; Graham et al., 2014; Jamalzadeh & Shahsavar, 2015; Lim & Chai, 2008; Roothoof, 2014; Tsui, 1996). In short, the relationship between the pre-service teachers' cognition and practices in this study are mutually informing, yet complex and vary across teachers. These findings confirm the relationship between teachers' cognition and practices is not linear, but rather highly interactive and complex such that they can potentially become disconnected from one another (Borg, 2006; Buehl & Beck, 2015; Calderhead, 1991; Li, 2013; Phipps & Borg, 2009; Richardson, 1996).

7.5 Summary

This study has advanced our knowledge on the impact of the short-focused training on pre-service teachers' cognition and practices adopting new pedagogy. This study found that short, focused training supports the development of cognitive process of pre-service teachers embracing new pedagogy due to the fact that their prior learning experiences influence the acceptance of the new teaching pedagogy; their beliefs and the new ideas presented were consistent and not in contradiction when accepting and internalizing the new pedagogy introduced; and they have strong beliefs on and value the potential of the new pedagogy introduced (Almarza, 1996; Borg, 2005; Cabaroglu & Roberts, 2000; Calderhead & Robson, 1991; da Silva, 2005; Debreli, 2012; Graber, 1995; Phipps, 2009; Sendan & Roberts, 1998; Sheridan, 2016; Tillema, 1994). Therefore, this study has shed light on the potential and understanding of pre-service teachers' cognitive development when measured in an intensive short course. There was evidence of successful attempts of the adoption of multiliteracies pedagogy by the pre-service teachers and that their conceptualizations reflect the principles and practices of the pedagogy.

This study has also shed light on understanding teachers' process of learning with little or no experiential background in teaching upon the uptake of an innovative practice. The pre-service teachers have developing awareness of the principles underlying the characteristics of multiliteracies pedagogy and adopted the pedagogy in their classroom even though their level of understanding and adoption varied. Apart from attending the course, this is owed to their strong personal beliefs and prior language experiences brought into the course too (Carless, 2003; Karavas-Doukas, 1995; Li, 2001; Pajares, 1992; Richardson, 2003; Shihiba, 2011). Their reported learning experiences seem to endorse the multiliteracies pedagogy as they rejected the traditional methods used by their former teachers and their strong beliefs about the potentials of the multiliteracies enhance their development and understanding of the new pedagogy. Nevertheless, it is important to note that there is the possibility that the pre-service teachers were pressured to conform to the expectation and standard set by the researcher rather than reflecting their own beliefs about how to teach given that the researcher is actually part of a larger institution.

Findings of this study also broadened our understanding on the complexity of the relationship between pre-service teachers' cognition and their teaching practices, particularly in the context of embracing new pedagogy. Data revealed that the relationship between both constructs are complex, dynamic and interdependent (Borg, 2006; Buehl & Beck, 2015; Calderhead, 1991; Li, 2013; Phipps & Borg, 2009; Richardson, 1996). It was found that contextual factors hold a key influence on the divergences between pre-service teachers' stated cognition and their actual classroom practices while affective factors are crucial in mediating the translation of their cognition into

practices and the uptake of new teaching method (Borg, 2005; Ghaith & Yaghi, 1997; Phipps, 2009; Shulman & Shulman, 2004; Van Eekelen et al., 2006).

Finally, this study is particularly important in order to rethink the current teaching practices of English education in Malaysia, to encourage effective teaching practices for the 21st century as emphasised by the local researchers. This study contributes to the understanding of pre-service teachers' cognition and practices on multiliteracies pedagogy and thus enriches the body of knowledge and literature within the field of pre-service training and English language teaching in Malaysia. This investigation suggests that pre-service teachers perceived the pedagogy positively, had developing awareness on the principles of the pedagogy and there were successful attempts to adopt the pedagogy as their instructional practices to a certain extent mirrored multiliteracies practices.

Chapter 8 Conclusion

8.1 Introduction

This chapter summarizes and concludes the present study. It begins with a summary of the main findings discussed according to the objectives of this study. This study has understood pre-service teachers' cognition upon the introduction of multiliteracies pedagogy in terms of their thoughts, knowledge and beliefs about the pedagogy; their practices embracing the pedagogy; and the factors mediating their cognition and actual practices. This study now concludes by discussing its contributions, limitations and recommendations for future research.

8.2 Summary of The Study

The current study aimed to explore pre-service teachers' cognition on multiliteracies pedagogy introduced in a short, focused training held during their teacher education programme; to examine their implementation of the pedagogy in real classroom during teaching practicum; and to investigate the relationship between their cognition and practices with regards to multiliteracies pedagogy.

The rationale to conduct this study was due to the need to broaden our understanding on the cognition of language teachers on the uptake of a new teaching pedagogy mainly the pre-service teachers. Even though there has been an increased interest in the study of teachers' cognition research over the decades, research on the cognition of pre-service teachers upon the uptake of an innovative practice remain limited, especially research into teachers with little or no experiential background in teaching and in the context of a short-focused training. So, multiliteracies pedagogy was chosen in order to bring a new perspective exploring pre-service teachers' cognition and practices in relation to the pedagogy to the vast amount of existing research.

This study combined the frameworks of Language Teacher Cognition by Borg (2003) with Multiliteracies Pedagogy by The New London Group (1996) to address the following research questions:

1. What is pre-service teacher's cognition on multiliteracies pedagogy before and after a short, focused training held in their teacher education programme?
2. How do these pre-service teachers implement multiliteracies pedagogy during their teaching practicum?

3. What is the relationship between pre-service teacher's cognition and their practices with regard to multiliteracies pedagogy?

8.3 Contributions of The Study

This investigation of pre-service teachers' cognition and practices in relation to multiliteracies pedagogy has contributed to the literature on pre-service teachers' cognition and practices on the uptake of an innovative practice, in the context where they have little or no experiential background in teaching. Given that this particular pedagogy is not a part of the national curriculum and that these trainee teachers have no experiences on this approach, be it in school or during their teacher education programme, the findings contributed to the understanding of the cognition of teachers with little or no experience in teaching upon embracing new pedagogic ideas. Even though the pedagogy is completely new and does not resemble any of their own educational experiences, the adoption of the new pedagogy was possible. For example, as discussed in section 7.2, the pre-service teachers appeared to have some understanding of multiliteracies pedagogy but their level of understanding varied. It was found that their definition of the pedagogy was parallel to the theory, they understood some features of the approach, had developed an awareness of the principles underlying the characteristics of multiliteracies pedagogy and adopted the pedagogy in their classroom. It was assumed that they might have very little knowledge base that they could draw on but given that the characteristics of the new pedagogy resemble other pedagogies that they have encountered in schools and in their teacher training programme, embracing the new pedagogy seemed to be less difficult. They were able to link the new knowledge with the existing knowledge and understanding gained, thus assisting the process of accepting the new approach. Through this kind of investigation, our understanding on the learning process of trainee teachers as well as their cognition and practices upon the introduction of new ideas has been broadened.

This study has also contributed to the understanding of pre-service teachers' cognition and practices when measured in a short, focused training programme. Counted as one of the variables that could impact the cognition of trainee teachers, this study has proven that such a programme has the potential to develop their cognition. There were successful attempts to implement multiliteracies pedagogy in pre-service teachers' instructional practices during their individual classroom observation. It seems clear that to a certain extent their conceptualizations were congruent with multiliteracies teaching practices. The pre-service teachers did not show any problem putting the features of multiliteracies teaching into practice despite having lack of understanding on certain features of the approach. For example, their teaching practices demonstrated various use of knowledge processes, multimodal representations, diversity and agency, despite the fact that their narratives show that they were partially aware about some of

the main tenets of multiliteracies pedagogy applied. They were confident and enthusiastic to take extra efforts in implementing this pedagogy which has led to the incorporation of most of the elements of multiliteracies in their teaching practices. Their instructional practices mirrored the practices of multiliteracies pedagogy even though the degree of application varied. In short, this study has described how pre-service teachers attempted to interpret new ideas introduced over a short period of time and were able to translate the new ideas into actual classroom practices.

This study shed light on the complexity of the relationship between pre-service teachers' cognition and their teaching practices and on those factors that mediate the adoption or abandonment of the multiliteracies pedagogy. Despite being able to put some features of the pedagogy in their practice, there were several inconsistencies between their cognition and practices and in fact some of their practices depicted more than their cognition indicated. The main reason for the divergences between pre-service teachers' stated cognition and their actual classroom practices was due to contextual factors. Their developing understanding of multiliteracies, their strong beliefs about the pedagogy and their prior language experiences brought into the workshop all helped to contribute to the pre-service teachers' adoption of the multiliteracies concept into practice. For example, their reported learning experiences seemed to endorse the multiliteracies practices introduced during the workshop as they rejected the methods used by their former teachers and their strong beliefs about the potentials of the multiliteracies pedagogy enhanced their development and understanding of the new pedagogy. So, teachers are prepared to reject their own lived experiences to create what they conceive as better learning opportunities for their students, but contextual constraints such as exams and teaching provision or resourcing counter this. Nevertheless, it is important to note that instead of reflecting their own beliefs about how to teach, there is also the possibility that they were pressured to conform to the expectation and standard given that the researcher is actually part of the larger institution.

Another striking result to emerge from examining the relationship between the pre-service teachers' cognition and practices is that affective factor in learning was found to influence the uptake of the new approach. Their willingness through personal engagement in between the sessions of the workshop as well as before the implementation in school has enhanced their understanding of the multiliteracies pedagogy thus led to successful adoption of the new pedagogy. This finding confirms those of previous studies and contributes additional evidence which suggests that teachers' own positive attitude and willingness to learn are the basic features for effective implementation of new ideas and could help them overcome variety of challenges in the process of adoption. The identification of the factors that encourage and constrain pre-service teachers learning offers insights into the sorts of support needed to foster their learning process. Perhaps teacher educators could offer more support to assist pre-service teachers learning process and take

careful consideration of the major factors that prevent the application of pedagogical approaches in pre-service teachers' classroom practices.

Finally, this study has made a significant contribution to the body of knowledge within the field of language education in Malaysia, regarding pre-service teachers' cognition and practices of multiliteracies pedagogy. These findings are particularly important with regards to the current teaching practices of English education in Malaysia that yearn towards effective teaching practices for the 21st century. In Malaysian context, this study is one of very few studies that has investigated trainee teachers' cognition and practices about multiliteracies pedagogy. Thus, another contribution of this study is the finding that the pre-service teachers had positive perception about multiliteracies pedagogy, have developed understanding about multiliteracies pedagogy and were able to adopt multiliteracies pedagogy in their classroom practices. Although multiliteracies pedagogy is not part of the national English curriculum in Malaysia, this study has contributed empirical data to enrich the literature for improving educational process of pre-service training and English language teaching in Malaysia. The exploration of pre-service teachers' cognition and practices of multiliteracies pedagogy has contributed to the literature on how ESL teachers understand multiliteracies pedagogy in a short, focused training; extended a body of knowledge on how ESL trainee teachers interpret multiliteracies pedagogy; and revealed their pedagogical practices in relation to multiliteracies pedagogy.

8.4 Limitations of The Study

This study has explored the cognition and practices of pre-service teachers in relation to multiliteracies pedagogy introduced during a teacher education programme. While important findings were presented in this study, this study also has some limitations that need to be acknowledged and considered for future practice.

The first limitation of this study stems from the relatively small sample of participants. There were only six pre-service teachers, and as they were selected from only one public university in Malaysia, the findings of this study clearly cannot be generalised across all ESL pre-service teachers in Malaysia. While it is an advantage to employ an in-depth approach to understand the cognition and practices of pre-service teachers, it means that the study lacks generalisability. The exploratory nature of this research limits its scopes, therefore the transferability of this study to another context is in the charge of the reader.

The second limitation is due to the frequency of classroom observation conducted during data collection process which can contribute to important findings on the consistency and more solid data about pre-service teacher's classroom practices. Throughout the data collection phase, there

was only one opportunity to observe each participant. The observation findings only relied on a one-time observation due to the limited time permitted by the schools. Although this study employed various data collection methods in order to ensure the quality of the teachers' reported accounts, limited observation was not enough to capture their true practices in the classroom. There is a possibility that the pre-service teachers' practices during that one-time observation was superficial and staged. Perhaps more observations could contribute to richer and more convincing findings.

The third limitation of this study is that the questions for semi-structured interviews sounded very brief and there were less efforts to build on and explore the pre-service teacher's responses. The researcher seems to focus more on the questions he or she wished to ask rather than to listen and respond thoughtfully to the teacher. Therefore, this has led to the shortness of some of the pre-service teachers' answers. This issue was often found in novice researchers where "interviews' questions sound terse and opportunities to build on and explore teacher's responses are not seized" (Borg, 2015, p. 243). Perhaps the researcher may require more training, practice and reflection in order to reflect the practices and principles underlie the method of interviewing.

The fourth limitation found in this study is the absence of detailed discussion and implementation of the different literacies in multiliteracies. Given that multiliteracies discourage the use of only paper-based reading and writing but to use multimodal representation in literacy practices, it is important that during the workshop the application of each of the modes were discussed in detail and were demonstrated during the designing phase. Nevertheless, due to time constraints this was eliminated during the designing phase in the workshop as the researcher chose to focus more on the knowledge processes framework. The decision made perhaps had led to the lack of awareness and understanding of the different literacies mentioned in multiliteracies and the absence of the use of technology in their lesson. Even though the impediment of the use of technology in their lesson was due to contextual constraints, yet their awareness of the use of different literacies in multiliteracies are still lacking. Perhaps, if future research is to highlight the implementation of the different literacies in multiliteracies concept, this could improve their cognition and perception of the multimodality element in particular and the pedagogy in general.

The final limitation is the duration of the workshop, which was too short, leaving the pre-service teachers with less opportunities to formally learn and explore the new pedagogy in-depth and gain a vivid picture of the new concept. In addition to that, the two weeks workshop was too packed due to the time constraint for the pre-service teachers to practice the prepared multiliteracies designed collaboratively. Initially the workshop was planned to incorporate a microteaching activity that aimed to strengthen the pre-service teachers' understanding of the concept. However, it was

discarded due to the external factors caused by the university. Thus, the workshop could only be conducted within two weeks' time consisting of one session for lecture, one session for activity, one session designing multiliteracies lesson plan and one session for lesson plan presentation.

Nevertheless, in general, these limitations do not lessen the significant findings provided in this study as it has generated massive and rich data that were carefully selected and presented. This study has contributed to the understanding of pre-service teachers' cognition and practices in relation to multiliteracies that could add to the knowledge in the field of language teacher cognition and second language teacher education.

8.5 Recommendations for Future Research

Further research could carry out a methodology similar to this study to explore the cognition and practices of pre-service teachers in relation to multiliteracies pedagogy within another context, perhaps from other universities in Malaysia. Perhaps it would be interesting to replicate this study to another cohort from different universities so that our knowledge in the field of multiliteracies and language teacher cognition could be broadened.

Since this study has found that pre-service teachers' actual practices exhibited more than their reported cognition, there is the possibility that those behaviours may have been the result of the pressure coming from their desire to impress the researcher. Apart from that, the researcher was actually part of the university thus there is also a chance that they attempted to conform to the expectations and standards of the programme. So, because this research was conducted in the context where the role of the research and teacher educator is connected it is possible that the behaviours shown might not be the reflections of their cognition and would be abandoned as soon as the external pressures are withdrawn. Therefore, future research could consider delayed impact interviews to conclude that the workshop has actually planted a seed in their cognition and to see whether their practices continued in their teaching career or not. This could then add more insights into their expressed preferences and their practices after prolonged exposure to school cultures.

Consequently, future studies could also consider employing longitudinal data collection to gain richer, more in-depth data to understand the cognition and practices of pre-service teachers on multiliteracies pedagogy. For example, conducting research through the entire period of teacher education programme or through an introduction of multiliteracies pedagogy course conducted for one semester. Perhaps, the relationship between pre-service teachers' cognition and their instructional behaviours as well as the factors mediating and influencing their uptake of the new approach could be better understood through the longitudinal mode of investigation given the complex and dynamic interaction among them.


8.6 Concluding Remarks

This study has provided further understandings for the research area of language teacher cognition especially for the pre-service teachers' education and multiliteracies pedagogy. It highlights the impact of short-focused training on pre-service teachers' cognition and practices in adopting new pedagogy. It adds to our knowledge on how pre-service teachers interpret and adopt multiliteracies pedagogy introduced in a short, focused training programme; their implementation of multiliteracies pedagogy during the teaching practicum; and the relationship between their cognition and practices with regard to multiliteracies pedagogy.

Pre-service teachers' conceptualizations and cognition reflect the principles of multiliteracies pedagogy, and they adopted the pedagogy in their teaching practice which suggests that short, focused training supports the development of pre-service teacher's cognitive process. This study has also broadened our understanding on the process of learning of teachers with little or no experiential background in teaching upon the uptake of an innovative practice.

This study shed light on the complexity of the relationship between pre-service teachers' cognition and their teaching practices particularly in the context of embracing the new pedagogy. The relationship between their cognition and practices is complex, dynamic and interdependent. The disparity between pre-service teachers' cognition and practices was due to contextual factors while affective factors mediated the uptake of new pedagogy and the process of putting their cognition into practices. These factors offer insight into the kind of support pre-service teachers needed to enhance their learning process which can be carefully considered by teacher educators. Finally, this study contributed to the understanding of pre-service teachers' cognition and practices on multiliteracies pedagogy.

Appendix A Multiliteracies Workshop Plan

 <p>INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA</p> <p>COURSE OUTLINE</p>	
Kulliyah / Institute	Kulliyah of Education
Department / Centre	Language and Literacy
Programme	B. Ed. (TESL)
Name of Course / Mode	Multiliteracies Workshop
Course Code	ML 101
Name (s) of Academic staff / Instructor(s)	Haziqah Zulaikha Binti Aris
Rationale for the inclusion of the course / module in the programme	<p>In the current era of Information and Communication Technologies, students as they interact with various multimedia and deal with the multiplicity of communication channels and social networking fundamentally change their learning processes in the ESL classroom. Students need to develop broad repertoires of literacy practices that are not only confined to the traditional ability of reading and writing alone anymore due to the rapid transformations occurring in today's interconnected technological world.</p> <p>Therefore, this workshop attempts to rethink the current teaching practices of writing instruction through an adoption of multiliteracies approach, a transformative pedagogy that could bring about change in the literacy teaching parallel with the demand of the current digital age. This course will train teachers on how to execute multiliteracies approach in teaching writing in schools.</p>

Semester and Year Offered	Semester 1, 2017/2018											
Level	Four											
Duration	27/11/2017 – 8/12/2017											
Batch of Student to be Affected	Fourth Year, Semester 1 Students											
Student Learning	<table border="1"> <thead> <tr> <th colspan="2">Face to Face</th> <th colspan="2">Independent Learning</th> </tr> </thead> <tbody> <tr> <td>Lecture</td> <td>Microteaching</td> <td>Preparation of Lesson Plan</td> <td>Review & Reading</td> </tr> </tbody> </table>		Face to Face		Independent Learning		Lecture	Microteaching	Preparation of Lesson Plan	Review & Reading		
Face to Face		Independent Learning										
Lecture	Microteaching	Preparation of Lesson Plan	Review & Reading									
Credit Value (hours)	3											
Pre-requisites (if any)	None											
Co-requisites (if any)	None											
Course Objectives	<p>The objectives of this course are to:</p> <ol style="list-style-type: none"> 1. Understand the concept of multiliteracies pedagogy. 2. Examine the elements, structure and functions of multiliteracies pedagogy. 3. Develop a multiliteracies lesson plan for teaching of writing. 4. Demonstrate the teaching of writing using multiliteracies approach with peers (microteaching). 											
Learning Outcomes	<p>Upon completion of this course, students should be able to:</p> <ol style="list-style-type: none"> 1. Describe the principles of multiliteracies pedagogy. 2. Analyse the purpose and implications of multiliteracies pedagogy. 											

	<p>3. Apply the principles of multiliteracies pedagogy for teaching writing in a lesson plan.</p> <p>4. Integrate and implement multiliteracies pedagogy in the teaching of writing with peers.</p>									
Transferable Skills:	<table border="1"> <thead> <tr> <th>Skills</th> <th>How they are developed</th> <th>Assessment method</th> </tr> </thead> <tbody> <tr> <td>Make decision on relevant activities</td> <td>Group Discussion</td> <td>Lesson Plan</td> </tr> <tr> <td>Plan and organize lesson</td> <td>Lecture Group Discussion</td> <td>Microteaching</td> </tr> </tbody> </table>	Skills	How they are developed	Assessment method	Make decision on relevant activities	Group Discussion	Lesson Plan	Plan and organize lesson	Lecture Group Discussion	Microteaching
Skills	How they are developed	Assessment method								
Make decision on relevant activities	Group Discussion	Lesson Plan								
Plan and organize lesson	Lecture Group Discussion	Microteaching								
Teaching-Learning / assessment strategy	<table border="1"> <thead> <tr> <th>Type of Assessment</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Teaching-learning strategy</td> <td>Lecture, Discussion, Presentation, Demonstration</td> </tr> <tr> <td>Assessment strategy</td> <td>Microteaching</td> </tr> </tbody> </table>	Type of Assessment	Description	Teaching-learning strategy	Lecture, Discussion, Presentation, Demonstration	Assessment strategy	Microteaching			
Type of Assessment	Description									
Teaching-learning strategy	Lecture, Discussion, Presentation, Demonstration									
Assessment strategy	Microteaching									
Course Synopsis	This workshop discusses the nature and concept of multiliteracies pedagogy as well as the development and implementation of multiliteracies lesson plan for teaching of writing.									
Mode of Delivery	Lectures, discussions, presentations and mini lessons.									

Mapping of course / module to the Programme Learning Outcomes				
Learning Outcome of the course		Programme Outcomes		
		01	02	03
1.	Describe the principles of multiliteracies pedagogy.	√		
2.	Apply the principles of multiliteracies pedagogy for teaching writing in a lesson plan.		√	
3.	Integrate and implement multiliteracies pedagogy in the teaching of writing with peers.			√
Content outline of the course / module				
Weeks	Topics	Learning Hours	Task/Reading (author/page)	
1	Introduction to the Workshop The nature and purpose of multiliteracies pedagogy <ul style="list-style-type: none"> Why is multiliteracies pedagogy? What is multiliteracies pedagogy? How is multiliteracies pedagogy? 	3	Cope & Kalantzis, Ch 1	
2	Developing multiliteracies lesson plan <ul style="list-style-type: none"> Understanding of how to integrate multiliteracies approach for teaching of writing 	3	Cope & Kalantzis, Ch 4	
3	Teaching multiliteracies approach in the teaching of writing <ul style="list-style-type: none"> Microteaching with peers 	3	Cope & Kalantzis, Ch 13	

Required references supporting the course		
Cope, B. & Kalantzis, M. (2015). "The Things You Do to Know: An Introduction to the Pedagogy of Multiliteracies." Pp. 1-36 in <i>A Pedagogy of Multiliteracies: Learning by Design</i> , edited by B. Cope and M. Kalantzis. London: Palgrave.		
Recommended references supporting the course		
Ajayi, L. (2010). Preservice teachers' knowledge, attitudes and perceptions of their preparation to teach multiliteracies/multimodality. <i>The Teacher Educator</i> , 46(1), 6-31.		
Cope, B., & Kalantzis, M. (2009). "Multiliteracies": New literacies, New learning. <i>Pedagogies: An International Journal</i> , 4(3), 164-195.		
Corkett, J. K. & Benevides, T. (2015). Pre-service teachers' perceptions of technology and Multiliteracies within the inclusive classroom. <i>International Journal of Psychology and Educational Studies</i> , 2(2), 35-46.		
Kalantzis, M., & Cope, B. (2008). Language education and multiliteracies. In <i>Encyclopedia of language and education</i> . Springer US, 195-211.		
Kaur, S., Ganapathy, M., & Sidhu, G. K. (2012). Designing Learning Elements Using the Multiliteracies Approach in an ESL Writing Classroom. <i>3L: Southeast Asian Journal of English Language Studies</i> , 18(3).		
Rowell, J., Kosnik, C. & Beck, C. (2008). Fostering Multiliteracies pedagogy through preservice teacher education. <i>Teaching Education</i> . 19(2), 109-122.		
The New London Group. (1996). A pedagogy of multiliteracies: designing social features. <i>Harvard Educational Review</i> . 66(1), 60-92.		
Prepared by:	Checked by:	Approved by:
_____	_____	_____
Haziqah Zulaikha Binti Aris	Dr. Julia Huettner	Dr. Suhailah Hussien
PhD Candidate	Supervisor	Deputy Dean
University of Southampton	University of Southampton	Student and Academic Affairs IIUM

A.1 Week 1: Lesson 1: Session 1

Course: EDC 4203		Date: 28/11/2017	Duration: 90 Minutes		
Unit: Multiliteracies Pedagogy		Time: 3.30 pm – 4.20 pm	Enrolment: /21		
Topic: The Concept of Multiliteracies					
Objective:					
1. Learners describe the principles of multiliteracies pedagogy.					
Learning outcomes:					
1. Learners draw upon and articulate personal knowledge and familiar, lived experiences about the teaching and learning of English in general and of writing in English in particular.					
2. Learners immerse themselves in and reflect upon new situations and information; multiliteracies pedagogy.					
Assumed prior knowledge:					
1. Students have had experience learning English and how to write in English.					
2. Students have had some understanding about the pedagogy of teaching writing from attending the course during the term.					
Time	Content & Teacher Activity	Student Activity	Purpose	Assessment	Resources
10 mins	Introduction: <ul style="list-style-type: none"> • Setting up classroom. • Collect attendance. • Warm up questions. 				

<p>20 mins</p>	<p>Teacher asks these questions:</p> <ul style="list-style-type: none"> • What do you think of the teaching English? • Can you recall any memorable experience of learning English? • What about the teaching of writing? What comes up when you think of teaching of writing? • How were you taught to write in English? • Are there any issues that you could think of with the way you were taught learning English and how to write in English? Any problem? What kind of problem? 	<p>Individually students write down their initial ideas on post-it notes, one idea per note.</p> <hr/> <p>In group, each person presents their ideas, sticking them one by one into a board close to similar ideas.</p> <hr/> <p>The group then works on ordering these ideas more systematically, identifying and naming groups, grouping the ideas in circles.</p>	<ul style="list-style-type: none"> • Finding out the ideas that learners bring to a topic. • Starting with what students know and what they bring to a topic. • Getting students background and their ideas about teaching. 	<p>A cardboard full of grouped ideas in a systematic manner.</p>	<p>Post-it notes</p> <hr/> <p>Cardboard/ Manila Card</p>
<p>10 mins</p>	<ul style="list-style-type: none"> • Teacher relates students' findings to a discussion about the issues of teaching writing in Malaysia in the current digital age. • Then teacher leads the discussion to the rationale of this workshop that attempts to rethink the current teaching practices of writing instruction through an adoption of multiliteracies approach, a transformative pedagogy that could 		<p>Creating problem awareness.</p>		

Appendix A

	bring about change in the literacy teaching parallel with the demand of the current digital age.				
30 mins	Teacher distributes Clink and Clunk worksheet, gives instructions on the activity and then presents a PowerPoint presentation on multiliteracies concept to students.	Students listen to a PowerPoint presentation about multiliteracies pedagogy by the teacher.	Assessing what students have learned and what need to be covered in more depth.	A text with questions, students' response and main ideas about the concept	PowerPoint slides on multiliteracies pedagogy
		After the presentation students draw up a table with three columns headed 'clink', 'clunk' and 'text ideas'.			
		Under 'clink' they record the information they really understand or what they already know.			
		Under 'clunk' they record what they do not understand or any questions they have.			
		Under 'text ideas' they record the main ideas of the text presented.			
15 mins		In groups students discuss and clarify information, using peer tutoring and teacher support to ensure all students understand the information.		Group discussion on students' findings	
5 mins	Teacher summarises lesson and give reading tasks to students for next lesson.	Students reflect on what they have learned for the day.	Encourage reflective practice among students.	Oral presentation	

A.2 Week 1: Lesson 1: Session 2

Course: EDC 4203		Date: 29/11/2017	Duration: 90 Minutes		
Unit: Multiliteracies Pedagogy		Time: 1.30 pm – 3.00 pm	Enrolment: /21		
Topic: The Concept of Multiliteracies					
Objective:					
1. Learners analyse the structure, purpose and implications of multiliteracies pedagogy.					
Learning outcomes:					
1. Learners examine and organize key features (knowledge processes) of multiliteracies concept in a learning element.					
2. Learners account for motives and consequences behind ideas and information of the learning element.					
Assumed prior knowledge:					
1. Students have had some understanding about the pedagogy of multiliteracies from attending the class yesterday.					
Time	Content & Teacher Activity	Student Activity	Purpose	Assessment	Resources
5 mins	Introduction: <ul style="list-style-type: none"> • Setting up classroom. • Collect attendance. • Warm up questions. 				
30 mins	Teacher distributes stripped multiliteracies lesson plan to students.	Each group will be given a set of stripped lesson plan and asked to figure out which knowledge processes they believe is	Develop understanding of the key features (knowledge processes) of multiliteracies		Stripped learning elements, multiliteracies

Appendix A

		activated by each activity by mapping it to the multiliteracies placemat.	concept and how it can be employed purposely to design learning.	Sequenced multiliteracies lesson plan	Placemat, 4 different colour pencils and a glue.
		Students will then be prompted to sequence the activities into a meaningful order according to the knowledge processes – thinking about and discussing how they would expect it to work in practice.			
10 mins	Teacher distributes stripped lesson objectives to students.	In groups students map and analyse the objectives to the activities sequenced in the placemat.	<ol style="list-style-type: none"> 1) To think about the degree of match and connection between the lesson objectives and its activities. 2) Get the general picture how designing learning in multiliteracies manner looks like. 	Multiliteracies lesson plan with its objectives.	Stripped objectives
10 mins	Teacher leads discussion to discuss on students' findings.	Each group presents their findings to the class.		Oral presentation	
15 mins	Teacher distributes predicting purpose and function sheet.	Following, students then consider the purpose, the implications and consequences for learners and how they think the learning element could be improved.	Enables students to examine a concept from more than one perspective	Purpose and implications of multiliteracies lesson plan	Predicting purpose and function sheet.
15 mins	Teacher leads discussion to discuss on students' findings.	In groups students present their findings.		Oral presentation	

15 mins	Teacher summarises lesson and give reading tasks to students for next week. Teacher also reminds students to bring their own laptop to class for the next lesson.	Students reflect on what they have learned for the day.	Encourage reflective practice among students.	Oral presentation	
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A.3 Week 2: Lesson 2: Session 1

Course: EDC 4203		Date: 5/12/2017	Duration: 90 Minutes		
Unit: Multiliteracies Pedagogy		Time: 3.30 pm – 4.20 pm	Enrolment: /21		
Topic: Designing Multiliteracies Pedagogy					
Objective:					
1. Learners test their understandings of lesson content by producing a lesson plan.					
Learning outcome:					
1. Apply the principles of multiliteracies pedagogy for teaching writing in a lesson plan					
Assumed prior knowledge:					
1. Understanding of the multiliteracies concept.					
2. Understanding of the elements, structure and functions of multiliteracies pedagogy.					
Time	Content & Teacher Activity	Student Activity	Purpose	Assessment	Resources
5 mins	Introduction: <ul style="list-style-type: none"> • Collect attendance. • Warm up questions on previous lesson. • Students get in groups 	Students reflect on what they have learnt from the previous lesson	1) Refresh what they have learnt in the previous lesson.		
10 mins	Teacher presents a PowerPoint presentation on how to design multiliteracies lesson plan	Students listen to a PowerPoint presentation about designing a multiliteracies lesson.	Explanation of how to operationalise the theory		PowerPoint on designing

			of multiliteracies approach.		multiliteracies lesson
70 mins	Teacher asks students to create a multiliteracies lesson plan for the teaching of writing through a series of design phases.	Ideation phase (generating ideas): <ul style="list-style-type: none"> Students identify learning purpose; a big idea, a guiding question or a topic for a unit of work which fulfils curriculum requirement. Students then generate ideas for activities that suits the learning purpose. 	To generate ideas that they can use in the classroom.	Post-it-notes with ideas on learning purpose and class activities.	Post-it notes
		Mapping phase: <ul style="list-style-type: none"> Students map activities which they have generated on post-it notes in the ideation phase according to the Knowledge Processes in the Placemat. 	To talk about, sort, refine, re-write, cull or add activities to their designs so as to achieve a balance of pedagogies.	Placemat with post-it-notes pasted according to the knowledge processes.	A1 multiliteracies Placemat and 4 different colour pencils
		Sequencing phase: <ul style="list-style-type: none"> Students scaffold the learning by labelling or attaching coloured dots (represent the Knowledge Processes) to the activities, then placing the activities into a teaching sequence. 	To ensure that there is an effective mix of pedagogies, that the activities connect well one with another and that each activity is relevant to the learning and has “earned its keep’.	Sequenced activities according to teaching sequence on an A1 paper	A1 size blank paper, coloured dots

Appendix A

		<p>Reviewing and aligning:</p> <ul style="list-style-type: none"> Students reviewed their activities against their learning goals and transfer it into a lesson plan. 	To reflect, review and align activities against their learning goals.	Completed multiliteracies learning element.	
5 mins	Teacher discusses on students' progress and give feedback.	Students reflect on what they have done so far.	Encourage reflective practice among students.	Oral presentation	

A.4 Week 2: Lesson 2: Session 2

Course: EDC 4203		Date: 6/12/2017	Duration: 90 Minutes		
Unit: Multiliteracies Pedagogy		Level: 1.30 pm – 3.00 pm	Enrolment: /21		
Topic: Implementing Multiliteracies Pedagogy					
Objective:					
1. Learners present what they have created creatively, the lesson plan in class.					
Learning outcome:					
1. Learners integrate multiliteracies pedagogy in the teaching of writing.					
Assumed prior knowledge:					
1. Students have had experience in presenting lesson plan attending the course during the term.					
Time	Content & Teacher Activity	Student Activity	Purpose	Assessment	Resources
5 mins	Introduction: <ul style="list-style-type: none"> • Collect attendance. • Warm up questions on previous lesson. • Students get in groups 	Students reflect on what they have learnt from the previous lesson	1) Refresh what they have learnt in the previous lesson.		
80 mins	Teacher gives explanation on how the microteaching will be conducted.	Students in groups present multiliteracies pedagogy lesson plan prepared to their peers. Groups that do not present will capture evidence of learning and provide feedback; the activities they have aligned along with multimodal	Allow learners to present what they have created creatively.		Oral presentation

Appendix A

		snapshots that capture or preserve the ways in which learners are learning.			
	Teacher gives feedback accordingly for each group.	Peers provide feedback to the presenter after every presentation.	Reflect on the strengths and weaknesses of the presented lesson plan, giving opportunities to improve the available lesson plan.		Rating Sheet
5 mins	Teacher summarises lesson and the whole workshop. Teacher opens the floor for any questions and comments from students.	Students reflect on what they have learned for the day or the whole workshop.	Encourage reflective practice among students.	Oral presentation	

Appendix B Pre-Intervention Interview Questionnaire

Interview Questionnaire (Pre-Intervention)

Name: _____

1. Personal questions about yourself:

a. What made you want to become a teacher? An English teacher?

b. In a scale of 1-10, how would you rate your English Language proficiency? Why?

c. Have you always studied in the city? Have you moved elsewhere?

2. Your perceptions on literacies in this digital age:

a. How often do you use English? What do you typically write and read in English?

b. What do you think your future students might typically write and read in English?

c. Do you think writing a Facebook post or in any social medium is part of literacy?
Why?

Appendix B

3. Please tell me about your own experiences of learning to write in English:

a. Can you remember what kind of writing activities you did?

b. How were you normally taught to write in English?

c. What kind of role did your teacher take?

d. What did you find best or easiest about learning to write in English? What do you like least? Why?

4. Do you think your own language learning experiences have any influence on the way you will teach?

5. Can you recall any good teaching writing approach, perhaps from a teacher who taught you, or a teacher you know? If yes, what is/are the approach(es) and why do you think so?

6. How would you describe your approach to writing? What about your approach to the teaching of writing?

7. How would your teacher education programme help to prepare you to teach writing in school?

8. Do you think your beliefs about the approach to teach writing have changed in any way during your teacher education training? If so, how and why?

9. When planning lessons, what do you think writing features to focus on? Why?

10. Can you describe a good writing lesson according to your understanding?

Appendix C Post-Training Interview Questions

Semi-Structured Interview Questions (Post-Training)

Understanding of the concept

1. In your understanding, what does multiliteracies pedagogy means to you? (Probe: What do you understand about the concept? How would you define multiliteracies instruction?)
2. Can you recall any of the elements or characteristics of multiliteracies pedagogy teaching practice?
3. How do the knowledge processes facilitate in the planning of writing activities?
4. During the designing activity, do you find the knowledge processes as helpful in planning the lesson? (Probe: Does the knowledge processes help you in any way? Planning better?)

Outcomes of the workshop

5. After you have tried designing the lesson using the pedagogy with your peers, do you have any comment on it? (Probe: How do you feel presenting it? Does it make sense to you in any way? Does it help you to get better understanding?)
6. At which point of the workshop you think that you have understood multiliteracies concept? (Probe: perhaps your chronology of understanding this pedagogy throughout the workshop?)
7. Do you think your knowledge on teaching writing pedagogy after attending this workshop has improved?

Significant of the workshop

8. What aspects of the multiliteracies learning elements was an advantage or disadvantage to teaching of writing?
9. Do you consider the multiliteracies learning elements an important pedagogical tool in the teaching of writing in this age? (Probe: Is it significant? How? Why?)
10. How do you think multiliteracies pedagogy will help you in the teaching of writing?

Future practice

11. Would you use multiliteracies pedagogy later on in your teaching practice? (Probe: Do you have the confident to teach this LP?)
12. Do you think you have received sufficient training or guidance to help you adopt multiliteracies pedagogy in your teaching practice? (Probe: If not, what more do you think you need before you can use this pedagogy?)

Appendix C

13. If you were to be given another training on multiliteracies pedagogy, what aspects do you want to know more? (Probe: Any improvement should be done?)
14. Any final comments? (Probe: Suggestions or questions in regard to the instructor, content of the workshop, materials, timing, support and feedback?)

Appendix D Post-Practice Interview Questions

Semi-Structured Interview Questions (Post-Practice)

Introduction

1. Please tell me about the observed lesson. What were your intended aims and objectives of that lesson?
2. Do you think you have incorporated the multiliteracies pedagogy into your teaching? (Probe: if the answer is yes, can you describe in more detail in what way you think your teaching is using multiliteracies pedagogy? If the answer is no, why?)
3. Can you highlight the elements of multiliteracies approach in your teaching? (Can you state the knowledge processes of multiliteracies in your lesson plan?)
4. Does the multiliteracies lesson plan enable you to achieve your learning objectives?

Multiliteracies Lesson Plan

5. How is it your updated lesson plan differ from the one you did during the workshop? What did you change? Why?
6. Do you find any significant different between multiliteracies lesson plan the normal lesson plan you always use?
7. Do you think your students are engaged during the lesson? Do you think the lesson plan is too easy for the students?

Final Perceptions

8. Do you think multiliteracies pedagogy is helpful in the teaching of writing? Does it help you? How did it help you? Please elaborate.
9. Which aspect of the multiliteracies pedagogy to teaching writing was the most beneficial?
10. What are the factors that need to be taken into consideration when using the multiliteracies pedagogy in the writing classroom?
11. Do you think multiliteracies pedagogy is practical in the teaching of writing?
12. Do you find the multiliteracies pedagogy relevant and practical for present times? (Incorporating technologies). So, one of the elements of multiliteracies is to incorporate multimodality where usually technologies are incorporated. Is there any specific reason why you have not integrated any use of technology in your lesson?

Challenges

Appendix D

13. Is it easy or difficult to integrate multiliteracies pedagogy in your teaching? Why?
14. Did you experience any difficulties when you adopted the multiliteracies approach? (Probe: if the answer is yes, what are the challenges you faced? Do you feel confident implementing it?) What about when you implemented the normal lesson plan? Would you still experience these difficulties?

Conclusion

15. Are you satisfied with your teaching today? (Probe: Did it work out the way you had expected? Do you think it works for the students? If you taught this lesson again, would you have taught it differently?)
16. Will you continue using this approach in your teaching practice?
17. Is there anything else you would like to say about this particular lesson, perhaps the planning or anything about it that I have not given you a chance to say?
18. Do you have suggestions that could serve as guidelines for teachers wanting to adopt the multiliteracies pedagogy as a form of literacy practice in the ESL writing classroom?
19. Do you think you have learned anything new about teaching from this experience?

Appendix E Pre-service Teacher Information Sheet

Study Title: Pre-service Teacher Cognition and Practices in Malaysian Secondary School Teacher Education: How Trainee Teachers Experiment with Multiliteracies Pedagogy.

Researcher: Haziqah Zulaikha Binti Aris

ERGO number: 30844

Please read this information carefully before deciding to take part in this research. It is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

This study is purely academic. It is a fulfilment for my PhD qualification which I am currently pursuing at the University of Southampton in the UK.

The purpose of this study is to examine the adoption of innovative teaching practice by pre-service ESL teachers and how they shape their beliefs in the process of experimenting with new teaching method introduced in the teacher education programme. The objectives of this research are:

1. to understand pre-service teachers' perceptions and practices upon implementing multiliteracies approach in the teaching of writing in ESL classroom.
2. examine the influence of short-focused pre-service trainings on pre-service teachers' cognition
3. to investigate how pre-service ESL teachers, implement a new teaching approach introduced during their teacher education programme

The research questions that this study attempts to answers are:

1. What are the teaching beliefs of pre-service teachers regarding the multiliteracies approach to teaching writing?
2. To what extent does a short focused pre-service training affect teacher cognition?
3. How do pre-service teachers experiment with this new teaching method presented in their teacher education programme?

Why have I been asked to participate?

You have been chosen purposively to take part in this study as a key respondent. You have also been chosen to take part in this research due to your expertise and experience as TESL students and being involved in the teacher education programme.

What will happen to me if I take part?

Upon receiving your consent form, you will be contacted to arrange a suitable time and place for the pre-intervention interview. The duration of the interview will last up to 30 minutes to an hour where you will be interviewed individually.

You will then attend a workshop on multiliteracies pedagogy. The workshop will be conducted during the final three weeks of the Teaching Writing in Secondary Schools course and you will attend a three hours' class per week where you will listen to lectures and do classroom activities. The workshop will be conducted in the Faculty of Education, IIUM where I will be the instructor. The workshop will be video recorded, and the tasks done will be collected.

Upon the completion of the workshop, you will be interviewed again for the purpose of post-training interview. The duration of the interview will last up to 30 minutes to an hour where you will be interviewed individually.

This study also requires the participants to be observed. These observations are not meant to find faults of the participants, but rather to help the researcher to understand the nature of the implementation of a multiliteracies pedagogy in real classroom practices. Therefore, you will be observed one time during teaching practicum, teaching writing using multiliteracies approach. The observation will be video recorded.

Finally, you will be interviewed for the purpose of post-practice interview. The duration of the interview will last up to 30 minutes to an hour where you will be interviewed individually. Please be reminded that all interviews will be audio recorded. After the interview, you will receive a copy of the interview transcripts for cross-checking. If there is any error, or misinterpretation, you have the right to inform the researcher and amendments will be made accordingly.

Are there any benefits in my taking part?

There may be no benefit to the individual, but the findings of this study can shed light on understanding the cognition of pre-service teachers on implementing an innovative teaching method introduced in a short focussed pre-service training during their teacher education programme. It will help to understand how pre-service teachers' cognition developed during their teacher education programme and what the challenges they encounter implementing theory into practice. This might improve the educational process of IIUM teacher education programme in particular and in other countries which have similar contexts generally.

By participating in this study, you will contribute to generating new set of knowledge in the area of implementation of multiliteracies pedagogy in Malaysia by discovering the ability and perception of pre-service teachers towards integrating multiliteracies pedagogy during their teaching practice.

You will also help in giving better understanding of those factors which facilitate learning leading to more effective teaching and learning process of teaching writing through an adoption of multiliteracies approach, a transformative pedagogy that could bring about change in the literacy teaching parallel with the demand of the current digital age.

Are there any risks involved?

I believe that the risks are very minimal. As this study involves collection of data through interviews and observations, therefore, the risk could be minimalized and controlled. Ensuring the safety of both you and the researcher, it is advised that the interview be conducted in your institution. First, there is no risk of having to commute to the interview locations involved. Secondly, the institution is properly secured by their security measures such as security guards and CCTVs. The observation on the other hand will be done in selected schools where it is also properly secured by security measures and within safe environment.

Will my participation be confidential?

As a researcher, it is my responsibility to comply with the University of Southampton Data Protection Act. All the data collected from the interviews will be stored in a locked facility, accessible to the researcher and the supervisors only. Data will strictly remain confidential. There will be no mentioning of name in any part of the report for this study, although the description about your roles in your establishments might be disclosed.

What should I do if I want to take part?

If you agree to participate, you need to complete the consent form and return it to the researcher either by hand or email. You will be given two weeks to make your decision.

What happens if I change my mind?

As you have already observed, participation in this study is voluntary. If for any reason you wish to withdraw from this study, you are free to do so. You just need to inform the researcher about your intention to withdraw from participating without the need to state any reason.

What will happen to the results of the research?

The results in this study will be written up and published. If necessary and needed, a copy of the results will be given to participants. All anonymised research data will be kept for research purposes only therefore they might be made available for future research projects. Therefore, they might be shared with my supervisor and they might be shared in academic publications but not publicly available. All anonymised research data will be stored in my computer which is password protected so that they are safe. There is also the server of the university that I will use as a back-up which is also a password protected. The password will only be known to me and my supervisor. The laptop will be either in my direct supervision or locked up at all times during the study. Publications and anonymised data relating to the research will be made available through the institutional repository and will be stored a minimum of 10 years as per University of Southampton policy.

Where can I get more information?

If you have any questions about the study, you can contact the researcher or her supervisor. The contact details are;

Researcher;
 Haziqah Zulaikha Binti Aris
 Faculty of Humanities
 University of Southampton
 Email: hzba1g15@soton.ac.uk or haziqah_zulaikha@yahoo.com
 Phone: UK +447599411176 / MALAYSIA +60196979817

Supervisor:
 Dr. Julia Huettner
 Faculty of Humanities
 University of Southampton
 Avenue Campus
 Southampton
 SO171BF United Kingdom
 Email: J.Huettner@soton.ac.uk
 Phone: 023 8059 9423

What happens if something goes wrong?

For any concerns or complaints about this study, contact: Research Integrity and Governance Manager (023 80 59 5058, rgoinfo@soton.ac.uk).

Thank you for taking the time to read the information sheet and considering taking part in the research.

Appendix F Pre-service Teacher Consent Form

Study title: Pre-service Teacher Cognition and Practices in Malaysian Secondary School Teacher Education: How Trainee Teachers Experiment with Multiliteracies Pedagogy.

Researcher name: Haziqah Zulaikha Binti Aris

ERGO number: 30844

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (25.11.2017 / version 1) and have had the opportunity to ask questions about the study.	
I agree to take part in this research project and agree for my data to be used for the purpose of this study.	
I understand my participation is voluntary and I may withdraw at any time for any reason without my rights being affected.	
I understand that classroom activities, reflective discussions and interviews regarding the research project will be audio/ or video recorded.	
I understand that the information gained in this study may be published in any final research reports and/or academic journals. At all times, my identity will remain anonymous.	
I understand that the information collected about me may be anonymised and used in future ethically approved research studies.	

Name of participant (print name)

Signature of participant

Date

Name of researcher (print name)

Signature of researcher

Date

Appendix G School Student Information Sheet

Study Title: Pre-service Teacher Cognition and Practices in Malaysian Secondary School Teacher Education: How Trainee Teachers Experiment with Multiliteracies Pedagogy.

Researcher: Haziqah Zulaikha Binti Aris

ERGO number: 30844

Please read this information carefully before deciding to take part in this research. It is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

I am currently studying for my PhD at the University of Southampton and I am very interested in some of the teaching practices related to teaching writing that the teachers in your school are using. My focus is on your teacher, but I will be recording your classes. The recordings I make will only be used for my PhD research. I have obtained permission to record at your school from the Economic Planning Unit, Prime Minister office of Malaysia but I would also like to have your consent to record your class.

Why have I been asked to participate?

You have been chosen to take part in this study as I am interested in how your teacher acts in the classroom. You have also been chosen to take part in this research due to your attendance as a student in this secondary school.

What will happen to me if I take part?

Upon receiving your consent form, you will take part in your English subject class as usual, but your participation in that class will be observed and video recorded. The observation mainly focus on the teacher as the purpose of this observation is to understand the nature of the implementation of a multiliteracies pedagogy in real classroom practices by pre-service teachers. Therefore, I am videoing you so that I can observe how the teacher teaches and interacts in the class.

Are there any benefits in my taking part?

There may be no benefit to you personally, but I hope that with a better understanding of teaching in a multiliteracies manner, the teaching and learning experience of students in Malaysian schools will be improved. By participating in this study, you will contribute to generating new set of knowledge in the area of implementation of multiliteracies pedagogy in Malaysia by discovering the ability and perception of pre-service teachers towards integrating multiliteracies pedagogy during their teaching practice.

Are there any risks involved?

As you are not doing anything unusual, but simply taking your English class, any risks are minimal. The data collected will not be used in your marks as it is only used for the purposes of research.

Will my participation be confidential?

As a researcher, it is my responsibility to comply with the University of Southampton Data Protection Act. All the data collected from the observation will be stored in a locked facility, accessible to the researcher and the supervisors only. Data will strictly remain confidential. There will be no mentioning of name in any part of the report for this study.

What should I do if I want to take part?

If you agree to participate, you need to complete the consent form and return it to the researcher either by hand or email. You will be given two weeks to make your decision.

What happens if I change my mind?

As you have already observed, participation in this study is voluntary. If for any reason you wish to withdraw from this study, you are free to do so. You just need to inform the researcher about your intention to withdraw from participating without the need to state any reason.

What will happen to the results of the research?

The results in this study will be written up in a PhD and published. All anonymised research data will be kept for research purposes only therefore they might be made available for future research projects. Therefore, they might be shared with my supervisor and they might be shared in academic publications but not publicly available. All anonymised research data will be stored in my computer which is password protected so that they are safe. There is also the server of the university that I will use as a backup which is also a password protected. The password will only be known to me and my supervisor. The laptop will be either in my direct supervision or locked up at all times during the study. Publications and anonymised data relating to the research will be made available through the institutional repository and will be stored a minimum of 10 years as per University of Southampton policy.

Where can I get more information?

If you have any questions about the study, you can contact the researcher or her supervisor. The contact details are;

Researcher;
Haziqah Zulaikha Binti Aris
Faculty of Humanities
University of Southampton
Email: hzb1g15@soton.ac.uk or haziqah_zulaikha@yahoo.com
Phone: UK +447599411176 / MALAYSIA +60196979817

Supervisor:
Dr. Julia Huettner
Faculty of Humanities
University of Southampton
Avenue Campus
Southampton
SO171BF United Kingdom
Email: J.Huettner@soton.ac.uk
Phone: 023 8059 9423

What happens if something goes wrong?

For any concerns or complaints about this study, contact: Research Integrity and Governance Manager (023 80 59 5058, rgoinfo@soton.ac.uk).

Thank you for taking the time to read the information sheet and considering taking part in the research.

Appendix H School Student Consent Form

Study title: Pre-service Teacher Cognition and Practices in Malaysian Secondary School Teacher Education: How Trainee Teachers Experiment with Multiliteracies Pedagogy.

Researcher name: Haziqah Zulaikha Binti Aris

ERGO number: 30844

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (25.11.2017 / version 1) and have had the opportunity to ask questions about the study.	
I agree to take part in this research project and agree for my data to be used for the purpose of this study.	
I understand my participation is voluntary and I may withdraw at any time for any reason without my rights being affected.	
I understand that classroom activities and reflective discussions regarding the research project will be audio/ or video recorded.	
I understand that the information gained in this study may be published in any final research reports and/or academic journals. At all times my identity will remain anonymous.	
I understand that the information collected about me may be anonymised and used in future ethically approved research studies.	

Name of participant (print name)

Signature of participant

Date

Name of researcher (print name)

Signature of researcher

Date

Appendix I Description of Lesson Plan

I.1 Description of Irfan's Lesson

Knowledge domain: English - Writing		
Scope of learning: Loving Our Country		
Learning level: Form 4		
Prior knowledge: Festivals celebrated in Malaysia and the format of writing an article.		
Learning objectives: Write an article about a festival celebrated in Malaysia.		
Knowledge Process		Learning Activities
Experiencing	The known	List three festivals celebrated in Malaysia on the whiteboard.
	The new	Introduction to festivals celebrated in Malaysia.
Conceptualizing	By naming	Identify four characteristics for every festival.
	With theory	-
Analyzing	Functionally	Identify the purpose for every festival. Why do people celebrate these festivals?
	Critically	-
Applying	Appropriately	Write an article on a chosen festival celebrated in Malaysia.
	Creatively	-
Learning outcomes:		
<ol style="list-style-type: none"> 1. List three festivals celebrated in Malaysia on the whiteboard. 2. Identify the purpose and four characteristics for every festival. 3. Write an article on a chosen festival celebrated in Malaysia in pairs. 		

Table 7 Irfan's Lesson Plan

Irfan's multiliteracies lesson focused on developing students' English writing literacy skills where the objective was to produce an independent, creative writing piece by the end of the lesson. Irfan chose a topic on festivals in Malaysia for his multiracial class which consists of Malay, Chinese and Indian students. Activities selected for the lesson were listing celebrated festivals in Malaysia where volunteers write on the board; choosing and identifying three festivals, their purposes and

Appendix I

characteristics through groupwork where students are involved in spoken discussion and creating an affinity diagram on large scale paper; and writing a short piece article about one chosen festival through pair work where students discuss and plan to write the article. He started off by asking volunteers to write on the board the festivals that were celebrated in Malaysia. Then in groups he asked students to choose three festivals, identify its purposes and characteristics in an affinity diagram on a large size paper. He pre-determined the characteristics which were food, attire and activities. Finally, in pairs students planned and wrote an article about one festival chosen from those discussed earlier. Since the students would already have content knowledge about the festivals, during the final activity, they just need to discuss how they were going to plan the writing and to write it.

I.2 Description of Din's Lesson

Knowledge domain: English – Writing		
Scope of learning: Helping Hands		
Learning level: Form 4		
Prior knowledge: Knowledge on disable people and the format of writing a formal letter.		
Learning objectives: Write a formal complaint letter to the minister of Ministry of Health.		
Knowledge Process		Learning Activities
Experiencing	The known	Describe types of disable people and share opinions and their feelings towards disable people. Sequence the format of formal letter.
	The new	-
Conceptualizing	By naming	Identify effects and solutions of inadequate facilities to disable people.
	With theory	-
Analyzing	Functionally	-
	Critically	Identify effects and solutions of inadequate facilities to disable people.

Applying	Appropriately	Write a formal complaint letter to the minister of Ministry of Health.
	Creatively	-
<p>Learning outcomes:</p> <ol style="list-style-type: none"> 1. Share opinions about disable people, types of disable people and their feelings towards them. 2. Sequence the format of formal letter. 3. Identify effects and solutions of inadequate facilities to disable people. 4. Write a formal complaint letter concerning the inadequate facilities for disable people to the minister of Ministry of Health. 		

Table 8 Din's Lesson Plan

Din's lesson focused on helping people with disabilities, and the lesson aimed to develop students' English writing skills through independent creative writing. Din started his lesson by asking students to describe types of disabled people and so, share their opinions and feelings about them. He then distributed sections of a formally written letter and asked the students to derive the correct sequence by pasting the sections on the board. Moving back to the topic he then grouped the students and asked each group to brainstorm the effects and solutions of inadequate facilities for disabled people. The students were expected to brainstorm and discuss among themselves and present the ideas in a circle map. He then finally asked the students to write a formal complaint letter concerning the inadequate facilities for disabled people to the minister of Ministry of Health.

I.3 Description of Aqilah's Lesson

Knowledge domain: English – Writing		
Scope of learning: Health and Environment		
Learning level: Form 1		
Prior knowledge: Experiences on feeling and handling stress.		
Learning objectives: Write an email to a friend to suggest a way to manage stress.		
Knowledge Process		Learning Activities
Experiencing	The known	List things that make students stress.
	The new	Listen to a lecture on how to write an email.

Conceptualizing	By naming	Compare all the options for ways to cope with stress.
	With theory	-
Analyzing	Functionally	Choose one way to manage stress and give reasons.
	Critically	-
Applying	Appropriately	Write an email to a friend to suggest a way to manage stress.
	Creatively	-
<p>Learning outcomes:</p> <ol style="list-style-type: none"> 1. List things that make students stress. 2. Choose one way to manage stress and give reasons. 3. Write an email to a friend to suggest a way to manage stress. 		

Table 9 Aqilah's Lesson Plan

Aqilah began her lesson by asking her students to share their feelings about their upcoming mid-year test. Aqilah acknowledged their feelings and then directed the discussion to focus on stress and expanded it by asking the students to list other things that made them stressed and asked them to write them on the board. Following this, she grouped the students and distributed a handout and a mah-jong paper to each group. In the handout, the students were presented with three activities to manage stress which were playing sports, reading comics, and playing mobile games. Each group was asked to choose an activity from the handout to manage stress and provide three reasons in a mind map drawn on the mah-jong paper. After checking the answers from every group, Aqilah then introduced an email writing format as she pasted colourful cards on the board to imitate the components of an email. Finally, she asked the students to write an email to a friend who is stressed to suggest a way to reduce stress. Building from their discussions and brainstorming ideas in groups, the students were asked to individually write an email to a friend in their writing book.

I.4 Description of Iliana's Lesson

Knowledge domain: English – Writing
Scope of learning: Science and Technology
Learning level: Form 1

Prior knowledge: Celebrating birthday and getting birthday presents.		
Learning objectives: Write a postcard to your mother to request a birthday present.		
Knowledge Process		Learning Activities
Experiencing	The known	Share experiences on birthday and favourite birthday presents.
	The new	Listen to a lecture on how to write a postcard.
Conceptualizing	By naming	Compare available choices for a birthday present.
	With theory	-
Analyzing	Functionally	Choose a birthday present and give reasons for the chosen birthday present.
	Critically	-
Applying	Appropriately	Write a postcard to your mother to request for a birthday present.
	Creatively	-
Learning outcomes:		
<ol style="list-style-type: none"> 1. Share experiences on birthday and favourite birthday presents. 2. Choose a birthday present and give reasons for the chosen birthday present. 3. Write a postcard to your mother to request for a birthday present. 		

Table 10 Iliana's Lesson Plan

The lesson began with Iliana asking the students to share their birthday experiences and their favourite birthday presents that they have received or wanted to have. Following this, Iliana pasted a huge postcard on the board and then explained to the students the format of writing a postcard. After the explanation she asked the students to be in groups. The students were given a situation where they are studying abroad, with an upcoming birthday, so they were asked to write a postcard to their mother to request for a birthday present. So, in groups they had to brainstorm choosing a birthday present and two reasons why they want it as a birthday present from their mother. Finally, Iliana instructed students to write a postcard to their mother to request for a birthday present. The postcard was to be written in their writing workbook.

I.5 Description of Aiman's Lesson

Knowledge domain: English – Writing		
Scope of learning: Helping Hands		
Learning level: Form 4		
Prior knowledge: Experiences seeing disable people and the format of writing a formal letter.		
Learning objectives: Write a formal complaint letter to the Department of Social Welfare Malaysia.		
Knowledge Process		Learning Activities
Experiencing	The known	Share experiences with or feelings about disable people.
	The new	-
Conceptualizing	By naming	Identify effects and solutions of inadequate facilities to disable people.
	With theory	-
Analyzing	Functionally	-
	Critically	Identify effects and solutions of inadequate facilities to disable people at a rail station.
Applying	Appropriately	Write a formal complaint letter to the Department of Social Welfare Malaysia
	Creatively	-
Learning outcomes: <ol style="list-style-type: none"> 1. Share experiences with or feelings about disable people. 2. Identify effects and solutions of inadequate facilities to disable people. 3. Write a formal complaint letter concerning the inadequate facilities for disable people at Taman Melawati rail station to the Department of Social Welfare Malaysia. 		

Table 11 Aiman's Lesson Plan

Aiman's class focused on independent, creative writing to develop students' English writing skills. The topic selected was chosen from the textbook which was based on the theme of the syllabus. The topic was on helping people with physical disabilities. Activities selected for the lesson were

sharing experiences and feelings about disabled people through discussion; identifying effects and solutions of inadequate facilities for the disabled at a rail station through groupwork where students discussed the topic and created tree map on large scale paper; and writing a formal complaint letter to the Department of Social Welfare in Malaysia individually. Aiman started his class with the students' experiential knowledge by asking them to think about the possibility of losing any of their limbs and to share their experiences with and feelings about disabled people. The discussion was then directed to the difficulties encountered by disabled people in Malaysia, reflecting on the experiences they shared. He then grouped the students and asked them to identify the effects and solutions of inadequate facilities for the disabled. The students were then asked to write a formal complaint letter concerning the inadequate facilities for disabled people at Taman Melawati rail station to the Department of Social Welfare in Malaysia.

I.6 Description of Balqis's Lesson

Knowledge domain: English – Writing		
Scope of learning: Looking Up Lifestyles		
Learning level: Form 1		
Prior knowledge: Format of writing email.		
Learning objectives: Write an email to a friend about activities to do during leisure time.		
Knowledge Process		Learning Activities
Experiencing	The known	Underline the correct format of email and arrange it in correct order on the board.
	The new	-
Conceptualizing	By naming	Compare all the activities to do during leisure time.
	With theory	-
Analyzing	Functionally	Choose two activities to do during leisure time and give reasons.
	Critically	-
Applying	Appropriately	Write an email to a friend about activities to do during leisure time.
	Creatively	-


Learning outcomes:

1. Underline the correct format of email and arrange it in correct order on the board.
2. Choose two activities to do during leisure time and give reasons.
3. Write an email to a friend about activities to do during leisure time.

Table 12 Balqis's Lesson Plan

Balqis first distributed a handout to students and asked them to underline the correct format of email. Once finished, she discussed the answers with the whole class and then moved on to the next activity which was arranging the format of email in correct order. She pasted cards that contain the format of email randomly on the board and asked volunteers to arrange them in the correct order. Following this, Balqis then asked the students to form groups and she distributed a worksheet to every group. In the worksheet, students were presented with several activities that could be done during their leisure time, but they had to choose only two activities and give reasons for the chosen activities. Therefore, in groups students were expected to discuss and come up with the ideas. Finally, students were given a situation where they are spending the upcoming holiday with a friend and they are writing an email to suggest beneficial activities that can be done during leisure time. Therefore, individually students were asked to write an email to a friend about activities to do during leisure time.

Appendix J Teaching Writing Course Syllabus

	INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA	Senate endorsement ref.: Senate endorsement date: Version no: Version effective date:
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COURSE OUTLINE

1. **Course Title:** Teaching Writing in Secondary Schools

2. **Course Code:** EDLE 4203

3. **Credit Value:** 3

4. **MQF Level:** 6

5. **Affected Batch:** Semester 1, 2017/2018

6. **Centre of Studies:** Kulliyyah of Education

7. **Department/Unit:** Language and Literacy

8. Course Synopsis:

This course discusses the nature of written communication, the relationship between reading and writing, the concepts of writing as text and discourse, writing as a thinking process, the principles for teaching writing, and the evaluation of writing for secondary school students. Students will also discuss the problems that Malaysian secondary school students have in writing in English, and how to help them to overcome these problems.

9. **Course Classification within the Curriculum:** Specialized Course

10. **Prerequisite(s) (if any):** None

11. Course Learning Outcomes

No.	Outcomes	Bloom's Taxonomy			Soft skills (KI)	Programme Outcomes (PO)
		C	A	P		
1	discuss the principles of teaching writing	2			CS2, CT2	1,7
2	prepare a lesson plan for a writing class		3	3	CT3, EM2	1, 2, 6
3	apply the appropriate teaching and assessment techniques in a lesson		4	4	CS6, CS7, CS8	2, 4, 5, 8, 9
4	produce instructional materials that can be used in a writing class	4		5	CT4, LL1	2, 3

12. LO - Instruction Method - Assessment Alignment:

Outcomes	Teaching-Learning Methods	Assessment Methods
LO1	Lecture and discussion	Short essay
LO2	Demonstration and small group discussion	Lesson Plan report
LO3	Demonstration and small group discussion	Micro-teaching Mini-teaching
LO4	Demonstration and Hands-on production of teaching materials	Production of Instructional materials

13. Assessment Methods Weightage:

Methods	Percentage
Short essay	15
Lesson Plan report	15
Micro-teaching	15
Mini-teaching	40
Production of Instructional materials	15
TOTAL	100

14. Student Learning Time:

1. Instruction Component	Total Allocated Hours
1.1. Teacher-oriented methods	
Lecture, discussion and demonstration	20
1.2. Student-oriented methods	
Preparation of Lesson Plan, Mini- and Micro-teaching exercises and preparation of Instructional materials	22
Total Instructor Contact Hours: 42	
2. Independent Learning Component	Total Estimated Hours
2.1. Reading and revision	
Learning hours to understand the prescribed topics	42
2.2. Estimated hours for preparation toward assessments	
Short essay	5
Lesson Plan report	5
Micro-teaching	8
Mini-teaching	8
Production of Instructional materials	10
3. Assessment Outside Instruction Hours	Total Allocated Hours
Final examination	3
TOTAL SLT	120

15. Course Contents and Related SLT:

Week	Topics	Face to Face Hours	Self-Learning Hours
1	Main concepts in L2 Teaching of Writing <ul style="list-style-type: none"> • Focus on language structures • Focus on text function • Focus on writing process • Focus on content • Focus on genre 	3	3
2	Oral and written language relationships <ul style="list-style-type: none"> • Physical, processing and situational factors • Oral and written language distinctions • Differences between L1 and L2 writers • Cultural schemata and writing • Cultural differences in written text 	3	3
3	Approaches in Teaching Writing <ul style="list-style-type: none"> • process approach and genre approach • writing as process and writing as product • controlled-, guided- and free-writing activities • integrated approach 	3	6
4	The Process of Writing <ul style="list-style-type: none"> • Developing paragraphs and essays • Revising, editing and proofreading • Writing and analyzing arguments • 5-steps process of writing • Strategies for getting writing ideas 	3	10
5	The Process of Writing <ul style="list-style-type: none"> • Parts of the writing process • Gathering and organizing ideas • Putting ideas to text • Understanding topic types 	3	10
6	Strategies and techniques in Teaching Writing <ul style="list-style-type: none"> • Using pictures • Using reading materials • Using all language skills • Teaching practical writing • Chronological order • Spatial and topical organization • Comparing and contrasting • Traditional narrative 	3	10

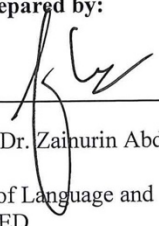
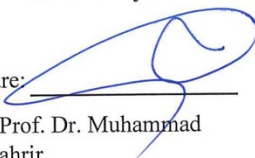
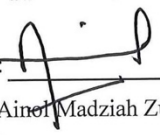
7	Common problems in writing <ul style="list-style-type: none"> • Sentence structures • Punctuations, mechanics and spelling 	3	3
8	Planning a Writing Lesson <ul style="list-style-type: none"> • identifying writing activities • matching classroom environment, approaches to writing and writing activities • time management in a lesson 	3	8
9	Teaching Materials for Writing Class <ul style="list-style-type: none"> • Roles of materials in the writing class • Materials and authenticity • Designing and modifying materials 	3	5
10	Textbook and Materials Development, Adaptation, Exploitation and Evaluation <ul style="list-style-type: none"> • Criteria for evaluating materials • Materials adaptation • Materials production • Issues in materials development 	3	5
11	Other Materials for Teaching Writing <ul style="list-style-type: none"> • Pictures • Reading texts 	3	3
12	Feedback to students <ul style="list-style-type: none"> • Oral, audio, written feedback and conferencing • Instruments for feedback • Correction procedures 	3	3
13	Assessment for Writing Activities from pre-writing to free writing <ul style="list-style-type: none"> • Sentence combining, expansion, reduction, copying and oral cloze • Guided writing • Free writing • Evaluating student writing 	3	3
14	Testing Writing skills <ul style="list-style-type: none"> • Testing composition writing • Setting and grading of composition • Treatment of errors 	3	3
15	Assessment for Writing Activities <ul style="list-style-type: none"> • Holistic marking scheme • Analytic scoring rubric 	3	3
TOTAL		42	78

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16.2. Recommended

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Prepared by:	Checked by:	Approved by:
<p>Signature: </p> <p>Assoc. Prof. Dr. Zainurin Abdul Rahman Department of Language and Literacy, KoED</p> <p>Date: 8th January 2020</p>	<p>Signature: </p> <p>Assoc. Prof. Dr. Muhammad Sabri Sahrir Head, Department of Language and Literacy, KOED</p> <p>Date: 8th January 2020</p>	<p>Signature: </p> <p>Prof. Dr. Ainet Madziah Zubairi Dean Kulliyah of Education</p> <p>Date: 8th January 2020</p>

ANNEX

I. Course Instructor Details

Semester: 1 Academic Year: 2017/2018

No.	Name	Email	Department
1	Assoc. Prof. Dr. Zainurin Abdul Rahman	zainurin@iium.edu.my	Department of Language and Literacy

II. Programme Learning Outcomes

By the end of the programme, students are expected to be able to:

No.	Outcomes	Outcome Domain
1	Demonstrate familiarity with established knowledge in the field of Teaching English as a Second Language and awareness of current development therein.	Knowledge
2	Use relevant skills learnt in Teaching English as a Second Language for professional and personal development.	Practical Skills
3	Cooperate with others and apply knowledge in a socially responsible manner for the progress of the nation and the ummah.	Social skills and Responsibilities
4	Demonstrate commitment to ethics, autonomy and professionalism in the workplace and everyday life.	Value, Attitudes and Professionalism
5	Communicate with people from a diverse range of backgrounds with empathy, showing leadership qualities.	Communication, Leadership and Team Skills
6	Analyse issues and demonstrate skilfulness in planning, executing and evaluating strategies and action plans.	Problem Solving and Scientific Skills
7	Use the necessary learning skills in information management and apply effective strategies for lifelong self-improvement.	Information Management and Lifelong Learning Skills
8	Apply basic managerial and entrepreneurial skills in relevant fields.	Managerial and Entrepreneurial Skills
9	Use and integrate Islamic principles to analyse and evaluate ideas and theories in the field of Teaching English as a Second Language.	Islamization

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