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**INTEGRATING ANALYTICAL THINKING SKILLS IN THE
ESL READING CLASS: AN INVESTIGATION OF EL
TEACHERS' KNOWLEDGE, PERCEPTION, PRACTICES AND
CHALLENGES**

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**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
2024**



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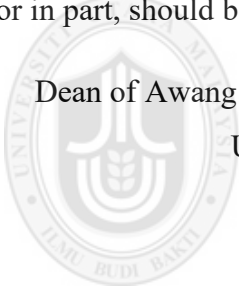
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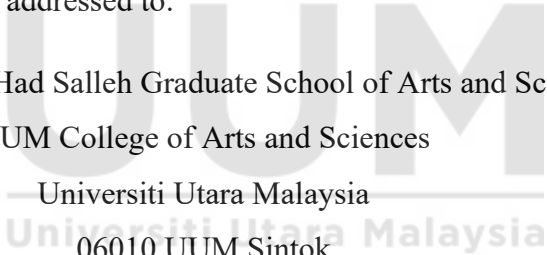
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Abstrak

Pelajar Malaysia adalah didapati lemah dalam penguasaan bahasa Inggeris dan kemahiran berfikir aras tinggi, yang mana penting bagi mana-mana negara untuk berkembang maju dalam pasaran global. Mereka bukan sahaja berada di bawah purata OECD dalam bidang matematik, kemahiran membaca dan sains tetapi turut bergelut dalam kemahiran berfikir aras tinggi dalam penilaian antarabangsa seperti TIMSS dan PISA. Kajian lepas menyatakan bahawa ketidakcekapan guru Bahasa Inggeris (EL) dalam kedua bidang ini menjadi punca utama masalah ini. Kajian ini cuba mengenal pasti strategi untuk mengatasi masalah yang dihadapi dengan mengkaji pengetahuan, persepsi, amalan dan cabaran guru EL yang berkaitan dengan pengajaran kemahiran berfikir analitikal. Metodologi kajian menggunakan kaedah kuantitatif dan kualitatif. Soal selidik, pemerhatian bilik darjah dan temu bual guru digunakan untuk mengumpul data. Data yang dikumpul dianalisis menggunakan statistik deskriptif dan analisis tematik. Kajian mendapati kesemua 132 peserta mempunyai pengetahuan yang kukuh mengenai kemahiran berfikir analitikal dan mempunyai persepsi positif terhadap pengajaran mereka dalam kelas membaca Bahasa Inggeris sebagai bahasa kedua (ESL). Kajian juga mendapati hubungan yang signifikan antara pengetahuan guru dan amalan mereka di dalam bilik darjah pada tahap 0.05, dan antara persepsi guru dan amalan mereka di dalam bilik darjah pada tahap 0.01. Penggunaan pelan rancangan pengajaran standard, teknik soalan, aktiviti kumpulan/kolaboratif dan aktiviti berasaskan tugas merupakan tema utama yang meningkatkan pengajaran kemahiran berfikir analitikal dalam kelas membaca ESL. Wawancara selepas pemerhatian menunjukkan bahawa teks bacaan, soalan pemahaman dan aktiviti pengajaran berdasarkan buku teks tidak berkesan untuk mengajar kemahiran berfikir analitikal. Cabaran terbesar bagi guru-guru ini telah dikenalpasti, iaitu untuk mengumpulkan bahan pengajaran yang relevan dan penguasaan bahasa Inggeris yang lemah dalam kalangan pelajar. Berdasarkan hasil kajian, satu kerangka garis panduan dicadangkan sebagai rujukan untuk guru EL apabila mengintegrasikan kemahiran berfikir analitikal dalam kelas membaca ESL mereka.

Kata kunci: Kemahiran berfikir analitikal, Pengetahuan guru, Persepsi guru, Amalan pengajaran dan strategi pengajaran.

Abstract

Malaysian students are found to be weak in both English language proficiency and higher order thinking skills which are crucial for any nation to thrive in the global market. They, not only rank below the OECD average in Mathematics, Reading and Science but are found to be struggling in higher order thinking skills in international assessments such as TIMSS and PISA. Past studies purport that the EL teachers' incompetence in both these areas to be the main cause for this predicament. This study attempts to identify strategies to overcome this problem by investigating the EL teachers' knowledge, perception, practices and challenges in relation to the teaching of analytical thinking skills. The methodology includes quantitative and qualitative methods. A questionnaire, classroom observation and teacher interview were used to collect data. Data collected were analysed using descriptive statistics and thematic analysis. The study found that all the 132 participants had sound knowledge of analytical thinking skills and held positive perception towards teaching them in the ESL reading class. The study found significant correlations between teachers' knowledge and their classroom practices at 0.05 level, and between teacher perception and teachers' classroom practices at 0.01 level. The usage of a standard lesson plan, questioning techniques, group/collaborative activities and task-based activities emerged as major themes that enhanced the teaching of analytical thinking skills in the ESL reading class. The post-observation interviews showed that the reading-text, comprehension questions, and teaching activities in the text book were ineffective to teach analytical thinking skills. Gathering relevant teaching materials and the students' poor English language proficiency were identified as the biggest challenges for these teachers. Based on the findings, a framework of guidelines is proposed for the EL teachers to use as a reference when integrating analytical thinking skills in their ESL reading class.

Keywords: Analytical thinking skills, Teacher-knowledge, Teacher-perception, Teaching-practices and Teaching strategies.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter gives a detailed narrative on the background of this study that encompasses the importance and the global trend of education today, the importance of the English language and higher order thinking skills and a historical view of their progress in Malaysia. The problem statement of this study identifies three major gaps that needs to be addressed. Based on the problem statement the research objectives, research questions and the hypotheses are presented. Next, the scope and significance of this study, as well as the operational definitions are explained. Finally, the organisation of the thesis and a summary of this whole chapter is provided. (see Figure 1.1).

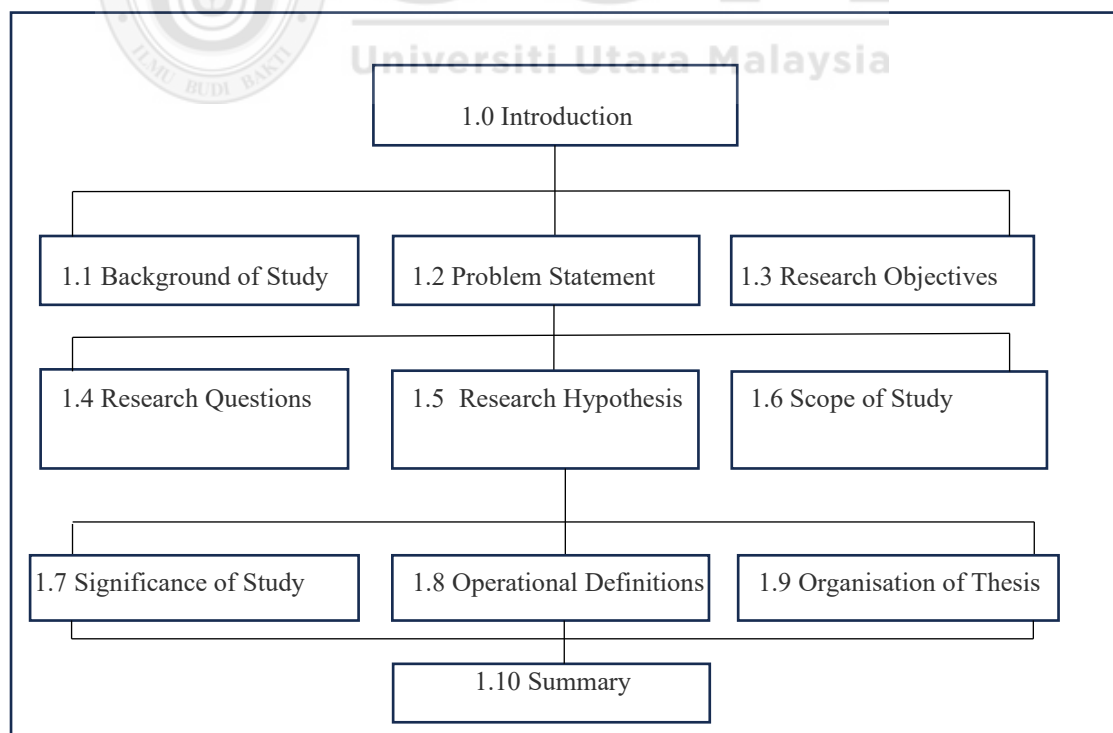


Figure 1.1 The Organisation of Chapter One

1.1 Background of the Study

English language teaching has been the focus of attention for the last five decades in the Malaysian education system. Since the shift from English medium to Malay Medium instruction in 1973, there has been a drastic drop in Malaysian students' English language proficiency. Employers, parents and the public at large have been voicing their concern over the Malaysian students' poor command of the English language. The National Union of Teaching Profession in Malaysia, for instance, had called for a comprehensive study into this decline in English proficiency among students in order to reinvent strategies and approaches to arrest this decline ((Nor Ain, 2019).

Meanwhile, the changes in the global education landscape have created new demands to nations world wide, including Malaysia which is striving to produce human capital that will be relevant and competitive in the global economy . On that premise, besides the acquisition of a good command of the English language, the acquisition of higher order thinking skills has become equally important for Malaysia to succeed in the global market. Infact, higher order thinking skills have become the most sought out skills in this millenium (Wagner, 2010). To understand this phenomena, one needs to understand the importance of education in nation building and its current global trend.

1.1.1 Education and its Global Trends

Education plays a crucial role in a nation's development and economic success. Clearly, nations with higher education levels enjoy gretaer economic prosperity (Malaysia Education Blueprint, 2013a). However, education has not been static. The continuously changing workplace needs, the numerous new research - new findings and discoveries have taken education into a different dimension. As a result, the 21st

millenium education has undergone dramatic changes and it is imperative that nations aspiring to be competitive in the global market keep abreast with these new developments in education to ensure their human capital remain relevant and competitive.

Rapid scientific and technological developments have posed serious challenges to the 21st century education systems practised around the world. For instance, much of today's technology and media-suffused environments demand people to be creative, evaluative and effective in utilizing information and communication technology in their everyday lives (Partnership for 21st Century Learning, 2007). The world has moved forward into knowledge economies and this shift from 'machine power' to 'brain power' emphasizes the need to produce workers imbued with the culture of continuous innovation and the capacity for lifelong learning. "A knowledge economy runs not on machine power but on brain power – the power to think, learn and innovate" (Hargreaves, 2003a, p.10).

Hence, today's workplace which is driven by knowledge economy demands for workers with the ability to pursue continuous learning, communicate and negotiate effectively as well as be creative and innovative. Higher-order thinking skills are therefore deemed crucial for people to confront the challenges of the 21st century (Coffman, 2013; Collins, 2014). Therefore, people need to develop sufficient higher order thinking skills to navigate their complex lives and work environments as well as be proficient in the English language which is the language of international trade and economy. '...in today's world, no other language can claim greater universal currency status for the transaction of knowledge and information than the English language' (Sophia, 2011).

The shift from industrial economies to knowledge economies has posed serious challenges to 21st century schools and education paradigms (Hargreaves, 2003a). The onus of developing knowledgeable students who can think critically and creatively and compete in the modern labour market weighs heavily upon the schools and the teachers. Schools, therefore, can no longer be content with providing factory-model education of the past that produced the workforce for industrial economies. Schools therefore need to produce workforce equipped with critical and creative thinking skills that can render their workforce to be competitive both on national and international platforms. In consequence, academically and economically advanced nations in this region, such as Singapore, South Korea, Japan and China have all made reforms to their education systems which focus on developing their students' higher order thinking skills, communication skills as well as their English language proficiency (MOE Singapore, 2015; Chuah & Huh, 2004; Shim & Baik, 2004; MOE Japan, 1996; Honna & Takeshita, 2004; Jin & Cortazzi, 2004). Studies also show that lower-middle income nations in this region which includes Vietnam (Vang, 2004), Indonesia, Brunei, Philippines, and Myanmar (Kam & Wong, 2004) have all made serious reformation to their education system that emphasises the teaching of English and the integration of higher order thinking skills which are indispensable in the modern world. According to Luke and Lin (2004) most East Asian nations are aggressively promoting the English language and higher order thinking skills in their curriculum to ensure development, modernity and human resource capital for successful participation in the global economic order.

In that connection, Malaysia too have continuously revamped and reformed its education system with special focus on the teaching of English language and the

integration of higher order thinking skills. The next section gives a historical view of the various educational reforms in relation to the teaching of English and higher order thinking skills in Malaysia.

1.1.2 The Emergence and Progress of English Language Teaching in Malaysia

Based on Government documents such as the New Economic Policy (1970), the 3rd Malaysia Plan (1976), The Education Act (1995), The Education Act (1996) the Malaysian Education Blueprint (2013), The Roadmap (2015), the National Education Philosophy (Dasar Pendidikan Kebangsaan, 2017) and scholarly articles (Pandian (2004); Azizah (2005); Mohamad, Tumin, & Omar (2008); Foo and Richards cited in Mohamad et. Al. (2008); Hazita (2016); the emergence and progress of the teaching of English in Malaysia up to the latest development of integration of higher order thinking skills in the English class is chronologically presented below.

English language came to Malaysia (then Malaya) with the arrival of the British colonisers (Gaudart, 1987). The teaching of English prospered even after Malaysia's independence in 1957. During these early years English was taught using the structural approach which emphasised grammar. However, with the introduction of the New Education Policy (1970), the Malay language became the main medium of instruction with English as a second language as stated in the National Education Policy document below.

“In keeping with the National Education Policy, English is taught as a second language in all government schools in the country at both the primary and secondary levels of schooling’ (KPM, 1995, p.1)

However, with this shift in the medium of instruction there was a steady decline in the Malaysian students' English language proficiency. Subsequently, the Structural

Approach was replaced with the Communicative Approach with the focus on the fluency of speaking rather than the accuracy of the language. The New Primary School Curriculum introduced in 1983 (KBSR), and the Integrated Secondary School System introduced in 1989 (KBSM) gave special attention to the teaching of English to prepare the students to communicate effectively at job situations both in local and international levels. However, teachers' preference for rote learning reduced the impact of the two syllabi (KBSR and KBSM).

At the end of the 20th century, with industrialisation and the shift towards science and technology, the teaching of English was further reformed to give Malaysians a greater command of the language to be competitive in the global market. With Vision 2020 policy, a new subject called English for Science and Technology (EST) was introduced at the upper secondary level and the teaching of Mathematics and Science in English (ETeMS) was introduced. Simultaneously, the 'SMART SCHOOL' project was started to democratise the teaching of English so that both urban and rural schools get equal opportunities to learn the subject. However, these efforts did not achieve the desired aims (Azizah, 2005). The teaching of Mathematics and Science in English was also aborted due to social and political reasons (Hazita, 2016).

However, initiatives to strengthen the teaching of English continued with another policy referred as MBMMBI in the Malay acronym - 'Upholding the Malay Language and Strengthening the Command in English'. This Policy focuses on teacher quality with a five-pronged sub-strategical approach to enhance English language proficiency among Malaysians namely, (I) Distribute English-Option Teachers fairly to schools, (II) Conduct Professional Development Courses for In-service teachers, (III) Employ Native Speakers to train local English teachers, (IV)

Re-employ retired English teachers, and (V) Increase intake of trainee-teachers for English (Jamil, et al. 2011). This period also saw the setting up of an English Language Teaching Centre (ELTC) to enhance the teaching competencies of English language teachers. ELTC plays a prominent role in the development of ELT policy and initiatives in the country with five main objectives.

- i.) To develop innovative methods and approaches for the teaching of English
- ii.) To conduct research for the development of quality English language teaching programmes
- iii.) To develop validated ELT programmes benchmarked against international standards for the teaching of English
- iv.) To co-ordinate all English language teaching initiatives in the country
- v.) To provide consultancy services to promote the development of English language teaching in the country and the region

(ELTC Malaysia, 2016, p.56)

Clearly, the years between 2001-2010, has been a period of aggressive promotion of the English language by the Malaysian government. However, the advancement of information technology and globalization and the dramatic changes it caused to education worldwide have made education reformations in Malaysia more complex and more challenging.

People are now living in a media-saturated society which has resulted in life becoming more diverse, complex and globalized. The world needs workers with the culture of continuous innovation and the capacity to keep learning (Hargreaves, 2003b). In this

connection, Wagner (2012) advocates that the 21st century curriculum needs to develop the following skills in people to succeed in these modern times:

- i) Critical Thinking and Problem Solving
- ii) Collaboration across Networks and Leading by influence
- iii) Agility and Adaptability
- iv) Initiative and Entrepreneurialism
- v) Effective Oral and Written Communication
- vi) Accessing and Analysing information
- vii) Curiosity and Imagination

Higher order thinking skills have become the skills for the 21st century. Besides the promotion of English language, Malaysia now needs to equip its students with higher order thinking skills as well. To confront these challenges, Malaysia proposed a comprehensive plan called the 'Malaysian Education Blueprint' (2013) and the Roadmap (2015).

The Malaysian Education Blueprint (2013 – 2025) is Malaysia's latest initiative to provide quality education to its citizenry. It proposes a two-pronged strategy i.e. (i) to enhance the teaching of English language as well as (ii) to integrate higher order thinking skills in the EL class. The Roadmap, on the other hand, is a comprehensive strategy which complements and supplements the MEB, particularly in the teaching of English and higher order thinking skills.

These initiatives were necessary as the English language proficiency among Malaysia students had declined as a result of the Language Policies that were enforced since independence (See Table 1.1).

Table 1.1

A Summary of Malaysia's Language Policy over the Years

Year	Policy	Language
Prior Independence and business (before 1957)	Colonial Malaya	English – the language of government, education
1961	1961 Education Act	Malay language as the medium of instruction across whole education system
1963	National Language Act 1963	Malay language as the medium of instruction and administration
1970	National Language Policy	Malay language was enforced by law in 1971 as the medium of instruction across all national schools and universities
2003	<i>Pengajaran dan Pembelajaran Sains dan Matematik dalam Bahasa Inggeris (PPSMI)</i>	English language as medium of and instruction for Science
2010	<i>Memartabatkan Bahasa Malaysia Dan Memperkukuhkan Bahasa Inggeris (MBMMBI)</i>	Malay language as medium of instruction for Science and Mathematics
2013-2015	The National Education Blueprint	Malay language as medium of instruction for Science and Mathematics *Dual Language Programme (OLP) in selected schools

Source : Ida Fatimawati bt Adi Badiozaman. Journal of Asia TEFL (2019)

The progress of English Language teaching in Malaysia has not been a smooth one – it has and is going through many challenges and problems, in spite of the government's efforts towards the learning of English.

While it is already a struggle for EL teachers in Malaysia to teach English, which is almost a foreign language to Malaysians today, the EL teachers now faced an added challenge i.e., to teach higher order thinking skills as well. As such, empirical research are necessary to identify new approaches and strategies as well as propose models,

templates or frameworks of guidelines which are vital to assist EL teachers to effectively integrate the higher order thinking skills in their ESL class.

This study concerns the teaching of the analytical thinking skills in the ESL reading class. Analytical thinking is a crucial higher order thinking skill in the Bloom's taxonomy (1976) that forms the bedrock of all other higher order thinking skills. To successfully integrate the analytical thinking skills in their ESL Class, the EL teachers need to acquire sufficient knowledge of the analytical thinking skills, learn new strategies to teach analytical thinking skills and they need to perceive that it is possible to integrate the analytical thinking skills in their ESL class. On that score, this study attempts to explore the EL teachers' knowledge, their perceptions and their teaching practices when teaching analytical thinking skills in the ESL reading class in order to identify and propose guidelines which can be a source of reference to other English language teachers.

1.2 Problem Statement

Malaysia desires its citizens to acquire a high level of English proficiency as well as excellent higher order thinking skills to enhance its competitiveness in the changing global economies.

'In order to compete with the best in the world, our education system must develop young Malaysians who are knowledgeable, think critically and creatively, have leadership skills and are able to communicate with the rest of the world (Malaysia Education Blueprint, 2013).

In this connection, Malaysia's Ministry of education has initiated numerous reforms to improve the standard of English among its citizenry. The English language is indispensable as the communication tool in international business and trade.

Although Malaysia has spent a large portion of its budget in educational reforms especially in the teaching of English, Malaysia still ranks below the Organisation for Economic Co-operation and Development (OECD) average in Mathematics, Reading and Science (Lagarde, 2019).

In addition, the Malaysian students' thinking skills were also at a dismal state as mentioned in the TIMSS and PISA international assessment reports cited below.

“In fact, based on the TIMSS and PISA international assessments it was found that our students struggle with higher order thinking skills. Survey of Malaysian and multinational companies also suggest that our students fall short on the soft skills looked for by prospective employers” (Malaysia Education Blueprint, 2013, E-11).

In fact, Malaysia is aware that its students are generally weak in both the English language and their higher order thinking skills, the two factors that are crucial for any country to thrive in the world market. Views expressed by employers reported in the Malaysian Education Blueprint (2013) supports this claim. “Employers report that graduates lack the critical thinking and communication skills and the language proficiency (especially in English) that are essential for success in the 21st century” (Malaysian Education Blueprint (2013-2025) E-6).

Central in the preparation of a scientific and progressive workforce for a nation are its educators as highlighted by Bajunid (1999). ‘The enterprise of providing knowledge and educating people in any society or nation is predominantly the responsibility of the teachers’ (Bajunid, NST, 1999). Teachers play a crucial role in developing their students' higher order thinking skills and their potentialities (Tan & Halili, 2005). However, studies claim that English language teachers in Malaysia are still struggling to teach their students the desired higher order thinking skills (Nawal Salleh, 2018). In

that light, empirical researches and findings on the integration of specific higher order thinking skills would be an important source of reference for English language teachers. However, there are not many such researches available in Malaysia.

For instance, local studies (Rajendran, 2001; Rosmawati, 2009; Vijayaratnam, 2011; Tan & Mohamad, 2014; Rania Deeb, 2015; Tan & Siti 2015; Caleb, et. al.2015; Khairon, Hanita, Fauziah, & Azizan, 2017; Charanjit, Tarasame, Nor Azmi, & Tunku, 2018) all did not investigate the different levels of higher order thinking skills (analytical, evaluative and synthesis thinking skills) separately. It is crucial that the integration of higher order thinking skills is investigated separately to identify which techniques and strategies are effective for the different types of higher order thinking skills. Surely, each of these higher order thinking skills (analytical, evaluative and synthesis) will need different approaches and strategies to teach. However, the different levels of thinking skills seem to be treated as a single unit clustered as higher order thinking skills in most studies. This gap in investigating the integration of the different types of higher order thinking skills separately needs to be filled.

Furthermore, it must be recognised that the teaching of English language involves four major components, namely Listening, Speaking, Reading, and Writing. Each component has different features and they cannot be taught simultaneously (Jessie, 2021). Among these components, reading which is the oldest form of language teaching style, plays a crucial role in language acquisition (Baumgartner, 2017). Apart from familiarising with the sentence structure and grammar units, reading is the main source of vocabulary building. In Malaysia, there is no study on the incorporation of analytical thinking skills conducted specifically in the reading

component. The dearth of research on integrating analytical thinking skills in reading class is the second gap that the current study hopes to fill.

One of the major benefits of educational research are that the findings can help suggests new strategies or approaches to improve the teaching process. The suggestions can be in the form of statements, models, modules or templates. For example, Australia has designed frameworks for successful teaching of higher order thinking skills (Kalantzis & Cope, 2004). The Learning Design created by the Multiliteracies Group (2004) proposes framework of lesson plans called the Learning Element to teach higher order thinking skills such as analytical thinking skills, evaluative thinking skills and synthesis thinking skills.

However, in Malaysia, there seems to be no such models or modules proposed for the teaching of analytical skills in the English reading class. In fact, all major researches on the teaching of higher order thinking skills in the ESL class (Rajendran, 2001, Rosmawati, 2009, Vijayaratnam, 2011; Tan, & Mohamad, 2014; Rania Deeb, 2015; Tan & Siti 2015; Caleb, et. al.2015; Khairon, et al., 2017; Charanjit Kaur, et al. 2018) merely suggest that Malaysian English language teachers need to improve their knowledge of higher order thinking skills (HOTS) to effectively teach them effectively in their English lessons.

In fact, Rajendran (2005) posits that teaching of higher order thinking skills in the ESL classes have generally been superficial (2005). Teachers generally taught their lessons using only the lower order thinking skills. A framework designed based on teachers' best practices can serve as a useful guide to teach HOTS especially the analytical thinking skills in the ESL class. Lack of such frameworks for teachers' references is another gap that needs attention. As such, an investigation of EL

teachers' best practices in integrating analytical thinking skills in the reading class is imperative.

These gaps, (i) of not addressing the different levels of higher order thinking skills separately, (ii) not investigating the integration of analytical thinking skills in the different language components as well as the failure of previous studies to suggest any model or framework so far for future EL teachers compels for fresh investigation.

1.3 Research Objectives

This study intends to explore the teaching of analytical thinking skills in the English reading class based on the following objectives:

1. To identify the EL teachers' understanding of analytical thinking skills in terms of its concept, process and activities.
2. To examine the EL teachers' perceptions towards the integration of analytical thinking skills in the reading class.
3. To explore the EL teachers' classroom practices in integrating the analytical thinking skills in the reading class.
4. To explore the challenges that the EL teachers encounter when teaching analytical thinking skills in the reading class
5. To determine the extent of correlation between teacher knowledge and teacher practices.
6. To determine the extent of correlation between teacher perception and teacher practices.

1.4 Research Questions

Based on these research objectives, this study attempts to seek answers for the following research questions:

1. To what extent do the EL teachers understand the concept, process and activities of analytical thinking skills?

2. What is the EL teachers' perception of integrating analytical thinking skills in the ESL reading class?
3. What are the EL teachers' classroom practices in teaching analytical thinking skills in the ESL reading class?
4. What are the challenges that the EL teachers encounter when teaching analytical thinking skills in the ESL reading class?
5. Is there any significant relationship between Teacher Knowledge and Teacher Practices
6. Is there any significant relationship between Teacher Perception and Teacher Practices?

1.5 Research Hypotheses

The following hypotheses were generated to investigate the relationships of teacher-knowledge and teacher-perceptions to teacher practices.

- H1:** There is significant relationship between teacher knowledge and teacher practices.
- H2:** There is significant relationship between teacher perception and teacher practices.

1.6 Scope of Study

This study essentially investigates the integration of analytical thinking skills in the ESL reading class in Malaysian secondary schools. Firstly, the EL teachers' level of knowledge in analytical thinking skills in terms of its concept, process and activities is evaluated. The study also explores the perception (beliefs and disposition) of the EL teachers towards the teaching of analytical thinking skills in the ESL reading class. Next, the study examines the relationship of teacher-knowledge and teacher perception with teacher practices. Following that, the classroom practices of the EL teachers in teaching analytical thinking skills such as the techniques, activities, materials and resources used are explored. Lastly, the study also investigates the

challenges that the EL teachers encountered when integrating the analytical thinking skills in the ESL reading class.

The teaching of English encompasses four major skills, namely listening, speaking, reading and writing. This study specifically focusses on reading as it gives greater space for the teachers to assess their students' understanding and their critical and creative thinking skills especially when they answer the comprehension questions based on the text read.

Secondary schools were selected for this study, as the teaching of higher order thinking skills is an official policy of the Malaysian Ministry of Education as indicated in the following citation. 'Pupils have frequent opportunities to develop their higher order thinking skills as they learn English ...which requires the pupils to evaluate the content, compare the information, analyse, evaluate and prioritise the information' (English Language Syllabus Secondary Form 1, p.1).

1.7 Significance of the Study

Literature review of past studies (Loges, et al., 2018; Aziz, et al, 2017; Dewitt, et al. 2016; Zohar & Schwartz, 2005) have shown that EL teachers' lack of pedagogical knowledge of integrating higher order thinking skills, and their negative perception towards the teaching of higher order thinking skills in the ESL class, as well as their lack of understanding of the strategies to teach higher order thinking skills as the main causes for the ineffective implementation of higher order thinking skills in the ESL classes. As such, findings of this study will be useful as it attempts to investigate the integration of the analytical thinking skills in the ESL reading class by way of exploring the EL teachers' knowledge of analytical thinking skills and their

perceptions towards the integration of analytical thinking skills as well as the teaching practices of the two expert EL teachers.

Based on its findings, this study hopes to propose guidelines that can improve the EL teachers' competence and effectiveness in integrating analytical thinking skills in the ESL reading class. The proposed guidelines will be a significant contribution towards the integration of analytical thinking skills in the teaching and learning of English.

Another significance of this study is that future researchers will be encouraged to examine the integration of higher order thinking skills along the different levels of 'HOTS' (Bloom, 1976) namely, analytical, evaluative and synthesis. Each of these components of HOTS may require different techniques and strategies to integrate them in the ESL class. For instance, problem solving activities can enhance analytical thinking skills, activities that require justification of ideas fosters evaluative thinking skills and activities which need information gathering from different sources strengthens students' synthesis thinking skills. EL teachers will benefit with new and different techniques and strategies for the integration of the different levels of higher order thinking skills (Sado, et al. 2015). The concept of exploring the teaching of higher order thinking skills separately as analysis, evaluative and synthesis will be a milestone in Malaysian educational research.

Models, modules, templates or guidelines are all frameworks for instructional practices which can be used to select and structure teaching strategies, methods, skills and activities to achieve the learning objectives (Regina, nd). However, there is a lack of studies that propose any framework of guidelines for teachers that could be used as scaffolding to teach analytical thinking skills in the ESL reading class in Malaysia. Such a framework would be beneficial to EL teachers who intend to teach analytical

thinking skills in the ESL reading class. On that premise, examining successful EL teachers' classroom practices in integrating analytical thinking skills in their ESL reading class in Malaysia is both necessary and timely. The guidelines proposed based on the observation of the two expert EL teacher's best practices can be used as a model or template by other EL teachers in preparing their lessons. Surely these guidelines designed, would be both relevant and beneficial to EL teachers to enhance their teaching and add value to the learning outcomes of the lessons.

Apart from benefiting practising English language teachers to strengthen their teaching and learning activities in the English language classroom the findings of this study can be used to design professional development programmes. Existing teachers may need more comprehensive training under CPD the Continuous Professional Development (CPD) programmes to not only give them a sound understanding of analytical thinking skills but to also invoke a positive mindset in them to teach analytical thinking skills. Fresh teachers, on the other hand, will need to be well equipped with knowledge of analytical thinking skills as well as develop positive disposition to teach them in their language classrooms. The Teacher Education Division (TED), which is directly responsible for teacher training in Malaysia, will benefit from the findings of this study and can include the proposed framework of guidelines in their training courses. The framework proposed can help the TED to prepare sample lesson plans for teachers to teach analytical thinking skills in the reading comprehension lesson as well as other language learning contexts. These efforts can help both existing and fresh teachers to be well equipped and adequately trained to teach analytical skills in the English lesson.

The findings of this study can also help the Curriculum Development Centre (CDC) under the Ministry of Education to update the Curriculum Specifications to give the

ESL teachers a better understanding and clearer ideas of integrating analytical thinking skills in the language classroom.

The Malaysian Examination Board, on the other hand, can benefit by referring to the findings of this study when preparing questions for national public examinations in a way to match the teaching practices.

Text-book authors and developers of teaching materials can gain inspiration to ensure their products are in alignment with the curriculum needs and Malaysia's National Education Philosophy. Finally, the findings of this study can add to the current literature in integrating analytical thinking skills in the language classrooms.

1.8 Operational Definitions of Terms

HOTS in this study refers to Higher Order Thinking Skills. Analyses, Synthesis and Evaluation skills mentioned in Bloom's Taxonomy (1956). However, higher order thinking skills in this study refers mainly to the Analytical Thinking Skills.

Analytical Thinking Skills in this study refers to critical thinking, creative thinking, compare and contrast, logical reasoning, problem-solving and decision-making activities.

ESL Class in this study refers to the English lessons conducted in Malaysian secondary schools. English is taught in Malaysia as a second language.

EL Teachers in this study refers to teachers who teach English in Malaysian secondary schools.

Expert EL Teacher in this study refers to English language teachers who are accorded special posts based on their excellent credentials in teaching the English language in Malaysian schools.

Teacher Perception in this study refers to the teachers' beliefs and disposition towards the teaching of analytical thinking skills in the ESL class.

Teacher Knowledge in this study refers to the EL teachers' knowledge of the analytical thinking skills concept and its definitions, process of teaching analytical skills, activities conducted to teach analytical thinking skills and types of analytical thinking skills.

Teacher Practices in this study refers to the planning of the lesson by the EL teachers, their classroom instructions, activities conducted in the ESL class and the feedbacks given by the EL teachers.

ESL Reading Class in this study refers to the reading and comprehension lessons conducted during the English lesson in Malaysian secondary schools.

Classroom observation in this study refers to the observation and evaluation of the expert EL teachers teaching in the ESL class by an independent evaluator. For this study the independent evaluator was a senior lecturer from a teacher-training institute.

Lesson Plan in this study refers to the document used by the teachers to plan and prepare lessons. Malaysian schools use the 'Presentation, Practice and Production' (PPP) lesson format.

Learning Element in this study refers to the lesson plan template created by the New London Group and widely used in Australia to teach the different higher order thinking skills in their English lesson.

Mixed-Method Research (MMR) A third type of research design which uses the combination of both quantitative and qualitative methods in a single study.

PISA is the Program for International Student Assessment is conducted by the Organisation of Economic Co-operation and Development (OECD) that measures member nations' students' problem-solving skills upon completion of their compulsory education.

TIMSS is the acronym for 'Trends in international Mathematics and Science Study'. It is another international assessment programme conducted by the International Association for Evaluation of Educational Achievement that measures the conventional Mathematics and Science aptitudes of member nation students upon completion of compulsory education.

1.9 Organisation of Thesis

This thesis has five chapters (see Figure 1. 2).

Chapter One titled as Introduction, gives a brief overview of the study. Next it presents the background to the study which includes the importance and the current global trend of education, the importance of the English language and higher order thinking skills for nation building, a historical view of the emergence and progress of English language in Malaysia, the research objectives, the research questions, scope of the study and its significance. This chapter also gives the operational definitions of important terms used in this study and closes with a summary.

Chapter Two titled 'Literature Review' consists of four main sections. The first section discusses definitions of higher order thinking skills (HOTS) and the numerous prominent frameworks of HOTS with a special focus on analytical thinking skills. The second section discusses four main learning theories relevant to this study and postulates the theoretical framework for this study with the inclusion of Bloom,s Taxonomy. The third section defines and describes the three variables 'teacher

knowledge', 'teacher perception' and 'teacher practices' and presents the conceptual framework of this study. The final section gives a detailed review of past studies in relation to this study.

Chapter Three titled 'Research Methodology' discusses the Research Design of the study along with the rationale for its selection. The chapter further discusses the sampling methods, data collection methods and its procedures as well as data analysis supported by relevant authorities for choosing these methods. It also introduces the research instruments used and explains in detail the steps taken to arrive at the reliability and validity of the research instruments.

Chapter Four titled 'Findings and Discussions' presents and discusses the findings based on the data collected and analysed. Firstly, data collected through the ASKP questionnaire is analysed to answer Research Questions 1 and 2. Next, data collected through the 'English Language Teachers Classroom Observation Protocol' (ELT-COM) is analysed to answer Research Question 3. Data collected through the 'Classroom Teacher Interview Protocol' (C-TIP) is analysed to answer Research Question 4. Finally, the two hypotheses are tested to answer questions 5 and 6.

Chapter Five titled 'Implications, Recommendations and Conclusions' discusses the implications of the findings of this study. Based on the findings, several recommendations are suggested to all stakeholders involved in English language teaching in Malaysia to further improve the teaching of analytical thinking skills in the ESL reading class. This study also provides a framework of guidelines for the integration of analytical thinking skills in the ESL reading class. Finally, this chapter concludes by highlighting the importance of teaching analytical thinking skills in the English language lessons.

Chapter	Objectives	Contents
Chapter 1	To provide the background of the study	Background of the study
	To discuss the research problem	Problem statement
	To describe the research objectives and research questions	Research Objectives & Research Questions
	To explain the scope and significance of the study	Scope of study & significance of study
	To provide the operational definitions of major terms	Operational definitions of major terms
Chapter 2	To discuss the definitions and frameworks of HOTS	Definitions and frameworks of HOTS
	To discuss major learning theories	Learning theories of Bandura, Skinner, Vygotsky & Piaget.
	To explain Blooms Taxonomy and formulate the Theoretical Framework	Blooms Taxonomy (1976) Theoretical Framework of the study
	To explain the variables in this study and formulate the Conceptual Framework	Variable (Teacher Knowledge, Teacher Perception & Teacher Practices. Conceptual Framework
	To review of related literature	Revision of related past studies
Chapter 3	To explain the research design	Mixed mode research
	To provide details of the settings, participants and research instruments	Research settings, participants, survey questionnaire, Classroom observation form, Teacher interview protocol.
	To establish the validity and reliability of this study	Calculation and explanation of validity and reliability of research instruments and data collected.
	To describe the procedures of data collection and data analysis	Administration of questionnaire, classroom observation and interviews and data analysis procedures (Statistical analysis and thematical analysis)
Chapter 4	To discuss the findings of the survey questionnaire and answer Research Question 1 & 2	Discussion of findings of survey questionnaire. Answer to RQ1 & 2.
	To discuss the findings of Classroom Observations and answer Research Question 3	Discussion of findings of EL teachers' Classroom teaching. Answer to RQ3
	To discuss the findings of the EL teachers' interviews and answer Research Question 4	Discussion of findings of EL teachers' Interviews. Answer to RQ4.
Chapter 5	To summarise the entire study	Summary of entire study
	To review major findings and its implications	Revision of findings and discussion of implications
	To state limitation of study and recommendations for future research	Explanations of limitations and suggestions for future research

Figure 1.2 Structure of the Thesis

1.10 Summary

This chapter gives a brief introduction of this study and presents a detailed historical overview of English language teaching in Malaysia with a special focus on the incorporation of the analytical skills in the English reading lesson. Next, it specifically identifies three research gaps which make this study pertinent. The chapter also discusses the research objectives and states the research questions. The significance of this study is discussed and beneficiaries of this study are also identified. Finally, this chapter also explains the operational definitions of major terms regularly used in this study. This chapter also presents the structure of the thesis with the help of a Table (Table 1.2). Finally, the chapter comes to a close with a summary of this chapter.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter is structured systematically under specific headings as shown in Figure 2.1. Firstly, learning and thinking is discussed in relation with Dewey's definition. Next, Bloom's Taxonomy (1956) on the hierarchy of thinking skills is discussed with a special focus on analytical thinking skills. In addition, numerous other prominent frameworks of HOTS are scrutinised. Then, the learning theories of Bandura, Skinner, Vygotsky and Piaget are discussed and used together with Bloom's taxonomy to formulate the theoretical framework of this study. The four major language skills are then described with a focus on 'reading'. The three variables investigated in this study, namely 'teacher knowledge', 'teacher perception' and 'teacher practices' are then described and used to formulate the conceptual framework. Past studies related to this research are reviewed to give a better understanding of the topic as well as to guide the direction of this research. A summary of the entire chapter is presented at the end.

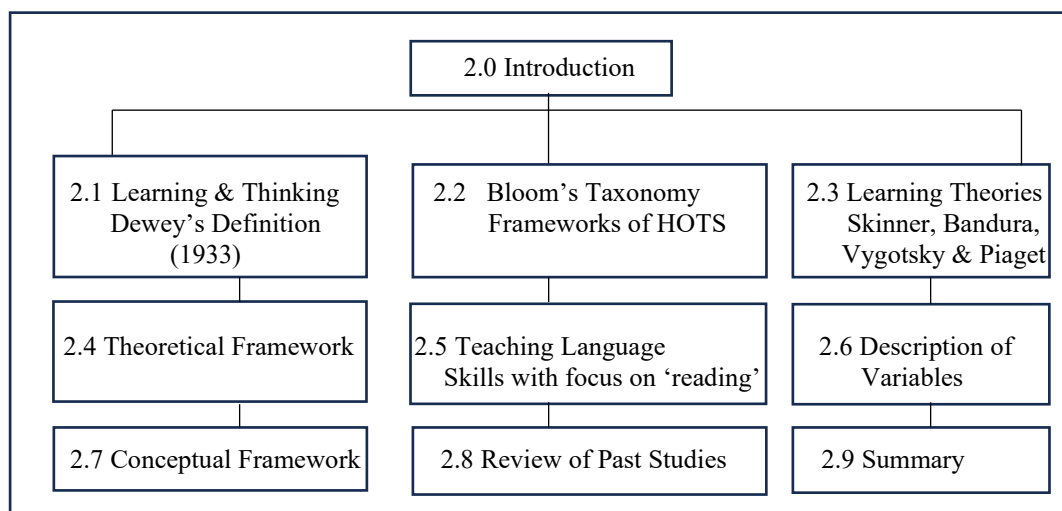


Figure 2.1. The Organisation of Chapter Two

2.1 Learning and Thinking

There is a strong relationship between learning and thinking. During the learning process, the mind is prodded towards enquiry either intrinsically (through self-learning) or extrinsically (through teacher or media-assisted learning) to acquire, accept and assimilate knowledge where thinking skills are greatly enhanced and pushed to the fore. This in effect, results in higher order cognitive learning (Seel, 2012). Therefore, everyone who is involved in the teaching and learning process invariably has to understand what thinking is. Thinking is a state of mental enquiry which is central in learning.

“To be generally thoughtful, we must be willing to sustain and protract that state of doubt which is the stimulus to thorough enquiry, so as not to accept an idea or make a positive assertion of a belief until justifying reasons have been found’ (Dewey, 1933, p.16).

Thus, the thinking process is necessary for learning - as both learning and thinking cannot be separated (Moseley et al. 2005). Subsequently, as the learning process progresses towards more complex and sophisticated cognitive level, it invariably involves higher order thinking skills.

According to Moseley (2005) teaching higher order thinking skills or HOTS has become a worldwide phenomenon in formal education. Moseley (2005) further reports that countries which perform poorly in international assessments place emphasis on the teaching of HOTS as a means to raise their nation’s education levels and standards. Conversely, even nations which perform well using traditional methods of teaching in schools have also resorted to teaching of higher order thinking skills to ensure better productivity among its workforce and to enable their citizenry to face challenges

confidently in the global economic arena. However, to teach HOTS, one must first understand what constitutes HOTS. On that premise, Moseley et al. (2005) identifies 41 frameworks of HOTS. While each of these framework supplement and complement each other, Bloom's taxonomy (1956) remains the bedrock of all these frameworks.

2.2 Bloom's Taxonomy and Frameworks of Higher-Order Thinking Skills

Bloom's Taxonomy (1956) is one of the earliest literatures that associates learning with higher order thinking skills. Bloom (1956) lists learning under 3 domains, namely, the Cognitive, Affective and the Psychomotor. However, it is in the cognitive domain that Bloom discusses thinking skills. Bloom categorises the cognitive domain under six levels (see Fig. 2.2). While level 1 & 2 involve remembering and recalling of information which are outcomes of rote learning (memorization), it is level 3, 4, 5 & 6 that encompasses higher order thinking skills. (Ivie, 1998., Underbakke et al., 1993).

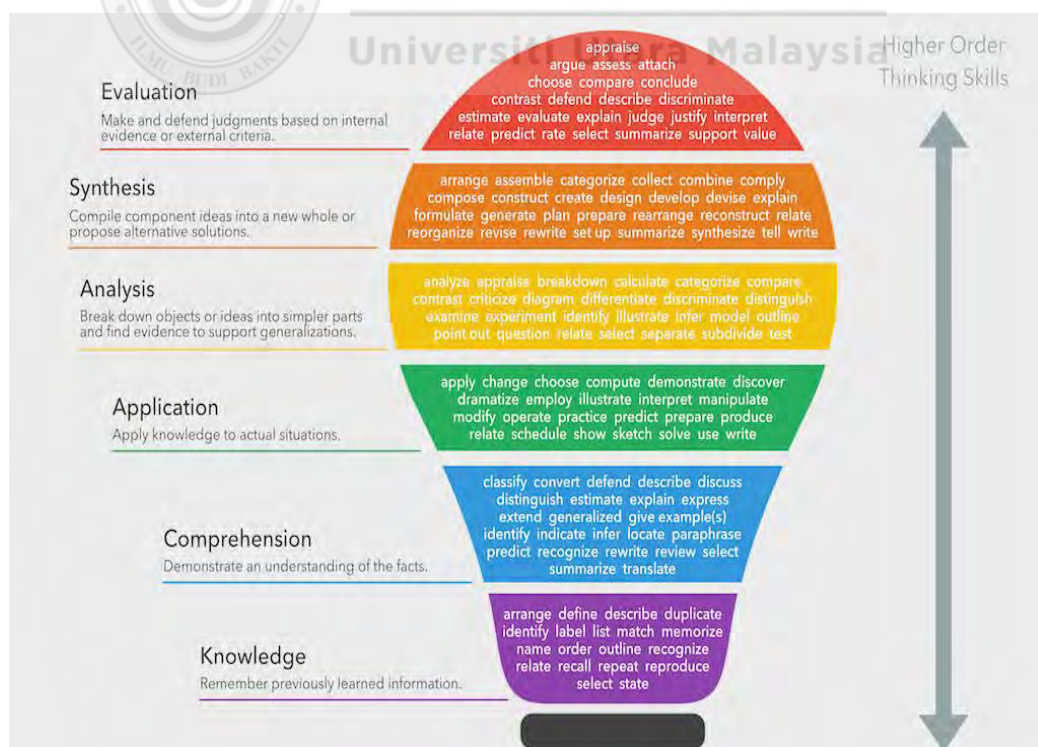


Figure 2.2 Bloom's Taxonomy of Cognitive Domain (1956)

Heick (2018) defines Bloom's Taxonomy as a hierarchical organisation of cognitive skills that can help teachers to teach and students to learn. Heick, further explains that the framework can be used to select activities for the lesson, design assignments and assessments, add rigour to the lessons, create discussion groups, and plan project-based learning. Hence, it is the most commonly used taxonomy by teachers all over the world.

According to Heick, the six levels in Bloom's Taxonomy can be easily understood by the specific terms used in each category. The first level of Bloom's taxonomy is 'Knowledge' and it is described as remembering of previously learned material, and verbs such as 'define, describe, identify, label, list, match, name, outline, recall, recognize, reproduce, select, and state' are listed under this category to denote knowledge. Activities such as memorizing a poem, remembering a mathematic formula or recalling state capitals are cited as examples under the "Knowledge" category.

The second level of Bloom's taxonomy is 'Comprehension' which describes the grasping of meaning of a learned fact. Verbs such as 'comprehend, condense, describe, discuss, distinguish, interpret, and locate' are used to demonstrate 'Comprehension'. Heick lists activities such as organising the animals in the jungle based on a given framework or summarizing a plot of a story as illustrating the 'Comprehension' level.

The third level of Bloom's taxonomy is 'Application' which refers to the using of learning, in new and concrete situations. Here, verbs such as 'apply, construct, carry out, demonstrate, operate, produce, use' are used under the 'Application' category. In this connection Heick, identifies activities such as using a formula to solve a problem or selecting a design to meet a purpose as examples of 'Application'.

The fourth level of Bloom's taxonomy is 'Analysis' which is described as the understanding of both the content and structure of the material. In other words, 'Analysis' is the breaking down of objects or ideas into simpler parts and finding the evidence to support generalization. This level of thinking is best demonstrated in verbs such as 'analyse, compare, contrast and differentiate'. Heick, lists activities such as explaining how the steps of a scientific process works together or identifying why a machine is not working, as examples of the 'Analysis' level.

The fifth level in Bloom's taxonomy is 'Synthesis' which refers to the compiling of component ideas into a new whole or proposing alternative solutions. Verbs such as 'compile, create, develop, generalize, integrate, and propose' are said to demonstrate 'Synthesis thinking'. Heick suggests activities such as proposing a new solution to an 'old problem' or writing a poem based on a given theme and tone as 'Synthesis'.

The sixth level of Bloom's taxonomy is Evaluation which refers to the making and defending of judgements based on internal evidence or external criteria. Verbs such as 'appraise, assess, criticize, defend, evaluate, justify, and support' are some words used to demonstrate this category. According to Heick, activities such as making a judgement regarding an ethical dilemma or illustrating the relative value of a technological innovation in a specific setting such as farming are deemed as 'Evaluation'.

Clearly, Bloom's Taxonomy provides a coherent framework to clarify thinking and learning outcomes. Bloom's main aim for creating this framework was to improve teacher communication and practices by way of exchanging ideas on testing and test materials (Moseley, 2005). However, teachers found difficulty in differentiating between the higher-order thinking categories such as analysis and evaluation (Wood,

1977) cited in Moseley (2005) which prompted other educationist to develop frameworks to further enhance the design and classification of educational objectives.

For instance, Hannah and Michaelis (1977) cited in Moseley (2005) developed a framework (see Figure 2.3) for thinking by field-testing it with school teachers. This framework places importance on teachers' writing lesson and course objectives that are planned to assist teachers to guide students to move from the lower levels to higher levels of thinking. The framework combines all three domains of learning (cognitive, affective and psychomotor) and lists them into three categories namely - intellectual processes, skills and attitudes and values. Hannah and Michaelis further posit that the data gathered through observation and remembering provides the knowledge base for learning. Although Hannah and Michaelis find all three categories to be independent, they assert the need for interaction among all three dimensions for effective thinking and learning to occur. Based on the details covered by Hannah and Michaelis, their framework initially seems to be a new method, but a careful analysis of Hannah and Michaelis's Framework (1977) clearly shows the overwhelming use of Bloom's categories of learning except the fact that Hannah and Michaelis have added more verbs to describe those categories for better understanding.

Intellectual Process	Skills	Attitude
Evaluating	Improving	Integrating
Predicting	Applying	Preferring
Hypothesising	Mastering	Accepting
Analysing	Patterning	Complying
Inferring	Initiating	Responding
Generalising	Data Gathering	Remembering
Classifying		
Comparing		
Interpreting		
Observing		

Figure 2.3: Hannah & Michaelis's Framework for Instructional Objective

(Source: Framework of Thinking. Moseley, et al., (2005))

Moseley et al., (2005) opines that in theory Hannah and Michaelis framework proposes autonomous learning, but in practice it is found to put immense pressure on teachers at every stage of teaching thereby suggesting that it would be better for students to abide by teachers' instructions. Apart from using Bloom's categories of learning, Hannah and Michaelis's framework do not have academic justifications and its usage is limited to school teachers. As such, Bloom's Cognitive Domain Taxonomy still remains the main source of reference for teaching thinking skills. On that score, Bloom's Cognitive Domain categories are being continuously used in many subsequent frameworks of thinking.

Paul (1985) conceptualised higher-order thinking practices as 'Critical Thinking'. Paul's critical thinking concept encompasses both cognitive and affective domains. Paul and Elder (2001), list 'analyzing, inferring, reasoning, judging, evaluating,

decision making and problem solving’ as major elements of critical thinking. Meanwhile, under the affective domain, Paul places the individual’s disposition (which includes attitudes, habits and ethics) as components. To surmise, Paul’s model (Fig 2.4) comprises the following three components - intellectual traits, elements of reasoning and standard of thoughts with specific words used as descriptors for clarity.

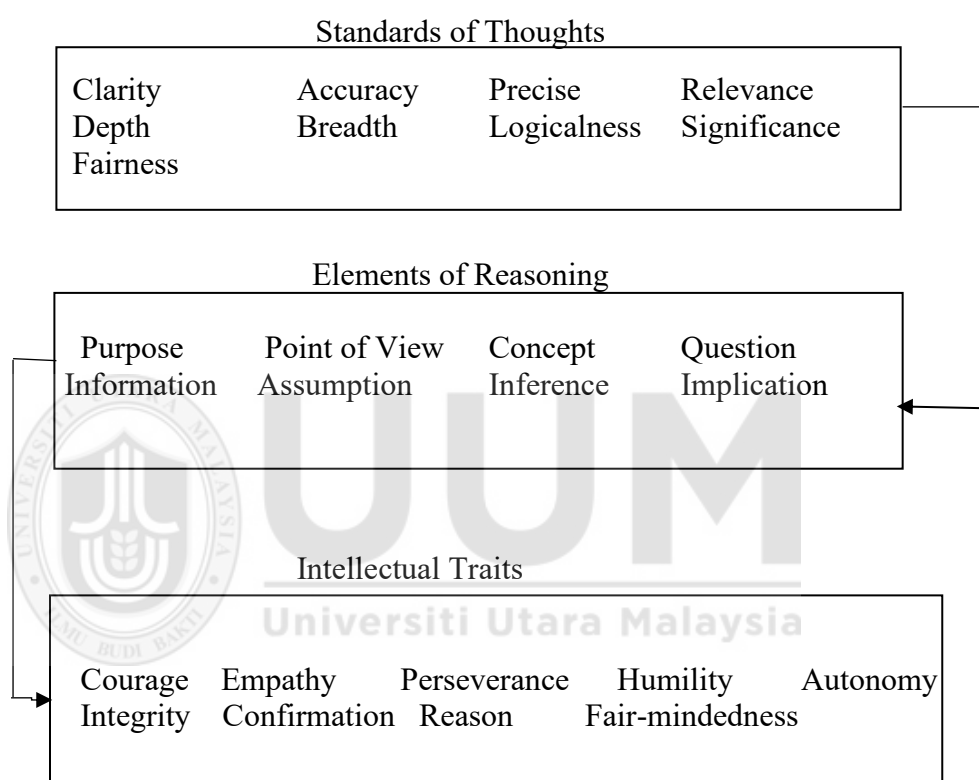


Figure 2.4. Paul’s Critical Thinking Model

(Source: Paul & Elder, 2008)

However, a close scrutiny of Paul’s concept of critical thinking also reflects the major components of Bloom’s Taxonomy as shown in Table 2.1 (Wang, 2017).

Table 2.1

Specific Critical Thinking Skills and Sub-skills

Skill	Sub-skills
Interpretation:	1. Identifying arguments and recognizing explicit premises, reasons and conclusions 2. Distinguishing argument from description, explanation and summary 3. Paraphrasing arguments to others, distinguishing deductive arguments from inductive arguments
Analysis:	1. Making inferences about premises, assumptions and conclusions 2. Detecting flaws in arguments
Synthesis:	1. Discovering hierarchical interrelations among arguments in support of the main position or view 2. Diagramming arguments
Evaluation:	1. Evaluating global structure of thought by using elements of reasoning and criteria of thought 2. Evaluating local arguments and their relationships by using criteria of thought

Source: Wang - Academic Publication (2017)

After careful analysis, Wang (2017), identifies the four main skills namely, ‘interpretation, analysis, synthesis and evaluation’ as central in Paul’s concept of critical thinking skills (Figure 2.4). Wang (2017) further gives clear explanation of all these four skills. Firstly, ‘Interpretation’ is defined as the understanding and interpreting of arguments, and ‘Analysis’ as the breaking down of a piece of information into finer points and taking into consideration of each of these finer points. On the other hand, ‘synthesis’ is defined as the opposite of analysis where the finer points of information which were broken down are recombined to be viewed as a whole. Finally, ‘evaluating’ is defined as the assessment of an argument that involves judgement on acceptability of the argument.

Clearly, traits of Bloom’s Taxonomy especially the three upper levels of thinking skills (analysis, synthesis and evaluation) are significantly embodied in Paul’s critical

thinking concept, thus, placing Bloom's Taxonomy in the forefront as the framework for HOTS.

However, Briggs and Collis (1982) produced a slightly different model for learning called the SOLO Taxonomy which is the acronym for 'Structure of the Observed Learning Outcomes'. The SOLO Taxonomy categorises the learners' understanding into five different levels with the underpinnings of the Piagetian theory (Table 2.2).

Table 2.2

Briggs & Collis 'SOLO' Taxonomy

Levels of Understanding	Descriptor
Level 1 Pre-structural	The learner hasn't understood the lesson but uses a much too simple way of going about it. The learner is unsure of the lesson.
Level 2 Uni-structural	The learner's response is focussed on several or only one aspect. The learner has only a basic concept of the subject.
Level 3 Multi-structural	The learner's response focuses on several relevant aspects but they are treated separately. The learner has several concepts of the subject but they are disconnected.
Level 4 Relational	The different concepts have become integrated into a coherent whole. The learner has learned the complexity of the subject by being able to join all the parts together. The learner achieves understanding of the subject.
Level 5 Extended Abstract	The previously integrated whole may be conceptualised at a higher level of abstraction and generalized to a new topic or area. The learner is now able to create new ideas based on the mastery of the subject.

Source: SOLO Framework Moseley, 2005

The SOLO Taxonomy (Table 2.2) shows the increasing complexity in the learner's understanding of the subject. While this taxonomy enables the teachers to recognize the complexity and quality of their students thinking, it does not take into account the

social and affective factors. Interactions between students, or between teachers and students, as well as peer influences suggested by Vygotsky as pertinent in student learning are clearly missing. Moreover, the SOLO Taxonomy generally emphasises age related progression in thinking with not much room for external factors that might enhance complex thinking. Apart from these frameworks there are other frameworks of thinking proposed by educationists that further enrich the literature on thinking skills.

De Bono's Lateral Thinking (1967) and Parallel Thinking (1985) are two concepts of thinking that have caught the attention of managers and CEOs of modern-day industries. Lateral thinking is described as the unorthodox thinking methods used to find solutions to problems, in contrast to Vertical Thinking that uses the traditional logical reasoning processes. Lateral thinking methods propose 'thinking out of the box' i.e. disrupting the usual thinking sequences to find solutions to problems. Moseley (2005) surmises Lateral Thinking as a cognate of creative thinking that is seen as the continuum of the philosophies of Socrates, Plato and Aristotle that have influenced western philosophical and scientific traditions.

Meanwhile, De Bono's Parallel Thinking (1985) proposes the Six Hats theory where each colour hat suggests using different aspects of thinking before arriving at a solution. For instance, the thinker when wearing (i) the White Hat should be using the facts, figures, information and gaps with regards to an issue before making a decision. The Red Hat thinker will have to take into cognisance the emotion, feelings and opinion aspects of the issue. When wearing the Black Hat, the thinker needs to evaluate all ideas as well as why an idea does not fit the system. The Yellow Hat thinker, on the other hand, is expected to positively view an idea and the consequences of implementing that idea. The Green Hat encourages the creation or proposal of other

options for solving a problem and finally, the Blue Hat emphasises both the subject thought as well as the thinking process itself. The Six Hats Theory provides space for each thinker to state his point of view without criticising the thought of others. It is a practical way of using thinking to resolve disputes in an amicable manner. Basically, both Lateral and Parallel thinking are concepts geared towards creativity and innovation both of which are embodied in Bloom's Taxonomy.

Besides these taxonomies, there are also other frameworks such as Feuerstein's Theory (1950) that proposes mediated learning through instrumental enrichment and posits that '...intelligence is modifiable, not static or fixed'. Ausubel (1978, p. 530) states that the goal of education is conceptual learning and proposes to teachers to structure and sequence their teaching. Ausubel's theory places emphasis on teachers' roles as central in the classroom and limits the students as passive receivers of information (Moseley, 2005). Furthermore, Ausubel does not subscribe to the notion that education needs to develop generic thinking, enquiry and problem solving skills.

William's Model for Developing Thinking and Feeling (1970) is a 3-dimensional model that encompasses the (i) curricula, (ii) teacher and (iii) Pupils. This model under the curricula dimension provides detailed lesson plans which provide a useful template for teachers who wish to teach creative thinking skills in their classrooms. However, the teacher behaviour and pupil behaviour dimensions are found to be rather general (Moseley, 2005).

Next, Stahl and Murphy's Cognition Taxonomy System (cited in Moseley, 2005) proposes a taxonomy that is based on the principles of a learning hierarchy. This taxonomy includes both the cognitive and affective aspects of learning but neglects the social-cultural influences on learning and thinking. Stahl and Murphy's model is also

void of the meta-cognitive aspect of thinking and learning. Moreover, all twenty-one processes of thinking proposed by Stahl and Murphy fit well into the six levels of Bloom's taxonomy (Moseley, 2005).

Quellmalz (1987) introduced the Framework of Thinking Skills that emphasises the development of higher-order thinking skills among learners to solve real-life problems. This framework is widely used to enhance reading, thinking and writing skills among learners. Moseley (2005) reports that schools have successfully used this model to infuse critical thinking skills across the curriculum. This framework focuses on the use of instructional designs, assessment tasks and classroom practices. However, it seems to have ignored the affective, conative and social aspects of learning. In 1990, Merrill came up with the Instructional Transaction Theory underpinned by Gagne's learning principle that 'different learning outcomes require different conditions of learning.' Through this framework Merrill posits that explicitly organised instruction and well elaborated knowledge facilitate effective learning. As such, this framework emphasises teacher expertise in pedagogies and proposes the meticulous planning of lessons.

Presseisen (2001) introduced the Complex Thinking Skills framework. Presseisen posits that to improve the quality of education, thinking skills should be taught as rigorously as how the subject-content is being taught in classrooms. In addition, Presseisen also advocates that thinking skills should be developed in a meaningful context. Apart from highlighting cognition and meta-cognition in this framework, Presseisen introduces two new concepts of thinking. The first concept referred to as the Epistemic Cognition is associated with understanding the limits of learning. The second concept termed conation or instinct is best described as clarity in thinking.

However, like many other frameworks, Presseisen's framework focuses mainly on the cognitive domain and tends to neglect the affective and social aspects of learning.

Meanwhile, Anderson and Krathwohl (2001) revised Bloom's Taxonomy and made two major changes to it. Firstly, Anderson and Krathwohl used verbs in place of nouns as used by Bloom. So, knowledge is replaced with remember, Comprehension with understand, Application with apply, analysis with analyse, evaluation with evaluate and synthesis was changed to 'create'. In addition, synthesis which was replaced with the term create was moved up to the sixth level while evaluation or evaluate was brought down to the fifth level of the taxonomy (Figure 2.5).

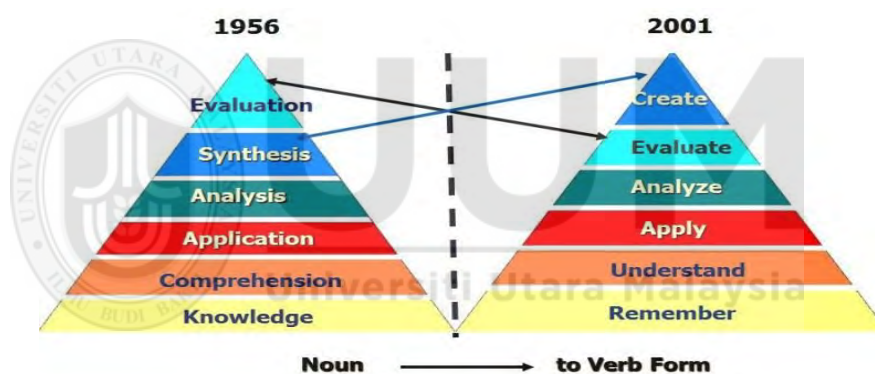


Figure 2.5 Bloom's Taxonomy and Revised Bloom's Taxonomy

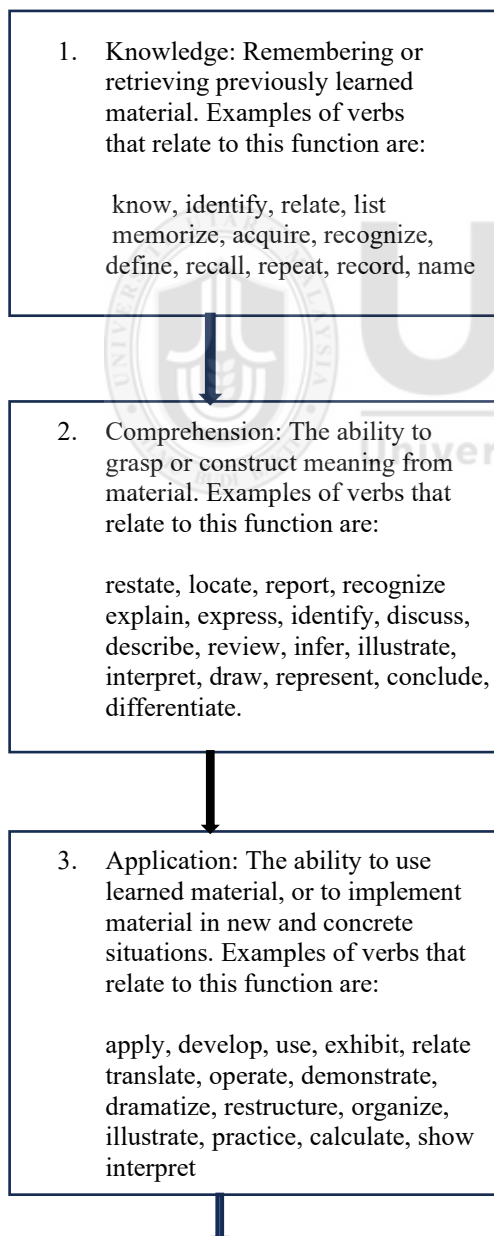
(Source: Leslie, 2001)

Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001) differs firstly in the listings by rewording the nouns into verbs. Next, it repositions the last two categories and explains in simple language what happens during each level of learning, hence making it easier for teachers to understand, recognize and utilise the different skills during their lessons. More importantly, the classification of knowledge as factual, conceptual, procedural and meta-cognitive types is a phenomenal addition to Bloom's

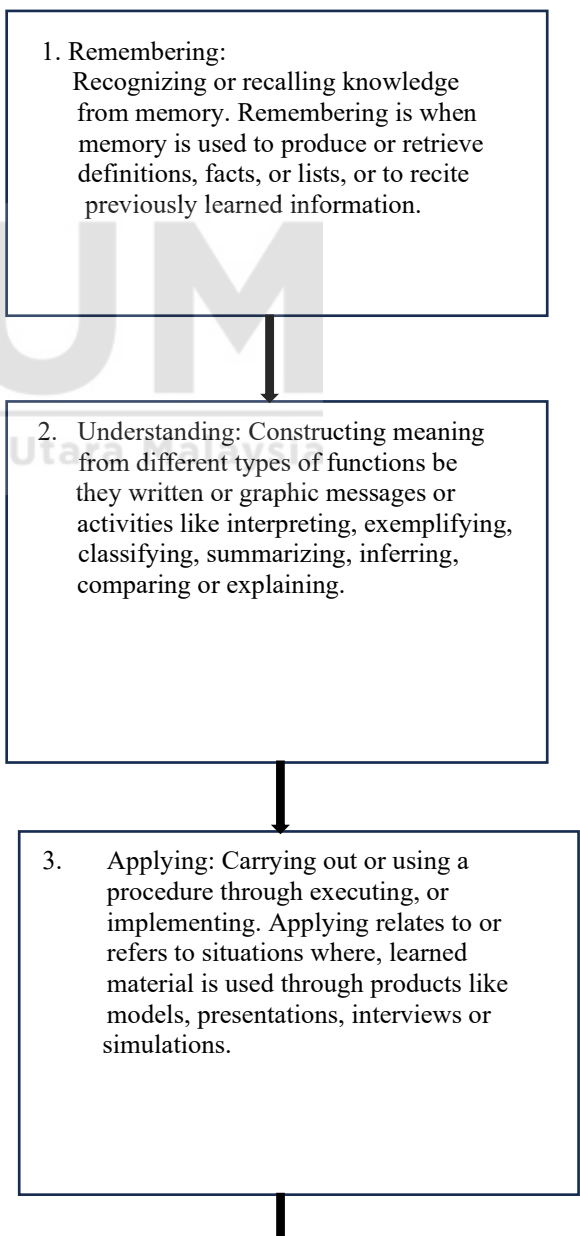
original taxonomy that helps teachers to understand the intersection of taxonomies in the teaching and learning process.

Thus, Bloom's Taxonomy has once again become dominant in most educational institutions (schools, colleges and universities) in the teaching of higher-order thinking skills. Table 2.3 clearly distinguishes the difference between Bloom's Taxonomy and Revised Bloom's Taxonomy by Anderson and Krathwohl, (2001).

Blooms Taxonomy 1956



Anderson and Krathwohl' Taxonomy 2001



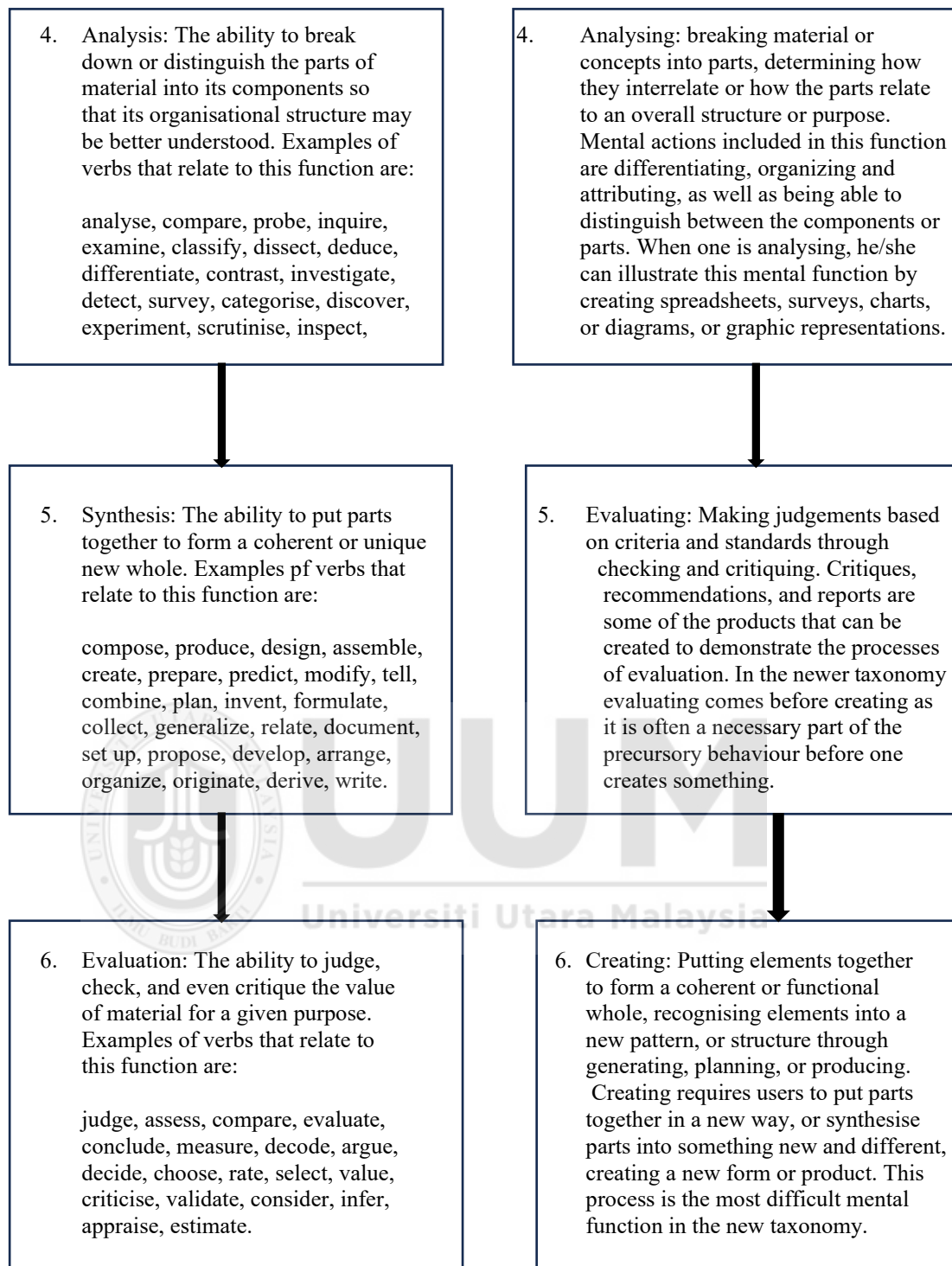


Figure 2.6: Bloom's vs Anderson & Krathwohl Taxonomies of Cognitive Domain

(Source: Leslie, 2001)

All the above discussions of the numerous frameworks of thinking should be sufficient to give a clear understanding of higher-order thinking skills and how these frameworks help complement and supplement each other. However, Bloom's taxonomy (1956) is still found to be the most useful of all other frameworks in understanding thinking in the academic context. As such, Bloom's Taxonomy (1956) is used as the foundation for the theoretical framework of this study with special focus on the analytical thinking skills.

2.2.1 Analytical Thinking Skills

Analytical thinking skills are the cognitive abilities in a person which helps to break down an issue into smaller units to find a logical solution. These skills are crucial to assess situations and to find ways to overcome obstacles in a structured and logical manner (Ariella, 2023). Analytical Thinking Skills are the bedrock of all other higher order thinking skills. Its application is inevitable in the other two higher order thinking processes, namely Synthesis and Evaluate. Many studies (Elder & Paul, 2019; Robins, 2011) have emphasized that analytical thinking skills are the fundamental thinking skills that students should acquire for greater success in their education and real-life situations.

Analytical thinking skills are manifested in thinking activities such as (i) data analysis, (ii) Research, (iii) logical reasoning and creative thinking, (iv) communication, (v) problem solving, (vi) visualisation, and (vii) critical thinking which demands keen observation and meticulous examination of information (Joseph, 2019).

Data analysis refers to the process of making sense of the information received in a logical manner and using it to make informed decisions.

Research is another aspect that demands analytical thinking skills. A researcher needs the analytical thinking skills to be able to see the pattern in the data collected to effectively suggest solutions for further improvement.

Logical reasoning and creative thinking are inferencing processes that help to arrive at a conclusion based on hypothesis. Logical reasoning can be further divided into three more sub-units:

- i. Inductive Logical Reasoning which is the process of forming a holistic view or generalised conclusion based on pieces of information gathered.
- ii. Deductive Logical Reasoning, on other hand, is done first by making a general statement and then examining the possibilities to reach a specific conclusion.
- iii. Abductive reasoning is used when there is a lack of evidence or explanation and is formed based merely on intuition to suit a given data. Being an intuitive form of reasoning, it invokes creative and revolutionary conclusion. On that score, the abductive reasoning skills can be closely associated with creative thinking skills.

Communication refers to friendliness, trust, asking questions and listening to others, and accepting and returning feedbacks. These attributes are vital for successful participation in communities. Analytical thinking skills help to build these attributes when keen attention is given to group interaction.

Problem solving is another skill that involves analytical thinking. In this process information is gathered on a particular problem. Activities such as brainstorming and data analysis help to design strategies to solve the problem.

Visualization refers to the understanding of the goal envisaged at the end of a process. Having a clear vision of the goal helps to stay on track of the project taken upon. Analytical thinking skills hones the vision.

Critical thinking is another element of analytical thinking process which involves keen observation and meticulous examination of data. It is the ability to interpret data to arrive at informed decisions. Critical thinking skills are used to solve problems, make informed decisions, and draw inferences. In short, critical thinking skill is the ability to think cautiously and rationally.

On that premise, careful study of the analytical thinking skills which underpins the other two higher order thinking categories as well needs to be given special attention when researching higher order thinking skills. Therefore, this study proposes to do just that, i.e. to explore the integration of the analytical skills in the ESL reading class. Having said that, it is equally important to understand the concept and contents of the many learning theories, especially the ones relevant to the teaching of the reading component.

2.3 Learning Theories

Learning theories are a set of principles that explain how a learner acquires knowledge. And from these theories teachers can have access to tested instructional strategies, tactics and techniques that can be used to accomplish effective learning in the classrooms (Ertmer & Newby, 1993). By studying and knowing the different learning theories, teachers will be better equipped to plan, prepare, conduct and conclude a successful lesson. Generally, learning theories are classified under three different perspectives, namely; I. Behaviourism, II. Cognitivism, and, III. Constructivism

I.) Behaviourism asserts that learning occurs when the learner acquires new behaviours or experiences changes in existing behaviours assisted by the associations between stimuli and responses (Ertmer & Newby, 1993).

II.) Cognitivism refers to the processing of information through the learner's mental process. This perspective upholds the principle that processing of information which leads to the understanding and retention of knowledge constitutes learning (Ertmer & Newby, 1993).

III.) Constructivists views learning as an active process where learners construct new knowledge by associating with their previous knowledge and experiences (Ertmer & Newby, 1993).

Having described the three perspectives of learning theories, this chapter now attempts to elaborate specifically the four learning theories that are used in the theoretical framework of this study.

2.3.1 Skinner's Operant Conditioning Theory (1948)

Skinner's 'Operant conditioning theory' (1948) is recognised as a fore-runner among the many behaviourist theories (see Figure 2.7). In a formal learning situation, operant-conditioning applies largely to class and student management rather than learning subject-content. Operant-conditioning asserts that learning occurs through reward or punishment. While rewards encourage the learners to repeat the behaviour praised, punishments are used to deter the learner from repeating an undesired behaviour. Therefore, teachers are encouraged to use stimuli such as rewards, compliments, approval, encouragement and affirmation for creating a positive learning environment. Hergenhahn, and Olson (2008) have established that positive reinforcements encourage learning in an individual. The use of positive feedback proposed in this learning theory can enhance the teaching of analytical thinking skills in the ESL reading class, to create a positive learning environment.

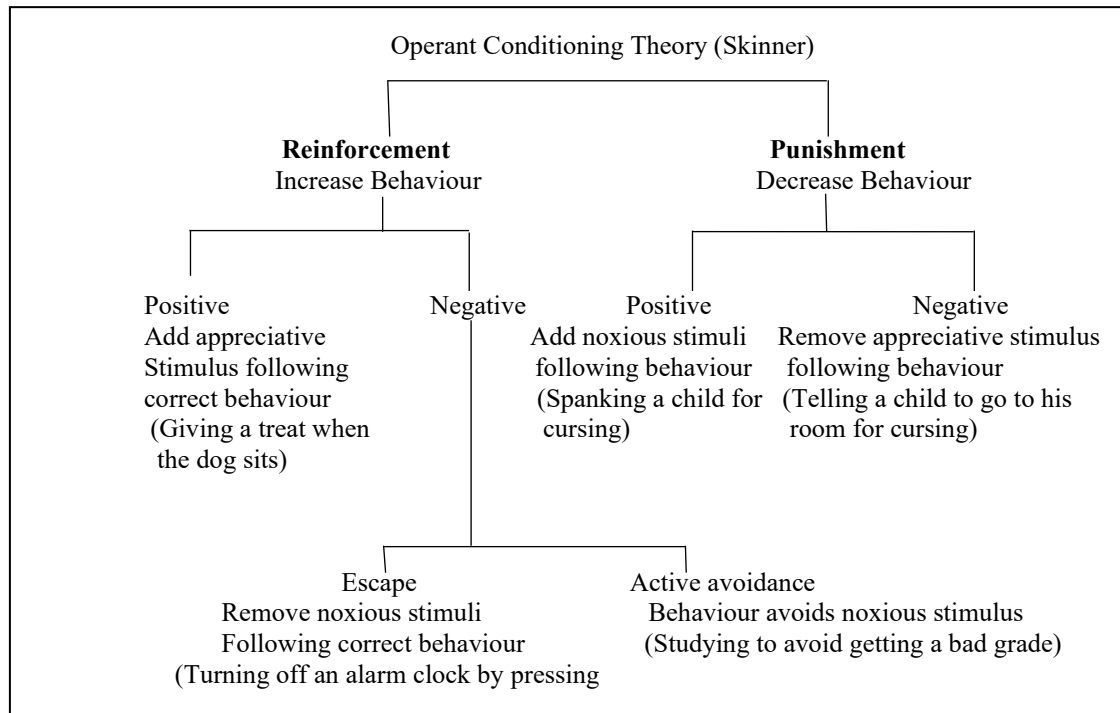


Figure 2.7 Skinner's Operant Conditioning Theory

Source: B.F. Skinner, Human Development

2.3.2 Bandura's Social Cognitive Theory (1986)

Bandura's Social Learning Theory (1977) is based on the behaviourist concepts which emphasizes reinforcement. However, realising that the internal thought process plays a bigger role than the social aspect involved in learning, Bandura renamed his theory as Social cognitive Theory (1986). This theory embodies two different learning perspective within it. The first perspective is referred as Cognitive Behaviour Theory (CBT) which concerns how people's perceptions and thoughts influence their emotional behaviour. This theory is commonly used in psychotherapy.

The second part of this theory highlights the cognitive perspective of learning i.e. the internal mechanics of the brain in attention, motivation and memory which are central in learning (Gerard, nd). This theory posits that learners acquire knowledge through observation of others within the context of social interactions, experiences and outside media influences. In fact, Bandura's Social Learning Theory (1977) emphasises that

learning is not purely behavioural, rather it is a cognitive process occurring in a social context and identifies observation, imitation and modelling as central in the learning process. In other words, teachers should not only act as role models, but encourage the students to interact with their fellow classmates to enhance their attention, memory and motivation (David, 2019). To sum up, Bandura's 'Social Learning Theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences' (David, 2019). Clearly, Bandura's Social Cognitive Theory (see Figure 2.8) which emphasizes the mental processes of attention, retention, motor reproduction and motivation as key principles of learning is relevant and appropriate to be included in the framework of teaching analytical thinking skills in the ESL reading class.

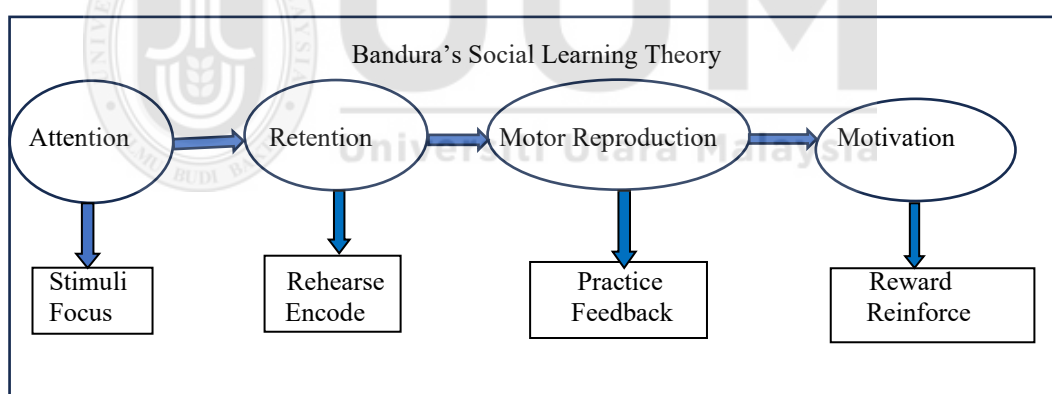


Figure 2.8 Bandura's Social Cognitive Learning Theory (1986)

Source: Gerard Learning Design (nd)

2.3.3: Vygotsky's Social Development Theory (1978)

Vygotsky's Social Development Theory is closely related to Bandura's Social Behaviour Theory. However, Vygotsky's theory emphasises two concepts – 'that learning occurs in social context and that learning occurs within a child's zone of

proximal development’ (Mayer, 2003). Vygotsky (1978) posits that social interaction precedes a person’s development. In other words, it is an individual’s socialisation and social behaviour that develops the individual’s consciousness and cognition. Meanwhile, Vygotsky explains the Zone of Proximal Development as the distance between the student’s current ability level to perform a task and the level that the student could attain through guidance of a more knowledgeable person. A more knowledgeable than others or MKO can be ‘anyone or anything that has a higher ability than the learner – it can be the teacher, an adult, peer, a younger person or even the computer’ (Vygotsky, 1978). Realising the importance of social interaction in enhancing learning and the central role of teachers as an MKO in the classroom, Vygotsky’s Social Development Theory is also included in the theoretical framework of this study.

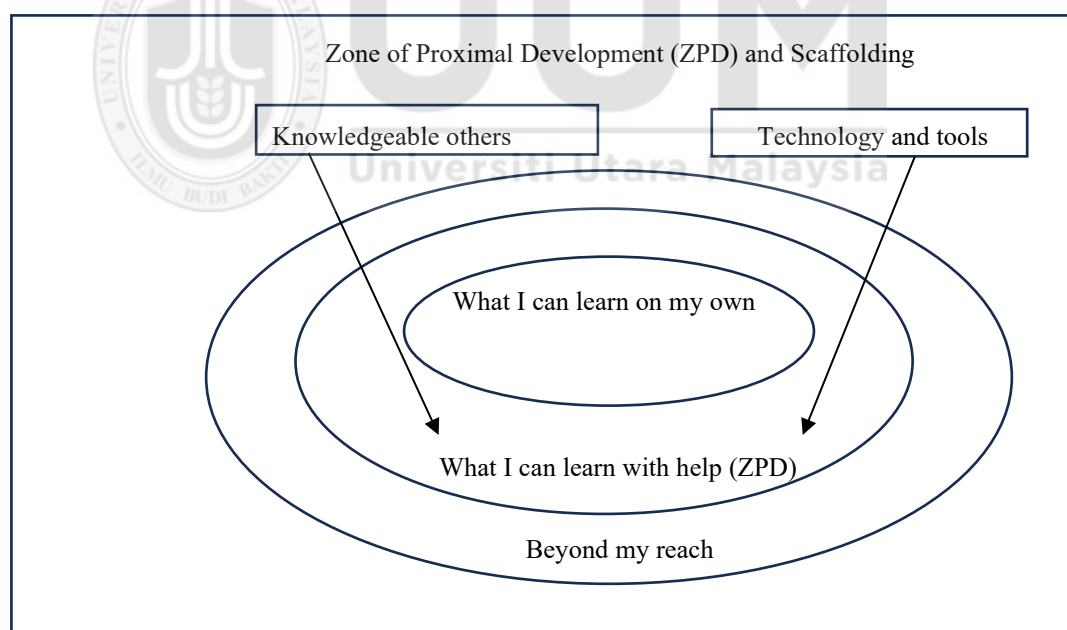


Figure 2.9 Vygotsky’s Social Cultural Theory of Cognitive Development

Source: Simply Psychology

On this premise, peers are effective in providing guidance that stimulate students’ mind to think critically and analytically. In addition, group work in schools helps build students’ collaborative skills that are so crucial at their workplaces. This is another

sub-skill that underpins the analytical thinking skills. It is necessary to collaborate with others especially in work places to achieve a desired target. People need to work in groups for that purpose. Literature supports collaborative learning approaches for its efficacy to involve students to work in groups. “Collaborative learning is a learning approach that involves joint intellectual effort by students, or students and teachers together. Usually, students work in groups of two or more, mutually searching for understanding, solutions, or meaning or creating a product’ (Barbara & Jean, 1992).

2.3.4: Piaget’s Cognitive Development Theory (1936)

Piaget proposed two learning theories. The first one, known as cognitive development theory posits that learning is a cumulative process which occurs according to the child’s age (Figure 2.10).

However, Piaget’s later works (based on the constructivist paradigm) emphasise that people acquire knowledge and make meaning of it based on their own experiences and prior knowledge (Mussen,1983). The two key components proposed in Piaget’s constructivist theory are (i) Assimilation and (ii) Accommodation.

Assimilation, according to Piaget, refers to the acquisition of knowledge by relating new knowledge to the individual’s existing experiences or prior knowledge called the schema. It is like adding new blocks onto the existing old blocks, using the old blocks as foundation. In contrast, accommodation is said to occur when new information which is presented to the individual does not relate to any existing experiences or prior knowledge of the individual, and this new knowledge is taken or accommodated onto the mental schema as another frame. The process of accommodation and assimilation occurs during task-based learning.

Definitions of task in the educational context by language experts (Long, 1985; Breen, 1987; Willis & Willis, 1996; Skehan, 1998; Ellis, 2003, ct in Nunan, 2003) can be summed up as a pedagogical action or activity of learning which has a specified objective, appropriate content, standard operating procedures and a range of outcomes for the learners. These activities can range from ‘simple and brief exercise type to more complex and lengthy activities such as group problem-solving or simulation and decision making’ (Breen, 1987 ct in Nunan, 2003).

A task in a language learning situation involves the meaningful use of the target language as well as the cognitive (thinking) skills by the students. In other words, it is an engaging activity where students can connect their experiences and prior knowledge with their newly acquired knowledge and skills to complete a piece of work. Fundamentally, task-based learning reflects constructivism. Piaget has explained this type of learning to be either assimilation or accommodation. According to Nunan (2003) task completion has become an important element in the ESL and EFL settings.

Calling these processes of learning as constructive learning, Piaget also places much emphasis on the roles of teachers in the classrooms. Piaget posits that teachers need to prompt the students’ minds to initiate effective critical thinking. On this premise, Piaget suggests that a teacher should not merely be a teacher, but must play the roles of facilitator, mentor, consultant and even a coach. Under the constructive theory, Piaget also highlights the importance of students’ active participation and working in groups - answering each other’s questions.

Piaget’s constructive theory comprehensively describes the principles of learning, suggests teaching methods and strategies, and proposes education reforms. On that basis, it is also selected to form the theoretical framework of this study.

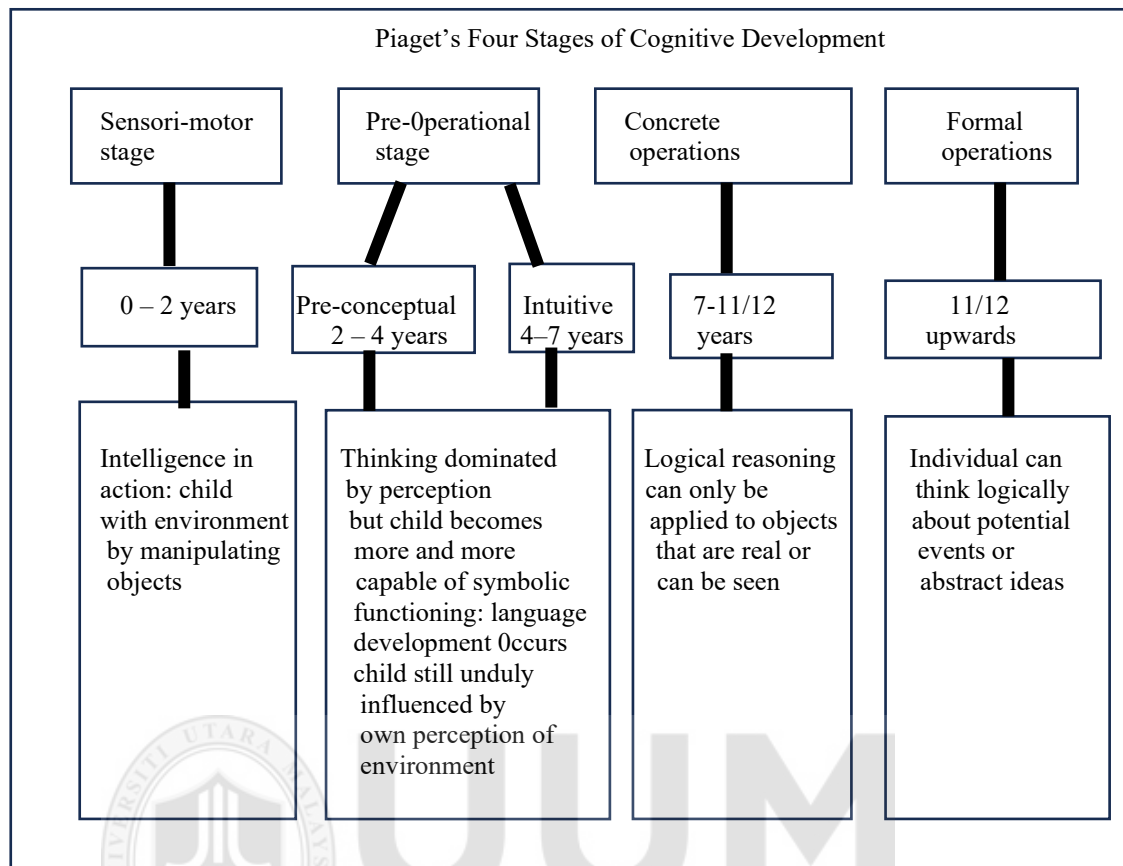


Figure 2.10 Piaget's Theory of Cognitive Development

Source: Foundations of Educational Technology

Positive consequences proposed by Skinner (1948), the principle of observation, imitation and modelling proposed by Bandura (1986) the social interaction factor proposed and the Zone of Proximal Development by Vygotsky (1978) and the four stages of learning (sensory-motor, pre-operational, concrete operations and formal operation) from infancy to adulthood postulated by Piaget are fundamental principles that determine the success of teaching and learning. On that premise, these four learning theories together with Bloom's taxonomy (1956) are used to formulate the theoretical framework of this study. (see Figure 2.11).

2.4 Theoretical Framework of the Study

The theoretical framework of this study places Bloom's Taxonomy as central supported by the four learning theories discussed earlier, namely: (i) Skinner's Operant Conditioning Theory, (ii) Bandura's Social Cognitive Theory, (iii) Vygotsky's Social Cultural Theory, and (iv) Piaget's Cognitive Development Theory (Figure 2.11).

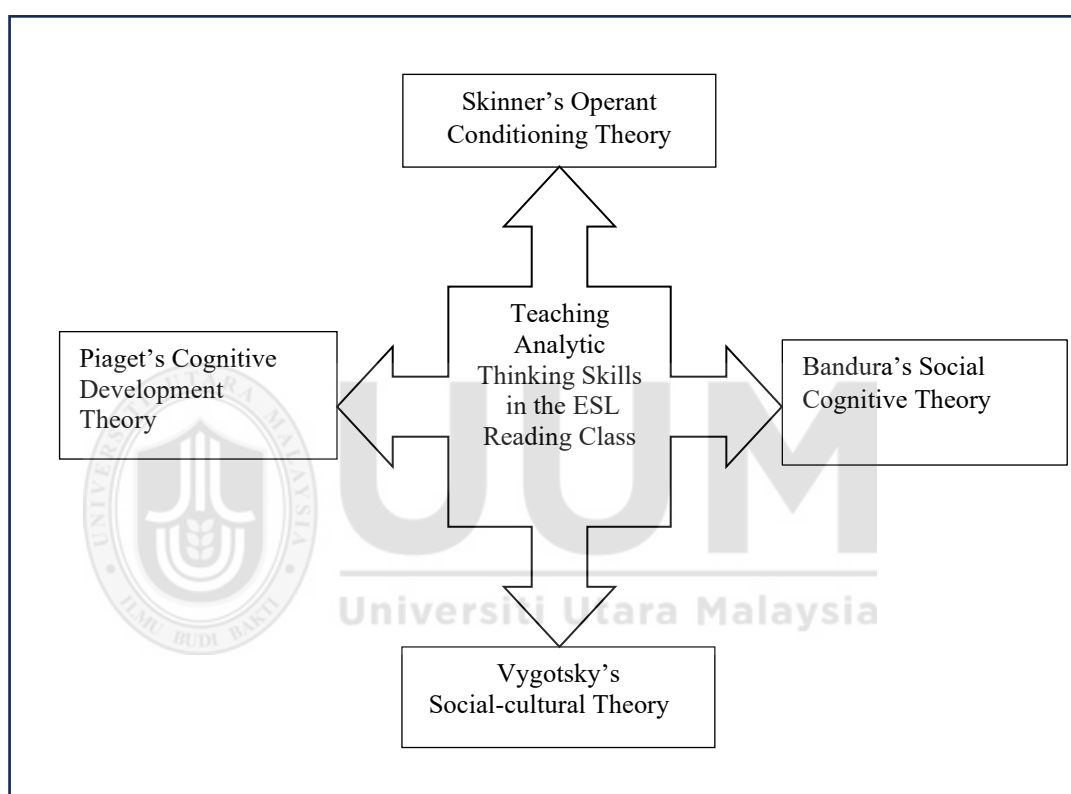


Figure 2.11 Theoretical Framework of the Study

Having discussed the learning theories and the taxonomy that underpin the theoretical framework of this study, the next section discusses the principles and practices of teaching the language skills particularly the reading skill in the ESL class.

2.5 Teaching Language Skills in the ESL Class

Listening, speaking, reading and writing are the four language skills that are central in any language-teaching practice. In fact, TESOL programmes in higher learning

institutions all over the world focus on these four language skills as their key content (Marlina, 2018).

While the teaching of listening and speaking skills are seen as the basic introductory skills in language learning, the teaching of reading and writing which are the oldest forms of language learning is seen as a more formal way of teaching the language (Pan, 2021). Further, it is posited (Pan, 2021) that teaching these skills simultaneously may not be effective as each of these skills have different features and may need different strategies to teach. However, empirical studies have established that reading takes precedence over the other language skills because it is reading that is used to enhance the spoken and written skills .and not vice-versa (Marlina, 2018).

Reading is taught in the ESL class for many purposes. Teaching reading to improve pronunciation and fluency are purposes of teaching reading at the elementary level. Making sense of the text, critically analysing the text and using the texts functionally are the purposes of reading at the higher level. 'Reading is a complex cognitive process of decryption signs in order to create or originate meanings' (Schulz, et al., 1977:30).

Sanglia (2014) emphasises that reading is fundamental in an advanced society and purports that it requires creativity and critical analysis of the text. 'Real reading has to do with thinking, learning and expanding a reader's knowledge and horizons' (Zimmerman & Hutchins, 2003). In this connection, reading enhances higher order thinking skills via numerous cognitive processes such predicting, connecting, inferring, comparing, creating images, summarising, synthesising, skimming, scanning, reflecting and using analogy (First Steps, 2012). These processes inevitably lead to analytical thinking skills which is the focus of this study. Relatedly, reading comprehension activities help evaluate the students' level of analytical thinking skills.

‘Good comprehension is vital if reading is to have a purpose’ (Clements, 2014). Studies (Lalicic & Dubravae, 2021; Oritz, et al. 2021; Soraya 2021; Nguyen 2020) on the teaching of reading in ESL and EFL programmes has established that reading is crucially important for language learners and that successful learners are generally proficient readers.

Meanwhile there are four aspects that are essential for successful navigation of an English language lesson, namely, lesson plan, teacher instruction, lesson content, and classroom culture.

Lesson Plan

Lesson plan is an essential teaching tool that helps the teacher to record what the students will learn and how it is going to be taught. In other words, the lesson plan facilitates the teacher to translate the curriculum into learning activities, assist the teachers to prepare the teaching materials along with the assessment in line with the learning objectives. Considering the essentiality of the ‘lesson plan’ it is taught as a compulsory unit in teacher training programmes in Malaysia. Teachers are encouraged to use the lesson plan to design their lessons even after graduating from their institutes.

A good lesson plan should comprise clear objectives, should list the materials or teaching aids needed, provide the background knowledge of the students to be taught, state the types of instruction or methods and techniques to be used to deliver the lesson, design a proper closure as well as propose a quick assessment (Panasuka & Todd, 2005, cited in Nafisah Mahmud, 2010). A lesson plan is a detailed ‘learning trajectory’ prepared by the teacher to guide his or her teaching activities and learning outcomes in the classroom. Details of a lesson plan will depend on the teachers’ preference on the subject being taught and the needs and ability levels of the students. To design an

effective lesson plan, the teacher needs to put in a lot of time and effort that demands dedication, understanding of students' abilities and specific goals (Engnoth, 2013). Considering the importance of lesson planning, teacher-training programmes in Malaysia provide a standard template for the trainee-teachers to prepare their lessons during their teaching practice (Nafisah, 2010).

Teacher Instruction

Teachers play a very important role in the lives of his or her students. They play many roles, firstly as knowledge providers, next as role models in the teaching and learning setting, thirdly as mentors, fourthly as facilitators and fifthly as resource developers (Latisha & Surina, 2010). However, it cannot be denied that the teacher as a knowledge provider is still the most important role. As such, the teacher needs to first have adequate knowledge of the subject matter be it language skills or thinking skills. The level of knowledge a teacher has of the target subject will determine his/her quality of teaching. According to Tengku Faekah, et al., (2018) past researchers have proven that 'the quality of teachers has contributed up to 30% of the variance in student outcome'. In addition, a teacher's leadership qualities and behaviour in class essentially makes the teacher a role model. Students not only learn what the teacher teaches in the classroom but what he is in the classroom (Pandian, 2004). Based on the influence that teachers have over their students, developed nations such as Australia, France, Finland, and USA are currently focussing on the quality of teachers as central in their recruitment. (Tengku Faekah, et al., 2018).

Lesson Content

Subject content refers to the topics and skills stipulated in the syllabus that needs to be taught in the specific classes or forms. In Malaysia, the subject content for the ESL class is developed by the Curriculum Development Unit of the Ministry of Education.

Classroom-culture

Classroom culture, according to Silvia (2015) is ‘an integrated system of particular values and norms for a learning group’. A positive classroom culture depends on the ability of the teacher to create an atmosphere in the class that can provide students the space to investigate, opportunities to explore as well as take risks to try new ideas and insights. Educators Rising (2019), identifies the following components as crucial in creating a positive classroom culture:

- i.) honouring students’ experiences and voices
- ii.) ensuring respectful interaction among students, and
- iii.) ensuring social and emotional safety

For this purpose, the teacher needs to allow the space for pupils to voice out their ideas and experiences. The teacher needs to encourage healthy interaction among the students based on mutual respect and ensure that there is no bullying in the class. The teacher is also expected to give regular feedback to students to enable them to correct their mistakes or reinforce their achievements. In addition, teachers should also recognise the different levels of abilities among students and cater to their individual differences, thus, giving the students social and emotional safety in class. These practices will have an impact on the students’ behaviour, values and attitudes and enable them to make adjustments to their learning environments (Sobri, 2017).

The physical environment of the classroom is equally important in creating a conducive class for learning. Physical environment in a learning context refers to the ‘overall layout of the classroom which include the lighting, ambient, noise, air-quality, thermal comfort and the level of upkeep of the classroom’ (American Institute of Research, 2019). It is generally accepted today that a safe, clean and comfortable physical environment of a class helps create a positive learning environment and impacts on the students’ performances (Nur Hidayathul, et al., 2014). Hidayathul also cites several past studies (Proshensky & Wolfe, 1975; Cane & Caine, 1991; Moore & Lackney, 1994; Szteejnberg & Finch, 2006; Clark, 2010) which report that factors such as design, space and furniture arrangements help enhance the teaching and learning process.

2. 6 Description of the Variables in this study

This study investigates the incorporation of analytical thinking skills in the ESL reading class with focus on three important variables, namely teacher knowledge, teacher perception and teacher practices.

Teacher Knowledge

Teacher knowledge in this study refers to the knowledge of the subject content taught by the teacher in the classroom. Subject content generally refers to facts, concepts, and principles that are used to teach in specific academic courses (Great Schools Partnership, 2019). Teachers who possess a strong command of the subject matter that they teach tend to be effective at their job. As such, teachers must have mastery over the subjects that they teach (Nor Rizan, et al., 2012). Norizan, et al.’s study of 495 Mathematics and Science teachers showed that more than 90% of them who are effective were very well-versed in their subjects.

On that score, this study attempts to investigate the EL teachers' knowledge of analytical thinking skills and their adequacy to teach it in their ESL reading class.

However, there is general opinion that the EL teachers in Malaysia have low proficiency in the English language and that their understanding of the analytical skills is equally weak. In fact, the teachers' poor command of English and their inadequate knowledge in analytical thinking skills have been identified as reasons for the unsuccessful implementation of higher order thinking skills in the ESL class (Nawal, 2019).

On that score, Malaysia's Ministry of Education, has initiated the Malaysia Education Blueprint (2013) and the Road-map (2015) for EL teachers with the aim of uplifting and strengthening the Malaysian EL teachers' English language proficiency as well as their higher order thinking skills. Teacher knowledge which is proposed as an independent variable in this study will be examined based on three important aspects, namely; Concepts of analytical thinking skills, processes of analytical thinking skills and activities of analytical thinking skills.

The concept of analytical Thinking Skills is explained as the ability or skills in a person that helps the person to break down a complex issue into smaller units and find a well-reasoned solution to it. Understanding a concept means that for each concept learned (or taught) the learner is guided by its critical attributes' (Donahoe and Palmer, 2009). Critical-attributes refer to the mandatory characteristics found in the concept. Understanding the concept of the analytical thinking skills is foremost for anyone to be able to use these skills in the academic as well as real life situations that require problem-solving, inferencing, predicting, or making informed decisions. To really understand the concept of analytical thinking skills its critical attributes need to be

mastered. Thus, to understand a concept, it needs to be thoroughly analysed and its critical attributes identified. In relation to that, to understand the concept of analytical thinking skills one needs to be able

(i). to distinguish examples of the concept from non-examples that lack one or more of the critical attributes.

(ii) to identify accurately analytical thinking skills from a wide range of varying activities

(iii) to be able to demonstrate analytical thinking skills in the teaching and learning process.

Apart from that, the teacher also needs to have clear understanding of the processes involved when teaching a particular concept. On that score, EL teachers need to have sound knowledge of processes such as data gathering, visualizing, problem solving, inferring, predicting and decision making, to effectively teach analytical thinking skills in their ESL class.

Finally, EL teachers also should have thorough knowledge of the activities that promote analytical skills to effectively incorporate them in their ESL reading class. Educationist have identified group activities such as ‘Save the Egg’, discussions (brainstorming), project-based learning, reading comprehension and creative writing as some of the major activities that can enhance the teaching of analytical thinking skills in the ESL reading class.

A profound understanding of these aspects is prerequisite for quality teaching. ‘Teacher quality has always been a crucial factor in determining successful teaching and learning in a class (the Organisation of Economic Cooperation and Development).

Teacher Perceptions

Teachers' perception generally refers to the interpretation of teachers on aspects of their teaching based on their prior knowledge, beliefs, past experiences, and their understanding of the present situation and information (Nikian, 2013).

The study of perception has been crucial in the teaching and learning process of any subject. Be it an investigation of teachers' perception of assessment (Banda, 2005), an exploration of teachers' perception of the teaching of grammar (Thu, 2009), a study of teachers' perception of applying technology in the classroom (Nikian et al., 2013), a study of teachers' perception of E-learning (Mei et al., 2017), or assessment of teachers' perception on computational thinking concepts (Ung et al., 2019) – they all have clearly shown a strong relationship between teachers' perception and the quality of their teaching.

According to Pitipornatapin and Sadler (2015) perceptions of teaching are generated from teachers' prior knowledge, teachers' beliefs and teachers' previously experienced teaching practices. However, teacher-beliefs seem to be central in any study of teacher perception. Thu (2009) posits that beliefs have powerful influence over human behaviour. William and Burden (cited in Thu, 2005) states that teacher beliefs which are closely related to their values, world views and conceptions have profound influences over teachers' classroom behaviours. Similarly, Kagen (1992) posits that the actual instruction provided by a teacher are closely linked with the teachers' beliefs about teaching.

Past studies have established that when changes are initiated in teaching such as introducing a new concept or using new methods or new approaches, teachers' perceptions have strong influence on the implementation of such changes. For

instance, Banda (2005) found teachers' perception on assessment in the Mathematic class affected their performance. These teachers perceived the classroom assessment as just a test, and thus, showed limited initiative to use different methods and tools to assess their students' ability while teaching. Thu (2009) who associates teacher perceptions to teacher beliefs asserts that teacher perception/beliefs have a marked influence on the teachers' performances in class. Thu's study on teachers' perception of grammar teaching in the English language classroom showed that teachers believed in teaching grammar explicitly rather than implicitly and their perceptions strongly influenced how they taught grammar in the English classroom. Similarly, Pitipornatapin and Sadler (2015), examined the pre-service science teachers' perceptions of socio-scientific issue-based teaching to see how their perceptions related to their practices. As such, it would be expedient to explore Malaysian EL teachers' perception towards teaching analytical thinking skills in the ESL reading class and to examine if their perceptions have any significant influence over their practices. Teacher perception is, therefore, proposed as another independent variable in this study.

Teacher Practices

Teacher practices is the dependent variable investigated in this study. Teacher Practices or classroom practices have a marked effect on students' learning and achievement (Wenglinsky, 2002). According to Yu (2015) teacher practice is 'what teachers do in class. In other words, teacher practice is the manner in which the teacher manages the students and creates conducive environments that result in successful learning. For instance, Thibadeau (2001) posits that effective teacher practices involve a high degree of planning, positive personal relationship and excellent classroom management skills. Chickering and Gamson's (1987) seven principles of good teaching are still acknowledged as the best guidance for ensuring best teacher

practices. On that premise, the following aspects are listed as essential for best teacher practices:

- having good communication/interaction with students
- encouraging interaction among students
- providing opportunities for active student participation
- offering timely and appropriate responses and teacher feedback
- emphasising time on task
- motivating learning by communicating expectations
- recognising diverse abilities and ways of learning

Figure 2. 12 Aspects of Good Teaching Practices

Source: Chickering & Gamson, 1987

Relatedly, it is equally important to understand the sub-units of teaching practices which are investigated in this study, namely: (a) the Lesson Plan, (b) Teacher Instruction, (c) Subject-content, (d) Classroom-culture and (e) Class/school physical environment.

2.7 Conceptual Framework

The conceptual framework of this study is formulated based on the three variables namely, Teacher Knowledge, Teacher Perceptions and Teacher practices (see Figure 2.13).

Knowledge and Perception of the English language teachers that is being investigated in this study are treated as independent variables. ‘Knowledge’ in this context refers to the information and skills that the English language teachers have acquired of analytical thinking skills. ‘Perception’, on the other hand, refers to how the English language teachers regard the teaching of analytical skills in the ESL reading class. In

other words, it refers to the level of the English language teachers' understanding and interpretation of teaching analytical skills in the ESL reading class.

Teacher Practices' is treated as dependable variable as it can be influenced by both the teachers' knowledge and perception. Teacher or Classroom practices refers to how the teachers conduct their lessons incorporating analytical skills in the reading comprehension lessons. Teacher practices, therefore, will involve the planning of the lesson (lesson design), the implementation of the lesson (teacher instruction), the subject matter that is being taught (content), the nature of interaction in the class (classroom culture), and the level of success of the lesson (learning Outcome). The conceptual framework is based on the understanding that these three variables strongly influence the teaching-learning process. Though there are many other factors that impact a lesson, these three variables were chosen as they are directly related to the 'teacher factor' which is the main area of this study.

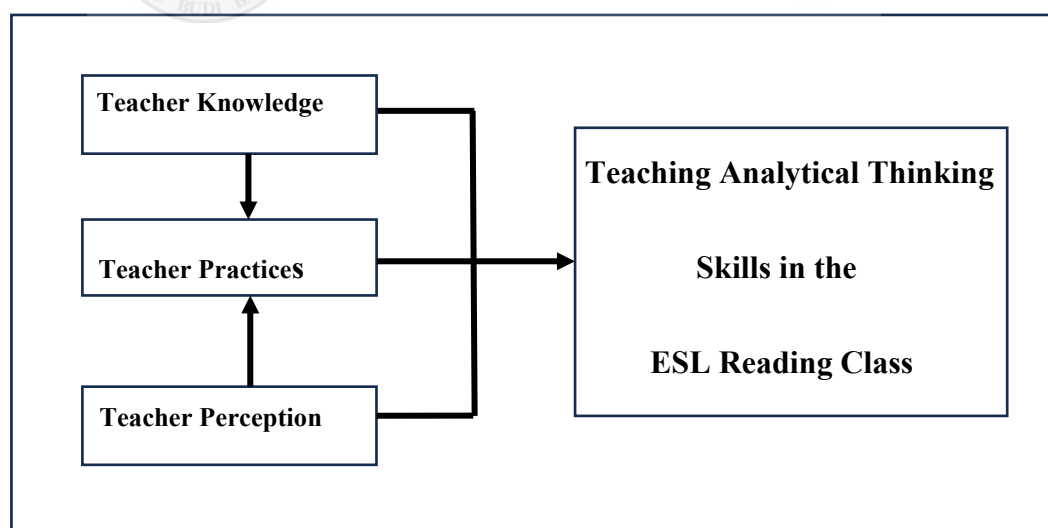


Figure 2.13 Conceptual Framework of the Study

2.8 Past Studies on Teaching of Higher Order Thinking Skills

One of the earliest studies on the teaching of HOTS in Malaysia was conducted by Rajendran (1999). Rajendran finds that Malaysian teachers are not fully ready to incorporate HOTS in their classrooms using the infusion approach. In contrast, Rajendran found the teachers preferring the direct teaching approach. In that light, Rajendran emphasises the need for Malaysian teachers to improve their knowledge of HOTS before they can improve their methods and tools for the teaching of HOTS in their classrooms.

Hashim, (2003), on the other hand, attempts to investigate Malaysian teachers' perceptions and practices for teaching thinking skills in the classrooms. Hashim's study comprised 337 secondary school teachers in the state of Selangor, in Malaysia. A questionnaire and personal interviews were used to gather data. Hashim found that the teachers strongly agreed and exhibited positive attitude on the value of teaching thinking skills to their students. The teachers' practices demonstrated the employment of multiple strategies to teach thinking skills. However, this study also found that the teachers were unsure of their competency at teaching higher order thinking skills and dealt more in teaching lower order thinking skills. Hashim, also found that teachers who had attended professional development courses in higher order thinking skills taught better than their counterparts who had not attended any such course. On that premise, Hashim proposes that teachers need to attend in-service courses periodically to be adequately equipped to teach higher order thinking skills in the Malaysian classrooms. In conclusion, Hashim suggests that future studies come out with strategies that can enhance the teaching of higher order thinking skills in Malaysian classrooms.

Meanwhile, Rahil, et al., (2004) studied the incorporation of thinking skills in the curricula from a different dimension. Rahil carried out a survey among 387 secondary school students to investigate the level of inculcation of critical thinking, creative thinking and convergent and divergent thinking skills in their classrooms. Rahil's study established that though teachers seem to have shifted their teaching strategies, giving greater opportunities for active participation from the students, there is 'still plenty of room for improvement in incorporating thinking skills.'

Rosmawati (2009) conducted a case study where three ESL teachers from a Malaysian secondary school in the state of Kedah were selected as participants. Rosmawati used classroom observation, interviews and document analysis to investigate the teachers' knowledge, their attitudes and the challenges that they faced with respect to the incorporation of higher order thinking skills in their classrooms. Rosmawati found that the teachers made concerted efforts to infuse higher order thinking skills, but their lack of pedagogical content knowledge impeded their efforts. As such, the teachers were found to underutilize strategies that could promote higher order thinking skills. In addition, Rosmawati also posits that teachers' beliefs and attitudes with respect to the teaching of higher order thinking skills should be improved to ensure a more effective infusion of HOTS in the classrooms.

Though the idea of incorporating HOTS into the Malaysian education system was mooted as early as in the 1990s, it did not materialise as intended till the last five years. From 1999 to 2009, there have been only a few notable studies (Rajendran, 1999; Hashim, 2003; Rahil, 2004; Rosmawati, 2009) on the teaching of higher order thinking skills.

However, in the last five years there has been a considerable increase in the interest of teaching higher order thinking skills in Malaysian English language classrooms. The steady increase in the research of teaching higher order thinking skills (Tan et al., 2014; Tan et al., 2015; Siti, 2016; Khairon, et. al., 2017; Tajurapin, et. al., 2017; Ganapathy, et. al., 2017; Charanjit Kaur., et, al. 2019) in the last five years is testimony to that fact. The emphasis that the Malaysian Ministry of Education is giving to the teaching of higher order thinking skills in schools and that higher order thinking is being tested in public examinations could be the main reason for this surge. (Malaysian Education Blueprint, 2012).

Studies on the teaching of higher order thinking skills in the last five years have not only increased but have involved varied investigations. For instance, Tan and Arshad (2014) conducted a case study on a Malaysian secondary school science class comprising seventeen students and a teacher to investigate the efficacy of Problem-based Learning as a tool to inculcate higher order thinking skills. In that study, Tan and Arshad (2014) found that only 16.3% of the questions were HOTS orientated, which included 'casual antecedent, casual consequence, goal orientation, comparison, enablement and reflective questions.' Moreover, it was found that the teacher's use of creative questions that facilitate students to generate ideas was minimal (8.8% only). On the other hand, the students' used about 27.1% of higher order thinking (evaluative questions) which helped them to think critically. Nevertheless, the study concludes that Problem-based Learning is useful in promoting active learning and questioning in the classroom. However, teacher and students need to sharpen their questioning skills to elevate their questions to the higher order level of thinking.

Tan and Siti (2015) reviewed several articles published on the teaching of higher order thinking skills. Besides recognising Zohar's (1999) view that higher order thinking

skills can be promoted through student engagement with learning tasks, Tan and Siti (2015) also identified five major factors that impede the teaching of higher order thinking skills in the classroom. Firstly, 'time constraint' seems to be a stumbling block to teachers who try to infuse HOTS in their lessons. Next, the students seem to prefer direct instruction from teachers rather than being asked to think for answers. In other words, the students lacked motivation to use the three levels of higher order thinking - analyse, synthesis or evaluate. Thirdly, it was found that Malaysian ESL teachers' inadequate knowledge of HOTS is a major cause that impedes the incorporation of higher order thinking skills into their lessons and as such they are ineffective in incorporating HOTS in the English classrooms. Tan and Siti also note that English language teachers perceive HOTS as more relevant to the teaching of Mathematics and Science. Che Musa, Koo and Azman (2012) and Tan and Siti (2015) cited in Ali (2003) posit that assessments in Malaysian classrooms are very standardized and rigid leaving little room for the incorporation of HOTS in their lessons. Finally, Tan and Siti identify the physical environment of the Malaysian classrooms especially with their traditional seating arrangements for pupils, as not conducive in encouraging the infusion of higher order thinking skills in their lessons. and that Malaysian classrooms need to have a more positive environment with adequate resources to enhance the teaching of higher order thinking skills.

Siti (2016) on the other hand, found that student constraint is the biggest obstacle in incorporating HOTS in the language classroom. Siti's study used a questionnaire which consisted of three sections, namely; the demographic background of the participants, teachers' perceptions of HOTS as well as the constraints faced by the teachers in incorporating HOTS. The constraint section investigated four constraints i.e., the students related constraint, teacher related constraint, curricula constraint and

other constraints. The questionnaire distributed among 144 teachers found that the students were afraid to answer when posed with questions that required them to think and that the students were hesitant to share their opinions and views. Meanwhile, the study also established that the teachers generally held positive perceptions towards the importance of HOTS and teaching of HOTS in their classrooms. However, most teachers expressed the need for more courses and training to effectively teach HOTS in their classroom. Siti's study also established that perception studies are still relevant when investigating teaching and learning process.

Khairon, et al. (2017) investigates a different dimension of teaching HOTS in the ESL classroom. Khairon, et al. investigates the use of 'question types' by the ESL teachers when incorporating HOTS. This study uses classroom observations, interviews and questionnaire to gather data. While twelve ESL teachers participated in the study and gave responses to the items in the questionnaire, two teachers from this group of twelve were observed. This study found that 'display questions' (i.e., questions which already have ready answers) were the choices of ESL teachers compared to 'referential questions' which demand higher order thinking. Khairon's study also states that the teachers' lack of knowledge in HOTS and their beliefs were the reasons why the teachers avoided the usage of HOTS in their English lessons. A notable element in this study is the proposal for future studies to explore ways and means of incorporating HOTS effectively in the ESL classes.

Charamjit, et al. (2018) tests the use of an instructional module created based on the ADDIE (Analyse, Design, Develop, Implement and Evaluate) model. Two ESL teachers and forty-five students from two different secondary schools were participants in this study. Observations, interviews and document analysis were used to gather data for this study. Thematic analysis technique was used to analyse the data.

From the questionnaire, this study, which evaluated the efficacy of the HOTS module to teach writing to weak ESL learners, found the use of the HOTS module a success. However, the module is restrictive as it caters more for a specific group (weak ESL learner) and is applicable only for teaching the writing skill.

Randip and Azianura (2019), analyse the use of higher order thinking skills in reading and comprehension tests in Malaysian schools. Eighty reading and comprehension items from various examination papers from eight different states in Malaysia were selected for this purpose. Both content analysis and expert analysis were used to analyse the data gathered. From the eighty items, only nine items reflected analytical thinking, two items reflected synthesis level and five were evaluative level. In other words, 80% of the items required only lower-level thinking skills and only 20% of the items reflected a need for higher order thinking skills of Blooms Taxonomy. Randip and Azianura posit that the questions in assessments need to be improved to match the aspirations stated in the Malaysian Education Blueprint. More importantly, Randip and Azianura also propose a teaching and learning model that can enhance the teaching of HOTS in the ESL classrooms. Clearly, the surge in studies on HOTS as well as the varied themes these studies investigate indicate a positive step towards integrating higher order thinking skills in the ESL classroom.

However, a concerted effort to incorporate HOTS in the teaching and learning process had long started in many countries abroad. For instance, the Education Commission of the State of Denver in USA had embarked on a Policy and Higher Literacy Project as early as 1987. Articles on thinking skills published by numerous personnel were compiled as working papers to develop their education system.

Similarly, The New London Group under the stewardship of Kalantzis and Cope (1999) embarked on a 'Multiliteracies Pedagogy' that highlighted the use of higher order thinking skills in the classroom. The 'Multiliteracies Pedagogy' proposed a Multiliteracies Model of learning comprising the Learning Element which is a lesson plan based on the Multiliteracies Pedagogy, that takes cognisance of the emergence of multimedia and consequent multiple modes of learning.

The Multiliteracies Pedagogy caught the interest and attention of researches all around the world who started exploring and testing the multiliteracies' schema. In Australia, for instance, Lines (2001) carried out his study on selected universities to investigate how they implemented change in teaching and learning in order to meet the demands of greater student number and diversity, coupled with the need to provide high quality education to be competitive in the market. Robyn found that these universities are generally turning towards the enabling power of advanced information technologies to provide the flexibility, student-centred teaching and learning environments.

Similarly, Johnson's glow project (1999) known as 'good learning on the world wide web' found that the vast majority of teachers felt that computers allowed them to expect more from their students, to spend more time with individual learners, provide tailored instruction and to present more complex material to the class. Meanwhile, it was found that the students in this project became motivated towards learning, resulting in lower absenteeism, improved grades and performance. Both these studies emphasize the use of the advanced information and communication technologies in classrooms in order to cope with the dramatic changes in the educational domain, the continuous changing demand of the workplaces and the new world order of the information era. "... the Multiliteracies project forces practitioners to stand back and critically review their pedagogy by providing a succinct and coherent means of

designing, developing, articulating and assessing the teaching of language and communication” (Bond, 2000).

While the above studies, which facilitate the use of HOTS in language classes, were a major shift from earlier notions that HOTS are only appropriate in Science and Mathematics classes, Brenda (2014) made a novel breakthrough by using ‘Visible Thinking Routines’ and ‘Art Investigation’ to inculcate higher order thinking skills in Middle School art lessons in Georgia. Brenda’s research established that higher order thinking skills can and need to be infused in all subjects.

Apart from developed countries like the USA and Australia, researchers from developing nations such as Nigeria (Olalibi, et al. 2015) and Palestine (Rania, 2015) too have shown interest in the implementation of HOTS in their national curricula. For instance, Olalibi (2015) from Nigeria, together with Chinedu and Kamin conducted a library based research by gathering data from text-books, journal articles and internet to examine existing ways of teaching HOTS in design and technology education.

Rania, (2015) on the other hand examined the impact of ‘Question-Answer Relationships Strategy’ to enhance HOTS among sixth graders in the Gaza Strip. Rania conducted this experimental study on seventy-seven students (39 students in a controlled group and 38 students in the experimental group) and found that there is significant difference between the two groups where the experimental groups performed considerably better than the control group.

In conclusion, research on the integration of HOTS in the curricula is on-going in most countries as it is seen as an essential ingredient of 21st century learning (Jeff, 2017).

2.9 Summary

This chapter discusses prominent frameworks of HOTS developed by several educationists with a special focus on Bloom's Taxonomy (1956) with special focus on analytical thinking skills. This Chapter also discusses selected theories of learning (Skinner, 1948; Bandura, 1977; Vygotsky, 1980; Piaget, 1936) relevant to this study. Next, a theoretical framework for this study is proposed, underpinned by the Bloom's Taxonomy and the learning theories discussed in this study. In addition, the three variables, 'Teacher Knowledge', 'Teacher Perception' and Teacher Practices' as well as the units related to teacher practices (Lesson Design, Teacher/Instruction, Subject Content, Classroom Culture and Physical Environment of School/Classroom) that are deemed pertinent for a successful lesson are also discussed. Based on this discussion the conceptual framework of the study is proposed. Finally, past studies related to the teaching of English and the teaching of higher order thinking skills, both in Malaysia and abroad are traced chronologically. Findings of these related studies are critically reviewed to show similarities and differences amongst them in preparation and justification for the present study. The next chapter will discuss the research methodology of this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter explains the research design of the study along with the rationale for its selection. The chapter further explains the features of the research instruments used, the steps taken to ensure its reliability and validity which includes a pilot study, as well as expert review. All statistical calculations related to reliability and validity of the instruments are included to strengthen its credibility. This chapter also explains the techniques and methods used for sampling which includes detailed information of the setting and the respondents. Next, procedures of data collection and data analysis supported by relevant authorities for their choices is explained. Finally, a summary brings the chapter to a close.

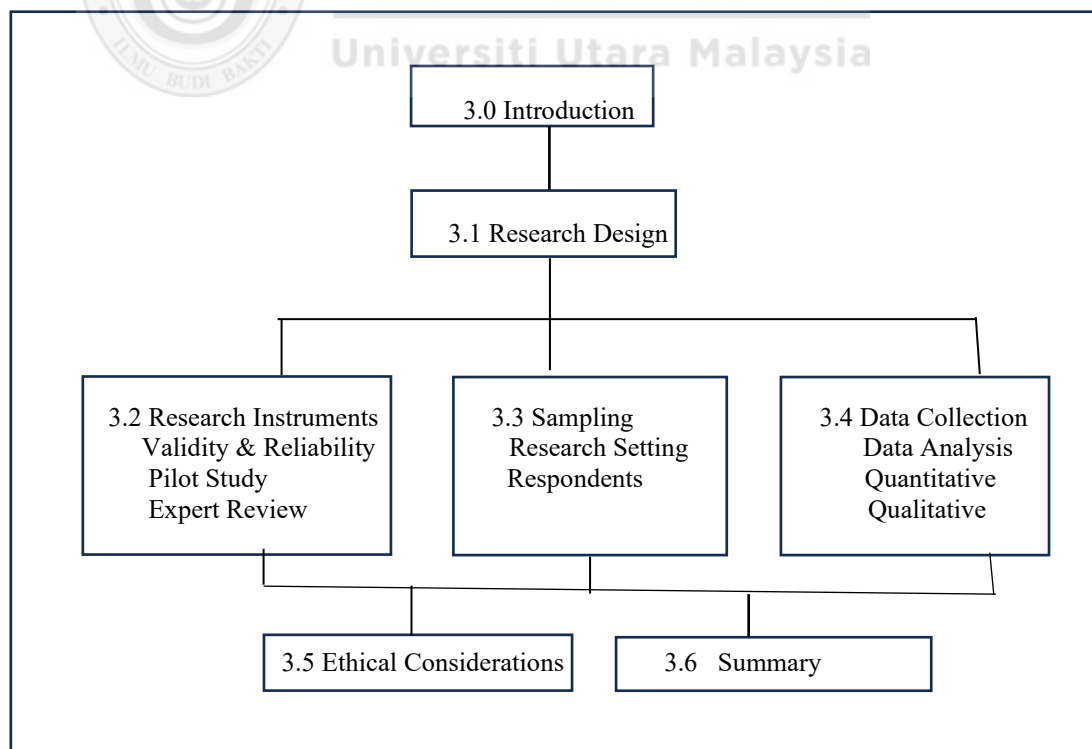


Figure 3.1. The Organisation of Chapter Three

3.1 Research Design

This study uses the mixed method research design which attempts to explore the English language teachers' knowledge, perceptions, their classroom practices and the challenges that they confronted in relation to the teaching of analytical skills in the English reading class as well as to determine the relationship of the two independent variables, i.e., teacher knowledge and teacher perception with teacher practices by way of two alternative hypothesis. Data for this study was collected using a variety of methods such as survey by questionnaire, classroom observations and teacher interviews.

A mixed method research (MMR) is a research design that combines both quantitative and qualitative approaches in a single study (Cresswell & Clark, 2011). It uses multiple methods of data collection such as survey, observations and interviews. Different methods of data collection are employed to gather quantitative data and qualitative data. 'A mixed method design can integrate and synergize multiple data resources which can assist to study complex problems' (Poth & Munce, 2020). Such purposeful data consolidations enable the researchers to view the phenomenon from different perspectives resulting in a wider view of their research (Shorten & Smith, 2017).

The use of the mixed-method design has gained popularity because it has some advantages over research that is either quantitative or qualitative only. Firstly, this method allows researchers to widen their inquiry with more depth and breadth. 'Collecting closed-ended quantitative data and open-ended qualitative data support understanding a research problem in great depth and breadth' (Cresswell, 2003). Next, although quantitative and qualitative designs have their own value, a combination of both will surely add to the value of the research as it enables to view a phenomenon

from different perspectives. Thirdly, the mixed-method design provides room for the employment of the different approaches that are found in quantitative and qualitative research. For instance, quantitative design helps to view large data samples that can be representative. On the other hand, qualitative design can help to do in depth study on smaller samples. Clark and Ivankova (2016) explains that the mixed-method design 'helps to obtain rigorous conclusions by employing both method'. For example, the strength of the quantitative method can help to supplement the weakness of the qualitative method and vice-versa. Thus, the two methods can complement each other in the mixed-method research. The mixed-method research gives ample opportunity for triangulation which adds to the credibility of the study. 'Triangulation is a pertinent factor for ensuring the accuracy of the findings and validating the results' (Ventakesh, et al. 2013). Finally, the mixed-method has the advantage of shaping new approach to further investigate the problem and 'to develop more effective and refined conclusions' (Clark & Ivankova, 2016).

3.1.1 Types of Mixed Method Research

There are generally four types of mixed-method design, namely Convergent Parallel, (ii) Embedded style, (iii) Explanatory Sequential Style and (iv) Explorative Sequential style

- i. In convergent parallel style both quantitative and qualitative data are collected simultaneously but these data are analysed separately.
- ii. In embedded style, quantitative data collection is central. Qualitative data collection is embedded within the quantitative data collection. Both these types of data are collected simultaneously. Further in embedded style, quantitative data is used to seek answers to the research question using numeracy while the qualitative data within is analysed to seek explanations for the findings.

iii. The explanatory sequential type of approach gathers numerical data first. Then qualitative data is collected, analysed and used to explain the quantitative findings.

iv. In the explorative sequential design, the qualitative data is collected first to explore a topic and set the path for quantitative data collection.

This study employs the mixed-method design because it needs both quantitative and qualitative data. ‘Mixing two methods might be superior to a single method as it is likely to provide rich insights into the research phenomenon that cannot be fully understood by using only qualitative or quantitative methods’ (Dawadi, 2021). On that premise, this study is shaped as a two-tiered explorative study that needs quantitative data in the first phase and qualitative data in the second phase. In the first phase data is collected via a survey questionnaire which uses the Likert scale for coding the participants responses and then analyses the numerical data using statistics which is quantitative in nature. For instance, to answer Research Questions 1 and 2, data was collected by administering the Analytical Knowledge Skills and Perception Questionnaire (ASKP Questionnaire) amongst 132 English language teachers from ten government secondary schools in the Kuala Muda/Yan district of Kedah.

In the second phase of the research, data is collected by way of classroom observation and teacher interviews which are both qualitative data collection methods. On that premise, to answer Research Questions 3 and 4, two expert English language teachers were observed and interviewed. This is because a single method may not be able to address different research questions. Hanson. et al. (2005) supports such an approach “A mixed method uses multiple techniques to collect, analyse and integrate quantitative and qualitative data”.

Numerous studies have used the mixed-method design in recent times (Chu & Liu, 2022; Kuloghu, 2022; Munce, et al. 2021; Hauken, et al. 2019). In Malaysia, for instance, Rosmawati (2009) employed multiple techniques of data collection for her research on higher order thinking skills in the English classroom and asserts that “in conducting case study, a researcher employs multiple techniques which include interviews, observations and even documents or artefact analysis”. Similarly, Muhammad (2019) in his study on the hierarchical order of metacognitive reading strategies and self-efficacy sources, employed the mixed-method research design by using questionnaires, a reading comprehension test and a semi-structured interview.

The current study also employs the mixed-method design (see Figure 3.2) using the explanatory sequential approach. For that purpose, data is collected via a survey by questionnaire (quantitative) and classroom observations and semi-structured interviews (qualitative). When two or more methods are used to collect and analyse data, it helps to cross-validate and corroborate the findings. This study uses both statistical analysis (using SPSS Version 25) as well as the thematic analysis method to analyse its data. When both quantitative and qualitative methods are used, they can supplement and complement each other's findings.

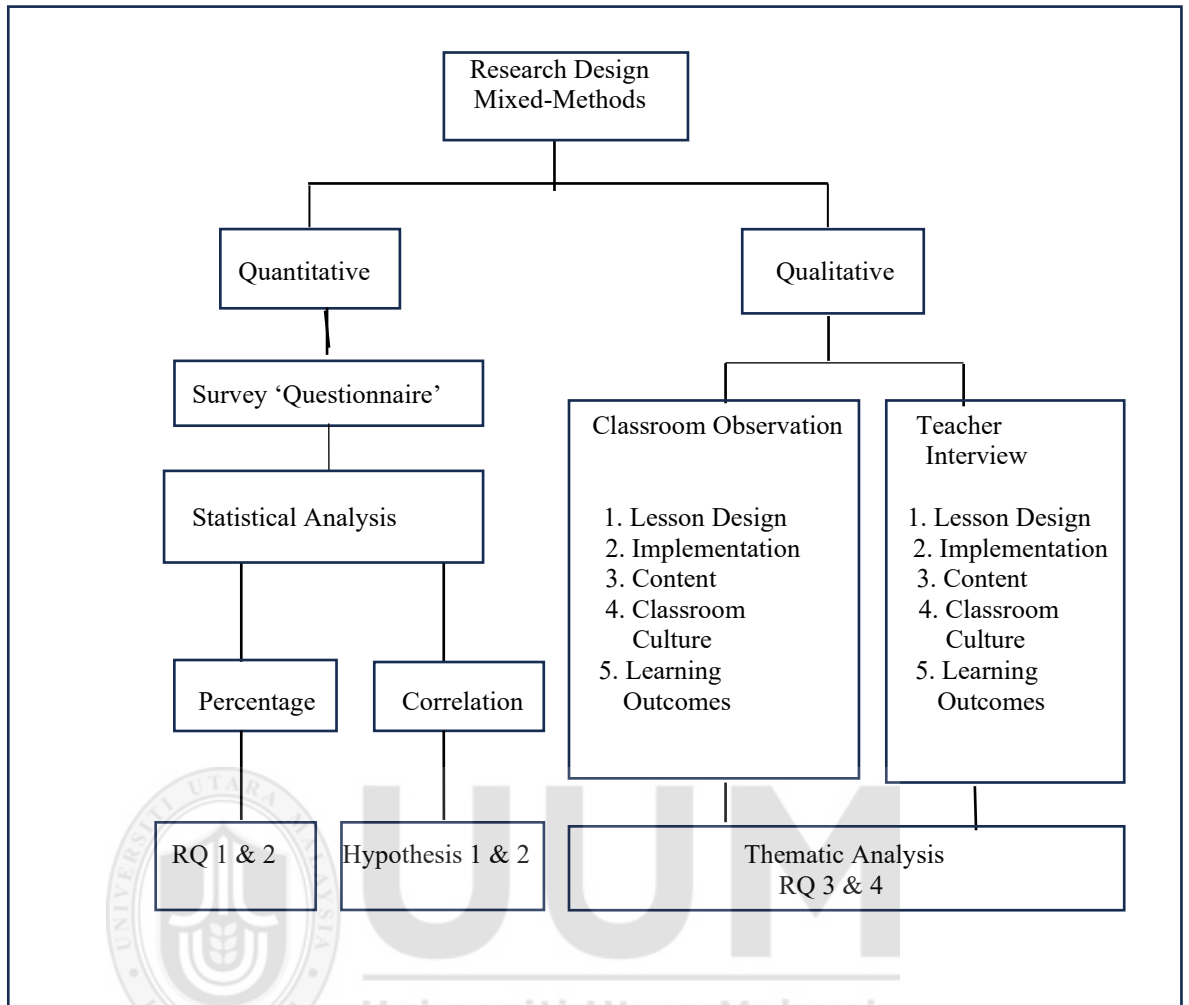


Figure 3.2 Research Design of the Study

3.2 Research Instruments

3.2.1 Quantitative

A questionnaire is a commonly used instrument for collecting quantitative data using a large number of participants. It is economical and relatively easy to administer a questionnaire. More importantly, a standard questionnaire will provide quantifiable answers that can be easily analysed. Several studies (Borg & Burns, 2008; Thu, 2009; Pitiporntapin & Sadler, 2015) have successfully used questionnaires to investigate teacher perceptions and knowledge.

The questionnaire for this study was adapted from the '*Socioscientific issue-based teaching Questionnaire*' (Pitiporntapin & Sadler, 2015) which was designed to investigate science teachers' perception towards implementing socio-scientific issue-based teaching. The original '*Socio-scientific issue-based teaching Questionnaire*' was obtained from Pitiporntapin via a request through email. It was adapted to suit the English language teaching context in Malaysia and referred as the 'Analytical Skills Knowledge and Perception Questionnaire' or ASKP Questionnaire in its acronym (refer Appendix A).

The ASKP Questionnaire consists of 25 items divided into three sections. In section A, question 1-7 solicits the respondents' demographic information such as gender (Figure 3.3), age (Figure 3.4), teacher qualifications (3.5), teaching experience (3.6), and the different classes taught (Figure 3.7).

3.2.1.1 Demographic Information

Gender

The demographic information sought in Section A of the ASKP questionnaire is analysed and presented in graphic forms. From the 132 English language teachers who participated in this survey, 34 of them are males and 98 of them are females as reflected in the pie-chart (See Figure 3.3).

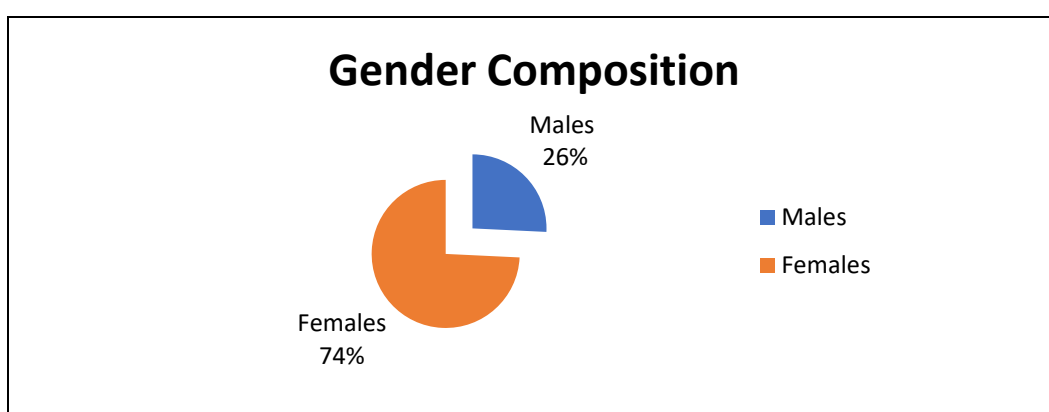


Figure 3.3: Distribution of Respondents based on their Gender

The gender composition of the survey participants in this research is in tandem with the gender composition of teachers in Malaysian secondary schools. According to MY-World Bank: Educational Statistics (2016), "... the gender ratio of teachers in Malaysian secondary schools in 2016 was 68.19% females and 31.81% males". Clearly, female teachers outnumber their male counterparts in the Malaysian schools.

Respondents' Age Distribution

The respondents are also divided into three groups based on their age. Those between the range of 30 - 39 years old are grouped together as one unit, respondents between 40 - 49 years old are placed as another group, while those between 50 - 59 years old are placed under the third group. It was found that the 30-39 age group made 12.1% of the total respondents. The 40-49 years age group made up 81.8% of the total respondents and the 50-59 years age group made up 6% of the total respondents. While the majority of the respondents come from the 40-49 years age group, the 50-59 years age group were the minority (See Figure 3.4).

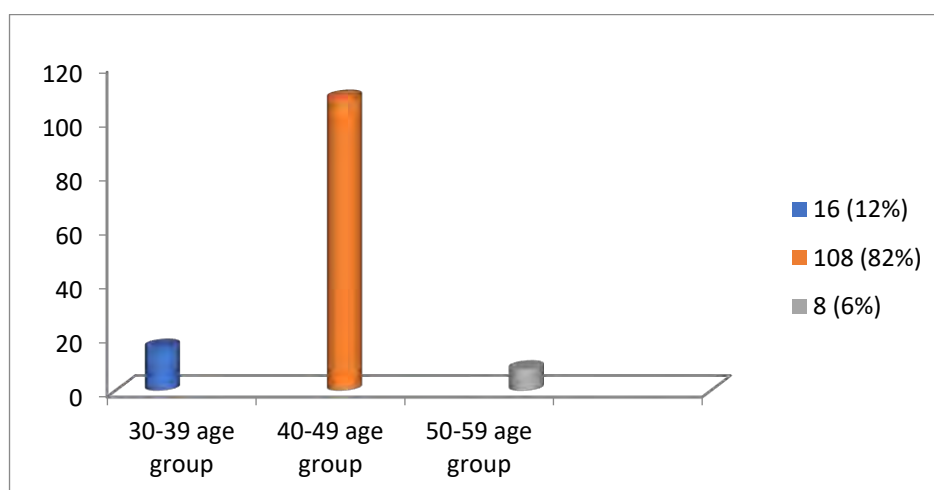


Figure 3.4. Distribution of Respondents based on their Age

Teacher Qualification

Next, it was found that all 132 respondents are graduates. While 130 of them (98.5%) have bachelor degree, 2 of them (1.5%) have both bachelor and a masters (see Figure 3.5). Surely, having teachers with tertiary education is a boon for the Malaysian education system. Higher teacher qualifications are significantly associated with higher quality of teaching (Manning, 2017).

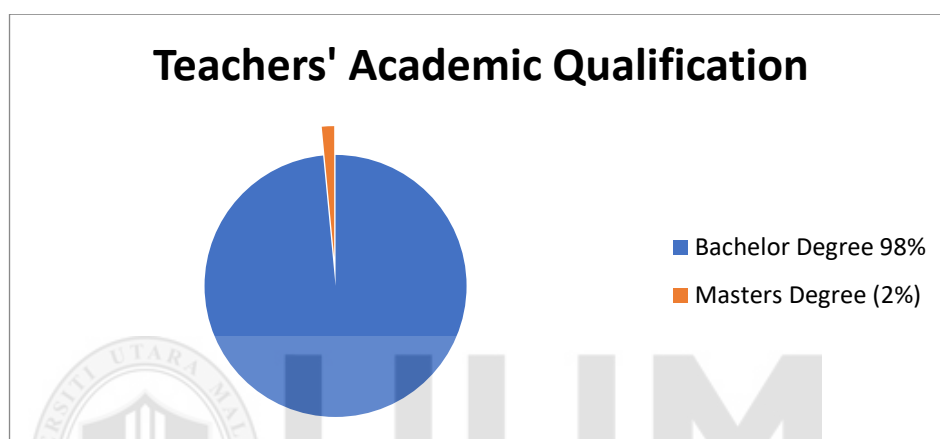


Figure:3.5 Respondents Academic Qualification

Respondents' Teaching Experiences

The respondents teaching experiences were also analysed using percentage. The data analysis showed that 9 of the respondents (6.8%) have 5-9 years of experience of teaching English. Meanwhile 93 of the teachers (70.5%) have 10-19 years of teaching experience and 30 of them (22.7%) have 20 - 29 years of teaching English. These statistics are presented in the form of a graph (see Figure 3.6) to illustrate the value spread of the respondents' English teaching experiences. Percentages have been rounded up to whole numbers.

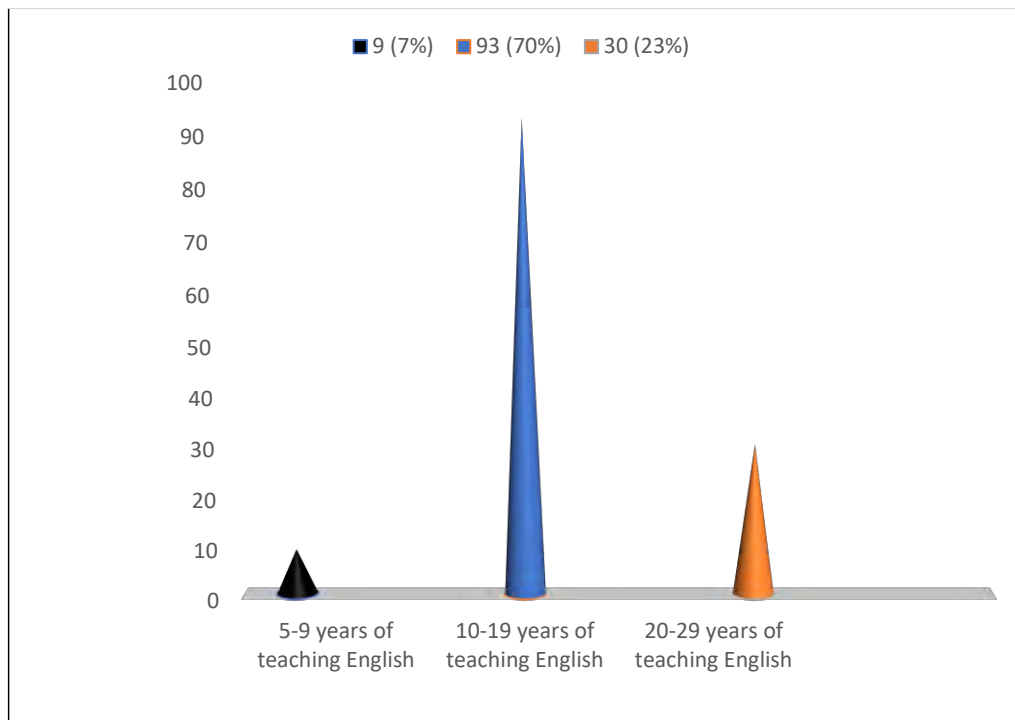


Figure 3.6: Distribution of Respondents based on their Teaching Experiences

Classes Taught

Finally, from the demographic data the classes that the respondents are teaching were also identified and grouped into five groups, namely, Forms 1, 2, 3, 4 and 5. And it was found that 29 of the respondents are teaching Forms 1, 28 of them are teaching Forms 2, 35 of them are teaching Forms 3, 29 of them are teaching Forms 4, and 11 of them are teaching in Forms 5 (see Figure 3.7). This analysis shows that the English language teachers are well spread for all the forms. The above statistics is illustrated in the graph below (Figure 3.7). Percentages have been rounded up to whole numbers.

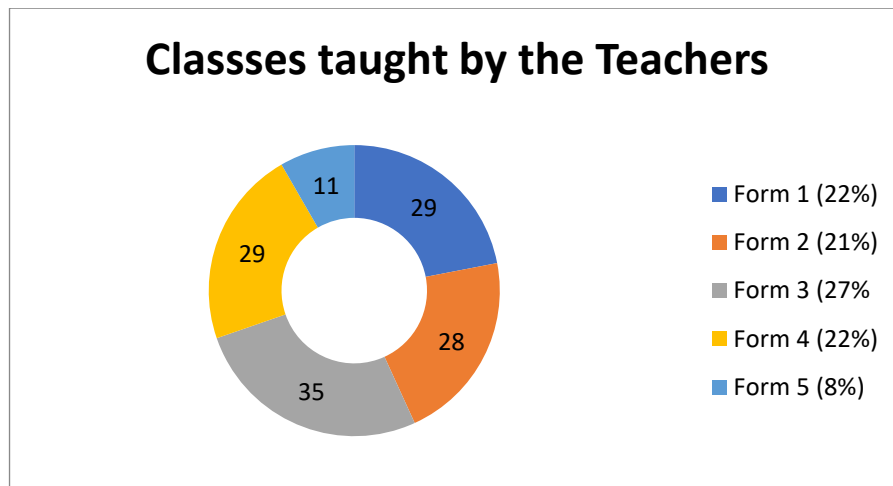


Figure 3.7: Distribution of the Respondents' Classes Taught

3.2.1.2 Teacher-Knowledge

Section B in the ASKP questionnaire starts with items 8 – 15 which seeks information on the teachers' knowledge on analytical thinking skills. Teachers should have a sound understanding of the subject matter that they teach (Walshaw, 2012). This section investigates the teachers' knowledge based on their understanding of the concepts, processes and activities of analytical thinking skills which are explained in detail in chapter two. These items are contextual questions based on Bloom's Taxonomy (1956). All items are multiple choice questions related to analytical thinking skills. The respondents need to choose the correct answer from the given choices. The scores attained by the respondents are used to grade their knowledge level of analytical thinking skills.

Grade refers 'to a particular level of rank, quality, proficiency, intensity or value used on a certain knowledge of a person within a discipline' (Durn, 1993). By grading a person's knowledge level in a discipline, the person's abilities in that discipline can be gauged (Dilon, 2018). Academic grading systems differ in different countries. For

instance, Malaysia's Academic Grading system in secondary schools is very close to US Academic Grading System (see Figure 3.8)

Marks	Grades	Descriptors
90 - 100	A+	Excellent
80 - 89	A	Excellent
70 - 79	A-	Brilliant
65 - 69	B+	Highest honours
60 - 64	B	High honours
55 - 59	B-	Top Honours
50 - 54	C+	Praiseworthy
45 - 49	C	Upon Graduation
40 - 44	C-	Pass
1 - 39	D	Fail
0 - 0	G	Fail

Figure 3.8 Malaysian Secondary School Grading System

Source: Global Indian International School, 2023

Similarly, the US Grading System also uses alphabets for academic grading purposes (A+, A, A- for excellent performance, B+, B, B- for good performance, C+, C, C- for satisfactory performance, D+, D, D- for less than satisfactory and E for fail).

In fact, the US grading system which is also known as the A-F grading system summarises its grading into five levels (see Figure 3.9).

Grade	Descriptors
A	Excellent
B	Good
C	Average
D	Below average
F	Fail

Figure 3.9 The A-F Grading System of the US

(Source: amberstudent.com, 2022)

Academic grading systems do not differ much between students and teachers as its purpose is to measure the knowledge level of the persons, based on their marks or scores attained in an assessment. On that premise, this study adapted the US A-F Grading System to gauge the EL teachers' knowledge level. In place of the alphabets, this Grading Scale uses the EL teachers' scores to represent their level of analytical thinking skills knowledge (see Figure 3.10).

Respondents' Scores	Descriptors
9 - 10	Excellent
7 - 8	Good
5 - 6	Average
3 - 4	Weak
0 - 2	Very weak

Figure 3.10 Grading System for EL Teachers' Knowledge of Analytical Thinking Skills

3.2.1.3 Teachers Perception

In Section C of the ASKP questionnaire, there are 10. Items 16 – 20, explores the EL teachers' perception towards the teaching of analytical thinking skills in the ESL reading class, while items 21 – 25 attempts to investigate the EL teachers' teaching practices.

For the purpose of determining the EL teachers' perception, the construct 'Perception' is operationalised as opinions, beliefs, disposition, feelings, thoughts and attitudes. The Likert scale with a continuum of 1- 4 is used to show the respondents level of agreement or disagreement to the statements in the questionnaire (refer Appendix A). In addition, a column is given for the respondents' comments which can be used as qualitative data. Items 16 -20 investigates specific aspects of the EL teachers' perception pertaining to the incorporation of analytical thinking skills in the ESL reading class. For instance, items 16 and 18 investigates the EL teachers' opinions, item 17 investigates their beliefs, item 19 investigates their disposition, and item 20 attempts to investigate their feelings. To evaluate the extent of teachers' perception towards the teaching of analytical thinking skills in the ESL reading class, the 'mean' score 2.5 and above is fixed as positive. On the other hand, mean score 2.4 and below is considered negative towards the integration of analytical thinking skills in the ESL reading class (see Table 3.1).

Table 3.1.
Grading Scheme of Respondents' Disposition Towards the Integration of Analytical Thinking Skills in the ESL Reading Class

Level of Disposition	Very Negative	Negative	Positive	Very Positive
Mean Score	1.0 – 1.9	2.0 -2.4	2.5 – 3.5	3.6 – 4.00

Source: (Pitipornatapin & Sadler, 2015)

3.2.1.4 Teaching Practices

Items 21 to 25 in Section C of the questionnaire examines the EL teachers' teaching practices. These items investigate specific aspects of teaching the analytical thinking skills in the ESL reading class. For instance, item 21 examines the preparation of the lesson design by the EL teachers, item 22 examines teachers' consideration for students' prior knowledge, item 23 examines the EL teachers indulgence in instructional methods and activities in preparation of their lessons, item 24 examines the EL teachers' questioning techniques and item 25 examines the level of encouragement of the EL teachers towards student participation in the ESL reading class. The respondents are required to indicate their level of agreement or disagreement to the statements given. These items are on a four-point Likert-scale (4 - strongly agree, 3 - agree, 2 - disagree, and 1 - strongly disagree). The mean score of 2.5 is used to grade the EL teachers' teaching practices (see Table 3.2).

Table 3.2

Grading System of Respondents' Teaching Practice

Standards of Teaching	Poor	Average	Good	Excellent
Mean Score	1.0 – 1.9	2.0 -2.4	2.5 – 3.5	3.6 – 4.00

Source: (Pitiporntapin & Sadler, 2015)

3.2.1.5 Correlation Coefficient

Correlation coefficient is a statistical technique used to determine the relationships between two or more variables in a study. It is crucial in identifying closely related variables in a given piece of information. It is used to calculate and interpret correlation and evaluate possible linear link between two variables (Mukaka, 2012). 'Findings from correlational research can be used to determine the prevalence and relationships

among variables and to forecast events from current data and knowledge; (Curtis, et al. 2016).

This statistical analysis is extensively used in educational research (Suthradhar, et al., 2023). For instance, Kar, Saha and Mondal (2016) used Pearson's coefficient correlation to establish a significant relationship between 'Emotional Intelligence and 'home, school and peer adjustment'. Similarly, Kar and Saha (2021) found significant relationship by the Pearson Method between 'Emotional Intelligence and Leadership style of undergraduate students' in West Bengal. Sutradhar and Sen (2022) used correlation analysis to investigate relationship between emotional intelligence and study habits of B. Ed. Trainees of Briblum district of West Bengal.

On that premise, the present study uses Pearson's coefficient correlation to examine the relationship between 'Teacher Knowledge and Teacher Practices' as well as the relationship between 'Teacher Perception and Teacher Practices'. For this purpose, the SPSS version 25 was used to determine the existence of any significant relationship between these variables stated in the conceptual framework (refer Figure 2. 13, Chapter 2).

3.2.1.6 Classroom Observation

To further strengthen the investigation into the EL teachers' best practices two expert EL teachers' classroom teaching were observed. An independent evaluator from a nearby teacher-training institute conducted the classroom observation using the observation checklists adapted from Horizon Research (2003). Each expert teacher was observed twice.

Classroom observation is a rigorous exercise and it is best done using multiple methods. Thus, the teachers' classroom teaching in this study was observed and rated

by the independent evaluator using the Classroom Observation Form. Meanwhile, the researcher's observation notes provided qualitative data.

To assist the evaluator to arrive at an accurate evaluation, observation checklist for each category of the classroom practices, namely, Lesson Design (Figure 3.11), Lesson Implementation (Figure 3.12), Lesson Content (Figure 3.13), Classroom Culture (Figure 3.14), and Learning Outcomes (Figure 3.15) are designed with clear descriptors for the different aspects in each category.

No.	Aspects to Observe in the Research Design	Weak 0 - 10	Average 11 - 20	Good 21 - 30	Excellent 31 - 40	Total 40 Marks
1.	The design of this lesson incorporated tasks, roles and interactions consistent with the reading comprehension lesson.					
2.	The design of this lesson reflected careful planning and organization.					
3.	The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge and/or learning styles.					
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction.					
5.	The instructional strategies and activities reflected attention to issues of access, equity and diversity for students.					
6.	The design of the lesson encouraged a collaborative approach to learning among the students.					
7.	Adequate time and structure were provided for 'sense-making'.					
8.	Adequate time and structure were provided for 'wrap-up'.					

Figure 3.11. Observation Checklist for Lesson Design

No.	Aspects to observe for Implementation	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Total 40 Marks
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.					
10.	The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.					
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.					
12.	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.					
13.	The teacher was able to "read " the students' level of understanding and adjusted instruction accordingly.					
14.	The teachers' questioning techniques were likely to enhance the development of the students' conceptual understanding of analytical skills.					

Figure 3.12 Observation Checklist for Lesson Implementation

No.	Aspects to observe for Lesson Content	Weak 0-10	Average 11-20	Good 21-30	Excellent 31-40	Total 40 marks
15.	The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.					
16.	The language skills and analytical skills were appropriate for the developmental levels of the students in this class.					
17.	'Teacher-provided' content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.					
18..	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.					
19.	The teacher displayed good understanding of the language and					

	analytical skills' concepts in his/her dialogue with students.					
20.	Students' English language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson.					

Figure 3.13. Observation checklist for Lesson Content

No.	Aspects to observe in Classroom Culture	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
21.	Active participation of all students was encouraged and valued by teacher.					
22.	There was a climate of respect for students' ideas, questions and contributions during the lesson.					
23.	Interactions reflected collaborative working relationships among students.					
24.	Interactions reflected collaborative working relationships between teacher and students.					
25.	Intellectual rigor, constructive criticism and the challenging of ideas were evident.					

Figure 3.14. Observation checklist for Classroom Culture

Items	Aspects to observe for Learning Outcome	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
26.	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.					
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson.					
28.	Students improved their performance in the reading comprehension lesson using the analytical skills.					
29.	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.					
30.	Students gained self-confidence in using the analytical skills through the reading comprehension lesson.					

Figure 3.15 Observation Checklist for Learning Outcomes

The above checklists were created based on literature from Horizon Research (2003). The aspects to be observed are clearly stated for each of the categories (lesson design, lesson implementation, lesson content, classroom culture and learning outcomes) to assist the evaluator to make an objective and quantifiable assessment.

The ASKP Questionnaire which is designed to seek quantitative data was piloted among 35 EL teachers from three separate secondary schools for credibility and then reviewed by three subject matter experts to establish its reliability and validity which will be discussed in another section referred as ‘Credibility, Reliability and Validity’.

3.2.2 Qualitative

3.2.2.1 Classroom Observation Form

EL teachers’ classroom practices, was also described using a classroom observation form called the English Language Teachers’ Classroom Observation Protocol (ELT_COP), (refer Appendix B). According to Estacion, et al., (2004), ‘Direct observations of classrooms is the best methodology available for observing how teachers teach...’ On that premise, this study used the classroom observation technique to answer Research Question 3.

The Classroom Observation Form (ELT-COP) used in this study is adapted from ‘Inside the Classroom–Observation and Analytic Protocol’ (Horizon Research, 2003). In fact, the ‘Inside the Classroom–Observation and Analytic Protocol’ is based on another research instrument called the Local Systematic Change through Teacher Enhancement Classroom Observation Protocol (LSC COP). Though, the LSC – COP was developed to measure science and mathematics teachers’ lessons in the K-12 classroom, it is now being widely used to observe teachers from all other disciplines as a professional development tool (Banilower, 2005). The Face Validity of the LSC -

COP was established through expert review and various other validity tests (Banilower, 2005). On the basis that the ‘Inside the Classroom – Observation and Analytic Protocol’ has been validated through rigorous measures, this study adapted it for classroom observations in this research.

The ‘Inside the Classroom-Observation and Analytic Protocol’ was adapted to suit the English language teaching context in Malaysia. It is referred to as ELT-COP in its acronym (refer Appendix B). The ELT-COP form was reviewed by three experts to establish its reliability and validity which will be discussed in detail separately under the Reliability and Validity section in this chapter.

The ‘ELT-COP’ is divided into two sections. Part I (items 1-6) seeks basic descriptive information, while items 7 and 8 are open-ended questions on the teacher’s purpose and preparation of the lesson plan. Meanwhile, Part II of the ‘ELT-COP’ is a form to assist the evaluator to rate the teachers’ classroom teaching objectively. Part II of the ‘ELT-COP’ has five subsections – (i) Lesson Design, (ii) Lesson Implementation, (iii) Lesson Content, (iv) Classroom Culture, (v) Learning Outcomes (see Appendix B). The classroom observation form (ELT-COP) provides a Likert Scale of 1 – 5 (see Figure 3.9) to rate the teachers classroom practices.

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).				
1	2	3	4	5
not at all	a little	fairly	to a great extent	totally

Figure 3.16: Likert Scale used in the ELT-COP to rate teacher practices

3.2.2.2 Teacher Interview Protocol

Interviews are another effective way of gathering data – where the interviewer is directly involved with the interviewee. According to McNamara (1999), ‘interviews are particularly useful for getting the story behind a participant’s experiences.’

The use of group or individual interview in numerous studies (Lim, et al. 2014, Pitipornatapin & Saddler, 2015, Hanita et al, 2017, Charanjit et al., 2018) lends credence to the effectiveness of interview as a research instrument.

This study used the Classroom Teacher Interview Protocol referred as C-TIP (refer Appendix C) to solicit information from the two expert English language teachers who were observed. The C-TIP is adapted from “Inside the Classroom: Teacher Interview Protocol (Horizon Research, 2003). The Classroom Teacher Interview Protocol was also sent for expert review to ensure its validity and reliability.

This interview schedule (C-TIP) comprises 25 semi-structured questions. The C-TIP is divided into 5 sections corresponding to the items in the Classroom Observation Form (ELT-COP). Each section (P1 – P5) have five questions that seek specific information from the Expert EL teachers. For instance, section P1 of the interview schedule consists five questions seeking information on the Lesson Design. Section P2 of the interview schedule also has five questions (items 6-10) which examine the implementation of the lesson by the teachers. Next, section P3 investigates the lesson content (items 11-15), and section P4 examines the classroom culture (items 16-20). Finally, in section P5, five questions (items 21-25) evaluate the learning outcome of the lesson.

3.2.2.3 Credibility, Reliability and Validity

The use of appropriate data collecting methods and duly validated research instruments are vital to ensure the consistency and accuracy of the research respectively. While, consistency of a research instrument is referred to as ‘reliability’, accuracy is referred as validity. Both ‘Reliability’ and ‘Validity’ are two important qualities that need careful considerations in research (Fiona, 2021; STATS-U, 2020).

On this basis, the three research instruments used in this study have been put through rigorous tests to establish their reliability and validity. All three instruments were reviewed by related subject matter experts from higher learning institutions. Two of the experts are from two different universities (one of them is a senior lecturer while the other expert is a professor, one other expert is the Head of the language department of a teacher training institute in the state of Kedah (refer Appendix E1, E2, E3). All three of them hold doctorate degrees and have more than 15 years of experience in research in the subject. The experts’ ratings of the research instruments (refer Appendix A1, A2, A3; B1, B2, B3 and C1, C2, C3) were calculated statistically and were also pilot-tested among 35 English language teachers from three secondary schools different from the schools in the study. As such, it is expected that the data collected will help to answer the research aims, objectives and the research questions as accurately as possible.

Salkind, (2000) states that the reliability of a study is established when the test measures the same thing more than once and derives the same results. In other words, the results should be consistent, stable and predictable. There are several methods to assess the reliability of a research instrument, such as, test-retest method, alternative

form method, split-halves method, internal consistency method or the inter-rater reliability test.

3.2.2.4 Reliability of Research Instruments

For this study, all three research instruments (the ASKP Questionnaire, Classroom Observation Protocol (ELT-COP) and the Teacher Interview Protocol (C-TIP) were all expert reviewed and calibrated using the Inter-Rater Reliability analysis (refer Appendix D1, D2, D3). The Cronbach Coefficient (Cronbach Alpha) is used to determine the reliability of the research instruments of this study. Salkind (2010) recommends the use of Cronbach alpha correlation coefficient to assess the reliability of research instruments when more than two raters are used. The Cronbach alpha for the research instruments in this study is calculated using the formula $\alpha = \frac{K}{K-1} \left(\frac{S_y^2 - \sum \epsilon_{Si}^2}{S_y^2} \right)$ (Stephen, 2020).

In this formula, K is the number of items in the measure, S_y^2 is the variance of the observed total scores and $\sum \epsilon_{Si}^2$ is sum of the item (i) variance. The numerical values for this formula are calculated using excel sheets (refer Appendix D1, D2, D3). Based on this formula the Cronbach alpha for the three research instruments were calculated as below.

Reliability of the ASKP Questionnaire

$$\text{Alpha} = \frac{25}{24} \times \frac{(27-2.7)}{27}$$

$$\text{Alpha} = 1.042 \times \frac{(24.3)}{27} = 0.93$$

The Cronbach Alpha for ELT ASKP questionnaire is 0.93 establishing its reliability as excellent. Alpha value above 0.9 reflects exceptional internal consistency (Cronbach, 1951).

Reliability of Classroom Observation Protocol (ELT-COP)

$$\text{Alpha} = 30/29 \times (16.33 - 4.06) / 16.33$$

$$\text{Alpha} = 1.034 \times 12.24 / 16.33 = 0.78$$

The Cronbach Alpha value for the ELT Classroom Observation Protocol is 0.78 and according to Cronbach, L. J., (1951) alpha value above 0.7 is considered acceptable.

Reliability Classroom Teacher Interview Protocol (C-TIP)

$$\text{Alpha} = 25 / 24 \times (30.33 - 5.25) / 30.33$$

$$\text{Alpha} = 1.042 \times 25.08/30.33 = 0.86$$

The Cronbach value for Teacher Interview Protocol is 0.86 and according to Cronbach, (1951) alpha value above 0.8 is considered quite good.

Based on the above Cronbach Alpha values all three research instruments are considered reliable. In social sciences the alpha value of 0.7 is accepted as reliable (Nunally & Berstein, 1994).

3.2.2.5 Validity of Research Instruments

In research, while reliability shows consistency, it is validity that accounts for the research instruments' accuracy. Validity of a research is established when the research instrument is said to have measured what it was set to have measured. 'Truthfulness, accuracy, authenticity, genuineness, and soundness' are some synonyms used by researchers when defining validity (Mohajan, 2017; STATS-U, 2020; Fiona, 2021). Salkind, (2000) condenses validity as 'the quality of a test doing what it is designed to do'. For the purpose of this study, validity of all three instruments of this study were duly established based on the expert raters' rankings (quantitative) and comments (qualitative).

Validity of a research instrument is generally assessed under three categories. Namely, (i) Content Validity, (ii) Construct Validity, and (iii) Criterion Validity (Mohajan, 2017, Hameed, 2016, Dimitor & Rumril Jr, 2003, Brown, 1966).

Content Validity

Content Validity refers to the appropriateness of the items in the questionnaire in measuring the information assessed (Yue Li, 2011; Vahid et al., 2015; Fiona, 2019). In qualitative study, content validity is based on the experts' recommendations on observing grammar, using covert and appropriate words in items as well as appropriate scale of scoring (Salkind, 2010). This study uses Lawshe's Content Validity Ratio referred as CVR (Colin & Andrew, 2013) to quantify the content validity of all three research instruments. The mathematical calculation $CVR = (N_e - N/2) / (N/2)$ is used to calculate the Content Validity Ratio of all three research instruments of this study.

Based on the above formula the CVR for the three research instruments are as follows where N_e is the number of experts agreeing with the appropriateness of the items and N is the total number of the experts who rated the said instruments. All three experts' ratings had showed full agreement of the appropriateness of the three research instruments and thus had a CVR of 1. (See Appendix D)

Content validity of ASKP Questionnaire

$$CVR = (3 - 3/2) / (3/2)$$

$$CVR = (1.5) / (1.5) = 1 \text{ (adjusted to 0.99)}$$

Content Validity of Classroom Observation Protocol (ELT-COP)

$$CVR = (3 - 3/2) / (3/2)$$

$$CVR = (1.5) / (1.5) = 1 \text{ (adjusted to 0.99)}$$

Content Validity of Teacher Interview Protocol (TIP)

$$CVR = (3 - 3/2) / (3/2)$$

$$CVR = (1.5) / (1.5) = 1 \text{ (adjusted to 0.99)}$$

When all three expert reviewers rate all the items in the research instruments as ‘essential’ the CVR is computed to be 1.00. However, the CVR is then adjusted to 0.99 for ease of manipulation (Lawshe, 1975). Lawshe’s Table proposes 0.99 and above as acceptable CVR index when 5 or lesser raters rate a research instrument (see Table 3.3). On this premise, the Content Value Ratio (CVR) of all three research instruments of this study is placed as 0.99 which clearly establishes a strong content validity.

Table: 3.3

Lawshe’s Minimal Values of CVR

No. of Panelists	Min Value
5	0.99
6	0.99
7	0.99
8	0.75
9	0.78
10	0.62
11	0.59
12	0.56
13	0.54
14	0.51
15	0.49
20	0.42
25	0.37
30	0.33
35	0.31
40	0.29

Source: Lawshe’s Table (1975)

Construct Value

Meanwhile, Construct Validity refers to the accuracy of the items in the research instruments in measuring the said construct or variable. For the purpose of establishing the Construct value of the research instruments in this study, the experts’ remarks are coded as (I = irrelevant, M = needs modification and R = relevant). All three experts had clearly indicated all items as relevant (refer Appendix D1, D2, D3).

Criterion Value

Criterion Validity refers to the level of representativeness of the items in the research instruments. In other words, Criterion Validity refers to the extent to which a measure is related to an outcome. This type of validity can be assessed by quantifying the experts' comments as 1 & 2 not essential, while 3 & 4 as essential. As all comments of the experts in this study fall into the 3 & 4 category, all three instruments were considered to have criterion validity (refer Appendix F1, F2, F3).

The fact that these research instruments are adapted from existing test batteries that have been all tested reliable and valid, it gives further credence to the reliability and validity of the instruments used in this research.

Pilot Study

Besides the review of the questionnaire by experts, a pilot study was conducted to further test its credibility. Thirty-five English language teachers from three other government secondary schools in the state of Kedah participated in this pilot study. For the purpose of confidentiality, the schools are listed as school X, Y and Z. (see Table 3.4)

Table 3.4.

Distribution of Participants of the Pilot Test

Schools that participated in the Pilot Test	X	Y	Z	Total
Number of ESL teachers who participated in the Pilot Test	12	12	11	35

The participants demographic data (items 1-7) were numerically coded. From these 35 English language teachers 11 were male teachers and 24 were females. All 35 of

them had more than 5 years of experience in teaching English. And all of them were more than 30 years of age.

Items 8-15 which are contextual questions based on Bloom's Taxonomy sought the participants knowledge of analytical thinking skills. Participants' answers to items 8-15 were marked and scored according to the marking scheme (see figure 3.8). The total score of each participant was used to ascertain the participant's level of knowledge on HOTS based on the grading scheme mentioned earlier. It was found that 29 of the participants 82.85% of participants showed adequate knowledge of higher order thinking skills. As for their perception (items 16-25) only 22 of the participants (62.86%) were in favour of incorporating higher order thinking skills in the language classroom. More importantly, all the 35 participants in the pilot study had no difficulty in understanding the items in the questionnaire which established credibility of the questionnaire.

3.3 Sampling

3.3.1 Samples for Quantitative Approach

A total of 132 English language teachers from ten government secondary schools in Kuala Muda/Yan district in Kedah (a state in Northern Malaysia) are participants in the first phase of this study (refer Table 3.5). Quantitative design supports large data samples which can be representative (Cresswell, 2003). These ten schools were selected based on their accessibility to the researcher. The schools' names were recreated to conceal their actual identity.

Table 3.5.
Distribution of Respondents of this Study

Schools	S M K A	S M K B	S M K C	S M K D	S M K E	S M K F	S M K G	S M K H	S M K J	S M K L	Total
No. of English Teachers	9	12	21	11	15	10	11	12	14	17	132

The Analytical Skills Knowledge and Perception Questionnaire (ASKP Questionnaire) was administered to the 132 teachers and the quantitative data collected was analysed to seek answers for Research Questions 1 and 2 as well as Research Questions 5 6 by way of testing the Hypothesis (1 and 2).

3.3.2 Samples for Qualitative Approach

Samples (respondents) for the second phase of the study were selected through purposeful sampling. Purposeful sampling provides information-rich data for in-depth study (Patton, 1990). In that light, two English language expert teachers (Guru Cemerlang Bahasa Inggeris) from two of the ten schools that participated in the survey were selected as samples to be observed and interviewed. Qualitative research design enables in-depth study on smaller samples (Cresswell, 2003).

Expert Teacher award is given to teachers by the Ministry of Education based on the following criteria:

- (a) highly motivated and inspired
- (b) skilfulness and high expertise in the subject areas
- (c) enthusiastic and accountable, and
- (d) have at least 5 years of teaching experience

(Chua and Lim, 2014, p.388)

These two expert teachers are also state level key personnel (Jurulatih Utama) for Teaching of English. They are also members of the National Examination Question-setting Panel for PT3 (National Public Examination for Forms Three) and SPM (National Public Examination for Forms Five) and state level Master-trainers of ETeMS programme (English for Teaching of Mathematics and Science) and Kedah state's key personnel for teaching of higher order thinking skills (HOTS). As such, they are deemed to be knowledgeable and informative about the topic under study. They are role models for other English language teachers in the district. On that premise, teacher Ms.Mastura from SMK C and Teacher Ms.Norma from SMK L (not their actual names) were selected as samples for this study.

Ms.Mastura is the English language Panel head in her school. She has 25 years of teaching experience and is trained in TESL. She has a bachelor degree in English studies. She teaches English for Forms 1, the literature component and is also a key-personnel for state level English language teaching and is specially trained in the teaching of higher-order thinking skills.

Ms. Norma is also the head of her school English language Panel. She has 20 years of experience in teaching English. Her degree is in English Studies. She teaches English for Forms 1 and 2 in her school. She is also a key-personnel for the teaching of English and higher order thinking skills at state level.

3.3.3 Research Setting

Research settings refer to the physical, social or experimental context within which the research is conducted. It has a strong bearing on the results and its interpretation

(Zulhairi et al., 2015). On that premise, the background of the two schools where the teachers were observed and interviewed are presented below.

The schools chosen are SMK C and SMK L. Both the schools are situated slightly in the outskirts of Sungai Petani (the main township in central Kedah, in the district of Kuala Muda/Yan). The schools were selected mainly because of their accessibility and the willingness of the administration to participate in the study. Meanwhile, both the schools are ranked in the average school category representing the majority of secondary schools in Kedah in particular and Malaysia in general.

3.4 Data Collection and Analysis

In a Mixed Method Research, data is collected using both quantitative and qualitative methods. As such, two or more techniques shall be employed and for the purpose of this study, three data collection techniques are used, namely: (a) Administration of Questionnaire, (b) Classroom Observation and (c) Post Observation interviews.

The quantitative data collected via the questionnaire was analysed using descriptive statistics, percentages, frequencies and Pearsons' correlation co-efficiency. Meanwhile the qualitative data solicited via classroom observations and teacher interviews were analysed using the thematic analysis.

The English Language Teachers' Analytical Skills Knowledge and Perception Questionnaire was designed to be used for this research. Ten secondary schools in the district of Kuala Muda were identified for this purpose. The questionnaire was distributed to the respective Heads of the schools' English Panel after obtaining the approval of the schools' Principals. The Head of the English Panel from each of these schools took responsibility to administer the questionnaire among their school's

English language teachers and helped to return the duly completed questionnaire to the researcher. Though no time limit was specified, the teachers completed the questionnaire in just a day.

The two expert English language teachers were selected from two different schools which participated in this study. An independent evaluator from a teacher-training institute was appointed to observe the two teachers' classroom practices.

Post-Observation interviews were conducted with the two expert English language teachers to seek answers for research question 4. The teachers were informed of the purpose of the interview and were told that their identity will be kept in confidence. Thus, the interview was conducted in a cordial atmosphere. The researcher managed to elicit in-depth information of the topic which helped to answer research question 4. The information collected was also used to corroborate the data gathered earlier through classroom observations. In other words, the interview in this study helped in the triangulation of the findings arrived at during the classroom observations.

3.5 Ethical Considerations

Ethical consideration is an important aspect in research which needs to be observed at all times. The viability of a research depends very much on upholding strictly the principles and procedures laid out for scientific research. According to Dzastina, (2022) ethical considerations such as safeguarding the rights of the participants are important to promote trust, collaboration and mutual respect because research generally involves the researcher and other people from different dispositions. Dzastina also highlights the importance of avoiding false interpretations and misrepresentation of facts when deriving at conclusions which can seriously affect the credibility of the research.

On that premise, this study was conducted following stringent ethical principles of research. Firstly, the teachers and school administrators were informed of the purpose and nature of the questionnaire through a cover letter from the researcher and an introduction letter from Universiti Utara Malaysia. The participants' consent was sought before the administration of the questionnaire and their classroom observations. The teachers participated voluntarily without any pressure from any quarter. Next, the researcher took all the necessary measures to keep the names of the participants and their schools in confidence and ensured no part of this study divulged their identities in any way. No photos, videos or audios were recorded in compliance with the school administration. Anonymity was maintained throughout the thesis. The results of the study were conveyed to the schools and the participants as proof that it does not bring harm or embarrassment to the teachers and their schools. Finally, the teachers' and their schools' informed consent was received for the production of the results in the thesis and for publication of any scholarly articles in the future.

3.6 Summary

This chapter explains the research design (Mixed-methods) and the rationale for its choice. Next, the features of the research instruments are explained supported by literature. All measures taken to ensure the validity and reliability of the research instruments are explained with statistical calculations. The background of the respondents selected for this study and the research setting are explained with the rationale for their choices. The chapter also discusses the data collection and analysis procedures used in this study. The next chapter will discuss the findings of this study.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.0 Introduction

This chapter presents and discusses the findings based on the data collected and analysed in two parts. Firstly, data collected through the ASKP questionnaire and the classroom observation form is analysed using frequencies, percentages, mean and correlation using SPSS Version 25 and the findings are presented and discussed under the heading Quantitative Approach. In the second part, qualitative data collected through the classroom observation and the teachers' interviews are analysed using thematic analysis under the heading Qualitative Approach. The key findings are then presented and described. Finally, a summary of the entire chapter is given.

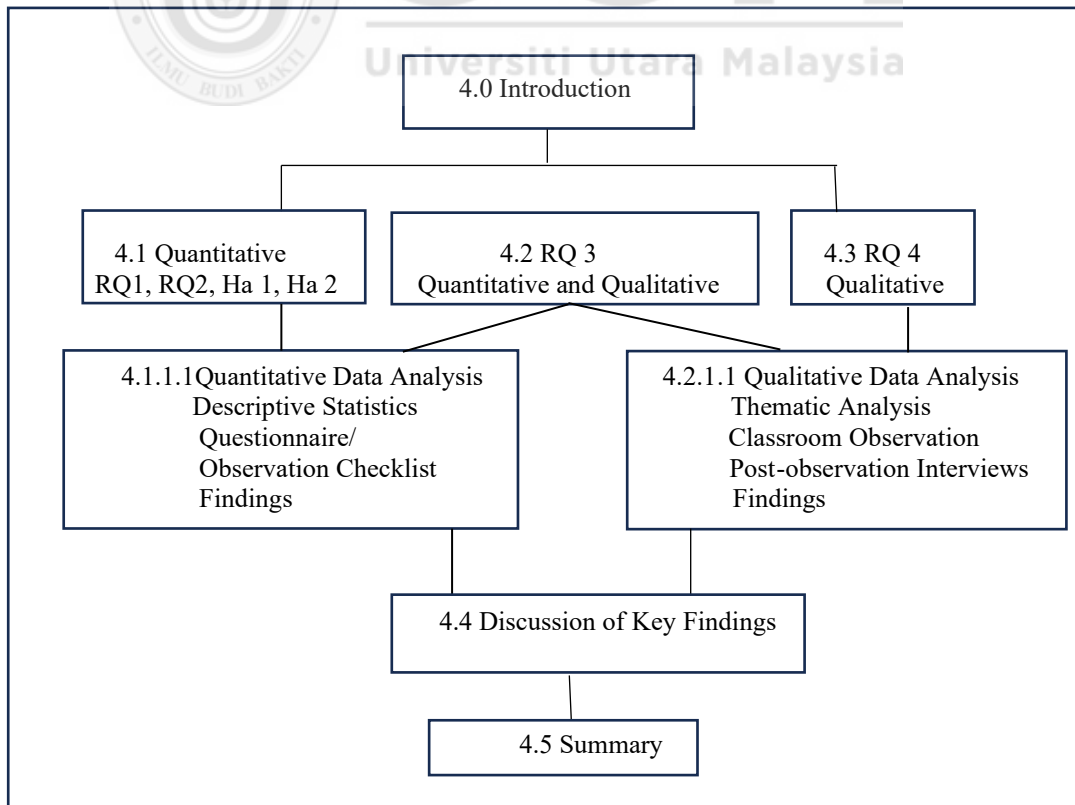


Figure 4.1. Organisation of Chapter Four

4.1 Quantitative Analysis

Quantitative research explores a group of people referred to as sample population using scientific inquiry where by data are gathered through questionnaires, structured observations or experiments. Quantitative research is a popular research framework in the social sciences employed ‘to study psychological, social and economic processes through the exploration of numeric patterns’ (Coghlan & Miller, 2014). This type of research ‘relies on data that are observed or measured to examine questions about the sample population’ (Allen, 2017).

In this study, quantitative data was collected through two research instruments, first by administration of a questionnaire and second by way of classroom observation. The samples’ responses to the items in the questionnaire are calibrated and analysed using SPSS version 25. The data for classroom observation was gathered through an independent evaluator. Percentages, frequencies and correlation coefficient are used to describe the findings.

A total of 132 English language teachers responded to the ASKP questionnaire (Analytical skills Knowledge and Perception Questionnaire) which was distributed and collected from 10 secondary schools in the Kuala Muda/Yan district of Kedah, through the Head of the English language panel of these schools. All 132 participants had responded to all the 25 items in this questionnaire. There were no missing cases (Refer Appendix G).

4.1.1 Research Question 1

Research question 1 aims to examine the EL teachers' knowledge of analytical thinking skills. For that purpose, the EL teachers' responses to items 8 -15 of the ASKP questionnaire is analysed. Items 8 – 15 of the questionnaire examine the EL teachers' understanding of the concepts, process and the activities of the analytical thinking skills. The teachers' responses are marked and their raw scores are used to place them in the different levels of knowledge (see Figure 4.2)

Marks	1-2 Very weak	3-4 Weak	5-6 Average	7-8 Good	9-10 Excellent	Total no. of EL Teachers (n)
EL Teachers	-	-	3	25	104	132
Percentages	-	-	2.3 %	18.9%	78.8%	100%

Figure 4.2 Analysis of EL Teachers' scores on Analytical Thinking Skills Knowledge Test

Section B of the questionnaire (ASKP Questionnaire) consists of items 8 – 15 which examine the EL teachers' understanding of the concept, processes and activities pertaining to analytical thinking skills. EL teachers' responses to items 8 – 15, can help gauge the respondents' knowledge level of analytical thinking skills.

For that purpose, the construct 'Teachers' Knowledge' was operationalized into three categories namely, (i) Concept, (ii) Process and (iii) Activity. All these three aspects are pertinent to evaluate the EL teachers' analytical thinking skills knowledge as explained in chapter two. The teachers' responses to these items (8–15) is crucial to get deeper insight of the teachers' knowledge of analytical thinking skills.

The analysis showed that 78.8% of the respondents had excellent knowledge of analytical thinking skills as they had scored 9-10 marks. Another 18.9% of the

respondents showed a good level of knowledge of analytical thinking skills and 3 of them had an average level of knowledge in analytical thinking skills. To surmise, the study found that the respondents had acquired a sound amount of knowledge in analytical thinking skills to teach them in the ESL class. For better understanding the above finding is illustrated in the form of graph (see Figure 4.3).

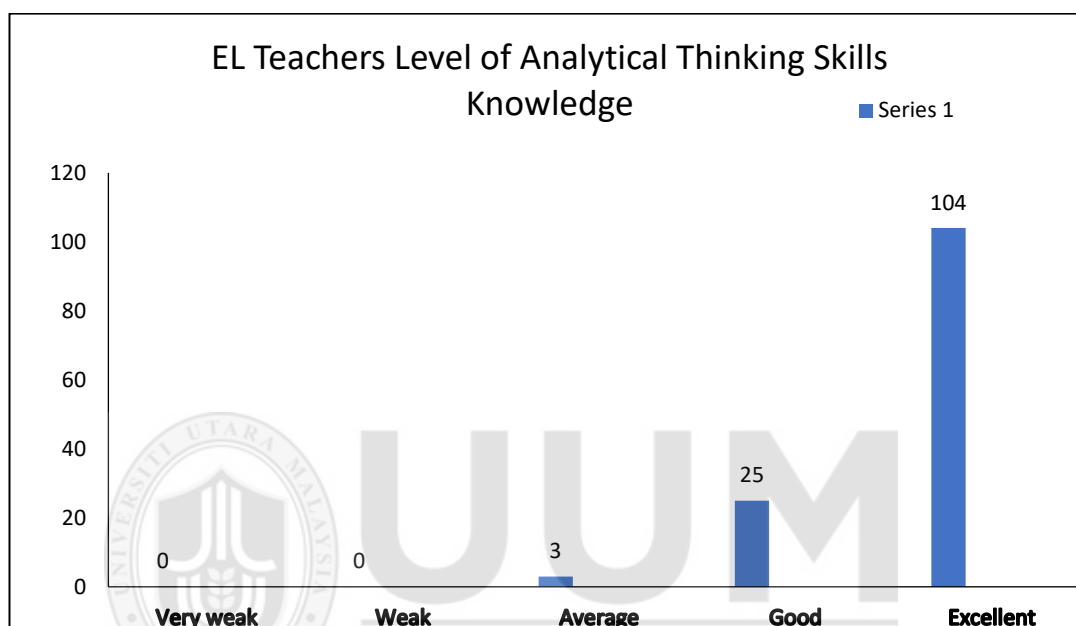


Figure 4.3 EL Teachers' Knowledge level of Analytical Thinking Skills

To further strengthen this finding, the ESL teachers' responses for each item (items 8-15 in Section B) were analysed and discussed with the aid of descriptive statistics (percentage and frequency).

Item 8 requires the respondents to indicate the concept of "analytical thinking skills" from the given list. And, it was found that from the 132 teachers' who participated in this survey, 128 of them (97.0%) answered this item correctly. Only 4 participants (3.0%) gave incorrect answers (see Table 4.1) below.

Table 4.1

Analysis of EL Teachers' responses to item 8 - Concept of Analytical Thinking Skills

Item 8: Concept of Analytical Thinking Skills	Frequency	Percent	Valid Percent
Incorrect answer	4	3.0	3.0
Correct answer	128	97.6	97.0
No. of Respondents (n)	132	100.0	100.0

Item 9 refers to a process involved in 'Analytical Thinking Skills' which is necessary to gain insight of the teachers' understanding of 'Analytical thinking Skills' and it was found 89 of the participants (67.4%) answered this item correctly while 43 of the teachers (32.6%) gave incorrect answers (see Table 4.2).

Table 4.2:

Analysis of EL Teachers' responses to Item 9 - Process of Analytical Thinking Skills

Item 9: Process of Analytical Thinking Skills	Frequency	Percent	Valid Percent
Incorrect answer	43	32.6	32.6
Correct answer	89	67.4	67.4
No. of Respondents (n)	132	100.0	100.0

Item 10 in the questionnaire examines another aspect of the process of analytical thinking skills. It was found that 122 of the participants (92.4%) answered this item correctly while 10 of the teachers (7.6%) gave incorrect answers (see Table 4.3).

Table 4.3:

Analysis of EL Teachers' responses to item 10- (Process of Analytical Thinking Skills)

Item 10: Process of Thinking Skills	Frequency	Percent	Valid Percent
Incorrect answer	10	7.6	7.6
Correct answer	122	92.4	92.4
No. of Respondents (n)	132	100.0	100.0

Similarly, item 11 in this questionnaire requires the teachers to identify the process that best represents 'analytical skill'. This item is important because it provides the link between the teachers' content knowledge about analytical skills and their practical knowledge of the matter. Analysis shows that 110 teachers (83.3%) answered this item correctly while 12 of them (16.7%) gave incorrect answers (see Table 4.4).

Table 4.4:

Analysis of EL Teachers' responses to item 11 - Process of Analytical Thinking Skills

Item 10: Process of Analytical Thinking Skills	Frequency	Percent	Valid Percent
Incorrect answer	22	16.7	16.7
Correct answer	110	83.3	83.3
No. of Respondents (n)	132	100.0	100.0

Item 12 in this questionnaire requires the teachers to identify two activities (12a & 12b) related to 'analytical thinking skills.' This item can help enlighten the researcher about the teachers' practical knowledge on the subject matter. It was found that 128

of the teachers' (97.0%) answered 12a correctly while 4 teachers (3.0%) gave incorrect answers (see Table 4.5)

Table 4.5:

Analysis of EL Teachers' responses to item 12a -Process of Analytical Thinking Skills

Item 12a:Activity of Analytical thinking Skills	Frequency	Percent	Valid Percent
Incorrect answer	4	3.0	3.0
Correct answer	128	97.0	97.0
No. of Respondents (n)	132	100.0	100.0

Meanwhile, 126 teachers gave correct answer for 12b and 6 teachers gave incorrect answers as shown in Table 4.6 below.

Table 4.6:

Analysis of EL Teachers' responses to item 12b – Process of Analytical Thinking Skills

Item 12b: Activity of Analytical thinking skills	Frequency	Percent	Valid Percent
Incorrect Answer	6	4.5	4.5
Correct Answer	126	95.5	95.5
No. of Respondents (n)	132	100.0	100.0

Item 13 requires the teachers to identify two statements (13a and 13b) that gives clear understanding of the concept of analytical thinking skills. This item is crucial to gauge the teachers' understanding of analytical thinking skills. The analysis showed that all 132 teachers (100%) had answered 13a correctly (see Table 4.7).

Table 4.7:

Analysis of EL Teachers' responses to item 13a – Concept of Analytical Thinking Skills

Item 13a: Concept of Analytical thinking skills	Frequency	Percent	Valid Percent
Incorrect Answer	0	0	0
Correct Answer	132	100.0	100.0
No. Of Respondents (n)	132	100.0	100.0

Meanwhile 124 participants (93.9%) had answered 13b correctly and only 8 teachers (6.1%) gave incorrect answers (see Table 4.8)

Table 4.8.

Analysis of EL Teachers' responses to item 13b – Concept of Analytical Thinking Skills

Item 13b: Concept of Analytical thinking skills	Frequency	Percent	Valid Percent
Incorrect Answer	8	6.1	6.1
Correct Answer		93.9	93.9
No. of Respondents (n)	132	100.0	100.0

Item 14 requires the teachers to select a statement that does not enhance analytical thinking skills. This item is a negative statement about the activity of analytical thinking skills. Answering the negative statement which has already been included in positive earlier positive statement can show the respondents' consistency. It was found that 124 (93.9%) of the participants were able to accurately identify the target statement. Once again, a small number of 8 participants (6.1%) gave incorrect answers to this item. (see Table 4.9).

Table 4.9:

Analysis of EL Teachers responses to item 14 – Activity of Analytical Thinking skills

Item 14: Activity of Analytical thinking skills	Frequency	Percent	Valid Percent
Incorrect Answer	8	6.1	6.1
Correct Answer	124	93.9	93.9
No. of Respondents (n)	132	100.0	100.0

Finally, item 15 which seeks the teachers to identify another activity pertaining to analytical thinking skills which will help to probe deeper into the teachers' knowledge of analytical thinking skills. Analysis of the teachers' responses to item 15 showed 128 teachers (97.0%) answered this item correctly. And a mere 4 teachers (3.0%) answered incorrectly (see Table 4.10)

Table 4.10

Analysis of EL Teachers' responses to item 15 – Activity of Analytical Thinking Skills

Item 15 – Activity of Analytical thinking skills	Frequency	Percent	Valid Percent
Incorrect Answer	4	3.0	3.0
Correct Answer	128	97.0	97.0
No. of Respondents (n)	132	100.0	100.0

Analysis of items 8 - 15 which assesses the teacher's knowledge level of analytical thinking skills is summarized and illustrated in Figure 4.4

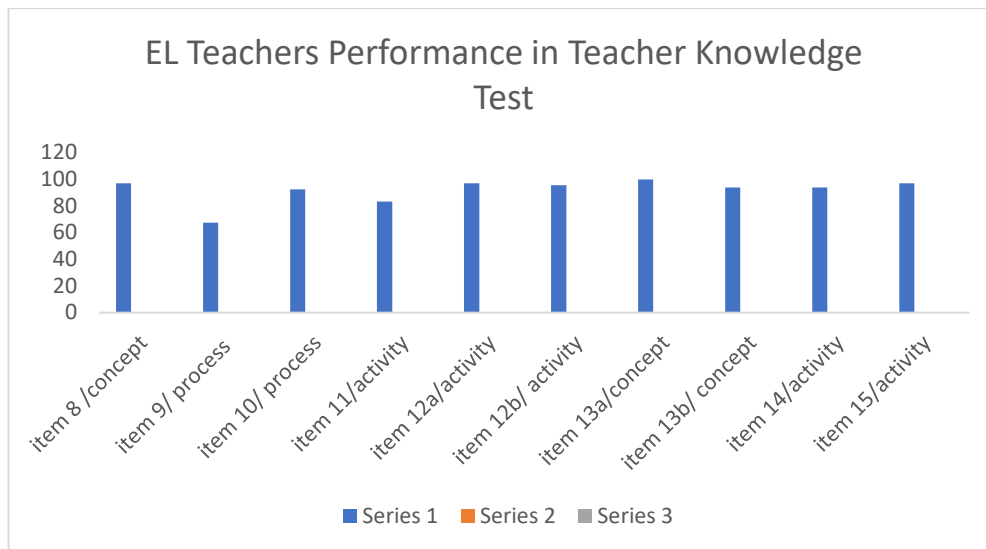


Figure 4.4: Analysis of EL Teachers' correct answers for the different categories of Analytical Thinking Skills

It was found that the English language teachers could answer most of the items correctly. While Item 9 had the lowest percentage of passes (67.42%), item 13(a) had the highest percentage of passes (100%). Meanwhile, item 11 showed 83.33 % passes and the remaining 7 items (items 8, 10, 12 (a), 12(b) 13(a) 14 and 15 have more than 90% of the respondents answering correctly.

These results indicate that the English language teachers have adequate knowledge of the analytical thinking skills to integrate the analytical thinking skills in the ESL reading class. The study showed that 104 respondents (78.78%) scored either 9 or 10 marks and fall into the 'excellent' category. Another 25 respondents (18.93%) scored either 7 or 8 marks and got placed into the 'good' category. And 3 participants (2.27%) have 5 or 6 marks and fall into the average category. In fact, a further breakdown of their responses to items in the questionnaire on the three aspects showed of teacher knowledge showed that EL teachers had attained 90.6% in knowledge of analytical thinking skills concept, 75% knowledge on process of analytical thinking skills, and 88% of knowledge on the activities of analytical thinking skills. This analysis suggests

that the majority of the EL teachers have adequate knowledge in analytical thinking skills to teach them in the ESL reading class.

4.1.2 Research Question 2

Research question two of this study explored the EL teachers' perception towards the teaching of analytical thinking skills in the ESL reading class. For that purpose, the variable 'perception' was first operationalized as teachers' beliefs.

Item 16 seeks the respondents' level of agreement or disagreement on the viability of incorporating analytical thinking skills in the ESL reading class. This statement was given in the negative (reverse form), as such, the respondents disagreement to this statement will deem that they hold a positive perception towards incorporating analytical thinking skills. It was found that 131 participants (99.2%) disagreed to this statement, thus indicating their belief that analytical thinking skills can be taught in the language classroom. And only 1 respondent (0.8%) opined that analytical thinking skills cannot be incorporated in the ESL reading class (see Table 4.11).

Table 4.11:
Analysis of ESL Teachers' Opinions on the Viability of incorporating Analytical Thinking Skills in the ESL Reading Class

Item 16: Rating of ESL Teachers' Opinions using the Likert Scale		Frequency	Percent	Valid Percent
Strongly disagree	1	127	96.2	96.2
Disagree	2	4	3.0	3.0
Agree	3	1	0.8	0.8
Strongly Agree	4	-	-	-
No. of Respondents (n)		132	100.0	100.0

Item 17 examines the ESL teachers' beliefs on the efficacy of analytical thinking skills to enhance analytical thinking skills in the ESL reading class. This item is also given in the negative form and again the teachers' disagreement to this statement would mean that they perceive teaching analytical thinking skills in the ESL reading class positively. On that premise, the EL teachers' responses (127 strongly disagreed and 5 disagreed) showed that all 132 respondents believed that incorporating analytical thinking skills will enhance the students' performance in the ESL reading class (see Table 4.12)

Table 4.12:
Analysis of EL Teachers' Beliefs on the Efficacy of Analytical Thinking Skills in Enhancing the Students' Performance in the ESL Reading Class

Item 17: Rating of ESL Teachers' Beliefs using the Likert Scale		Frequency	Percent	Valid Percent
Strongly disagree	1	127	96.2	96.2
Disagree	2	5	3.8	3.8
Agree	3	-	-	-
Strongly Agree	4	-	-	-
Total number of Respondents		132	100.0	100.0

Item 18 seeks the opinions of the ESL teachers on the difficulties of incorporating analytical thinking skills in the ESL reading class. This statement is also in the negative form, as such the ESL teachers' responses will give reversed meaning. For instance, 'strongly disagree' or 'disagree' to this statement will mean that the EL teachers do not consider teaching analytical thinking skills as a burden. Analysis show that 15 respondents disagreed and the remaining 117 strongly disagreed. In other word, all

132 (100.0%) EL teachers who participated in this survey do not consider teaching analytical skills as a burden (see Table 4.13).

Table 4.13:

Analysis of EL Teachers' Opinions on the burden of Teaching Analytical Thinking Skills in the ESL Reading Class

Item 18 - Rating of EL teachers' opinions on the burden of incorporating analytical thinking skills in the ESL reading class		Frequency	Percent	Valid Percent
Strongly disagree	1	117	88.6	88.6
Disagree	2	15	11.4	11.4
Agree	3	-	-	-
Strongly agree	4	-	-	-
Total number of Respondents (n)		132	100.0	100.0

Item 19 examines the EL teachers' disposition on teaching analytical thinking skills in the ESL reading class in comparison with the teaching of Mathematics and Science. Once again, the statement in this item is written in the negative form and as such respondents' disagreement to it will mean that EL teachers have favourable disposition towards teaching analytical thinking skills in the ESL reading class in comparison to the teaching of Mathematics and Science. Analysis showed 12 respondents (9.1%) disagreeing to this statement and 102 (77.3%) strongly disagreeing to it. Therefore, 116 respondents were favourable to the teaching of analytical thinking skills in the ESL class. However, there were 18 respondents who indicated that it is more appropriate to teach analytical thinking skills in the Mathematics and Science classes. To surmise, the majority of the teachers (86.4%) perceived teaching analytical thinking skills in the English language classroom positively (see Table 4.14).

Table 4.14:

Analysis of EL Teachers' Disposition on Teaching Analytical Thinking Skills in the ESL Reading Class in Comparison to the Teaching of Mathematics and Science

Item 19 – Rating of EL teachers' disposition to the teaching of analytical thinking skills in the ESL reading class		Frequency	Percent	Valid Percent
Strongly disagree	1	102	77.3	77.3
Disagree	2	12	9.1	9.1
Agree	3	18	13.6	13.6
Strongly agree	4	102	77.3	77.3
Total number of respondent (n)		132	100.0	100.0

Item 20 seeks the teachers' view on whether their students find their English lesson interesting when analytical skills is incorporated. If the teachers' responses for this item is in the affirmative then it is considered that they have a positive perception towards incorporating analytical skill in their English lesson. Conversely, if they disagree then they are deemed to be having a negative perception. It was found that 130 teachers (98.5%) indicated 'strongly agree' with this statement while 2 teacher (1.5%) indicated 'agree'. In other words, all 132 teachers (100.0%) showed positive disposition to this statement (see Table 4.15).

Table 4.15:

Analysis of EL Teachers' Feelings on the receptiveness of the students on the Lessons

Item 20: Rating of the ESL teachers' feelings on the receptiveness of their lesson		Frequency	Percent	Valid Percent
Strongly disagree	1	-	-	-
Disagree	2	-	1.5	1.5
Agree	3	2	1.5	1.5
Strongy Agree	4	130	98.5	98.5
Total number of respondents (n)		132	100.0	100.0

Based on the analysis above, a summary of the Mean of the respondents is tabulated (see Figure 4.5) to determine the overall perception of the English language teachers towards the teaching of analytical thinking skills in the ESL reading class. Mean between 0.99 till 2.4 is grouped into the ‘negative’ category, 2.5 – 3.00 is deemed ‘neutral’. And, the Mean of 3.1 and above is deemed as having positive perception towards the teaching of analytical thinking skills in the ESL reading class.

Mean	0 – 0.99	1 – 2.4	2.5 -3.0	3.1 – 3.5	3.6 -4.0
Perception	Negative	Negative	Neutral	Positive	Positive
Participants	-	-	-	9	123
Percentage	-	-	-	6.81%	93.19%

Figure 4.5: Mean Score of Respondents’ Perception of incorporating Analytical Thinking Skills in the ESL Reading Class

On that basis, it was found that 123 participants (98.18%) scored Mean 3.6 – 4.00 and 9 of them (6.81%) had mean between 3.1-3.5. This result is a strong indication of the ESL teachers having positive perception towards the teaching of analytical thinking skills in the ESL reading class.

4.1.3 Hypothesis and Mean Calculations

Generally, two types of hypotheses are used in statistical hypothesis testing. The Null hypothesis (*H₀*) and the Alternative hypothesis (*H_a*). This study uses the alternative hypothesis which predicts that there exists a significant relationship between the independent variables (Teacher Knowledge; Teacher Perception) with the dependent variable (Teacher Practices). The Correlations between the variables, teacher knowledge with teacher practices, as well as teacher perception and teacher practices were analysed using Pearsons Correlation Coefficient formula.

For that, first the EL teachers' teaching practices were examined based on items 21-25 of the ASKP Questionnaire which consists statements that reflects pertinent aspects of classroom practices. The respondents were asked to indicate their level of agreement or disagreement to these statements which were used by the researcher to explore the respondents' teaching practices.

Item 21 probed if the EL teachers' lesson design accommodates the teaching of analytical skills in their English lessons. All 132 (100%) respondents answered this item in the affirmative. While 11 respondents (8.3%) indicated that they often gave consideration to the inclusion of analytical thinking skills when designing their lessons and the remaining 121 respondents (91.7%) showed that they always included analytical thinking skills in their ESL reading class (see Table 4.21). On that score, it can be inferred that all the respondents do take into consideration the incorporation of analytical thinking skills when designing their ESL reading lessons.

Table 4.16:
Analysis of the frequency of incorporating Analytical Thinking Skills in the ESL Reading Lesson Plan

Item 21: Rating of the EL teachers' frequencis of accommodating analytical thinking skills in the ESL reading lesson design		Frequency	Percent	Valid Percent
Never	1	-	-	-
Sometimes	2	-	-	-
Often	3	11	8.3	8.3
Always	4	121	91.7	91.7
Total number of respondents (n)		132	100.0	100.0

Item 22 probes if the EL teachers take into consideration their students' prior knowledge when designing their ESL reading lessons. It was found that all 132 respondents gave considerations to their students' prior knowledge when preparing their ESL reading lesson (8 teachers indicated 'often' and 124 teachers indicated 'always' (see Table 4.17). Giving importance to students' prior knowledge is emphasized in all learning theories explained in chapter two. This finding showed that the ESL teachers have followed strictly to the learning theories.

Table 4.17:

Analysis of the frequency of EL Teachers' consideration given to their students' prior knowledge when preparing their ESL Reading Lesson

Item 22: Rate of inclusion of students' prior knowledge when preparing ESL reading lesson		Frequency	Percent	Valid Percent
Never	1	-	-	-
Sometimes	2	-	-	-
Often	3	8	6.1	6.1
Always	4	124	93.9	100.0
Total number of respondents (n)		132	100.0	100.0

Item 23 enquires if the EL teachers, pay attention to analytical thinking skills during their instructions and during their lesson activities. The analysis finds 5 respondents (3.8%) indicate 'often' and 127 teachers indicate 'always' (see Table 4.18). Once again, all 132 respondents revealed that their instruction methods and activities do focus on analytical thinking skills during their ESL reading class.

Table 4.18:

Analysis of the frequency of EL Teachers' Inclusion of Analytical Thinking Skills in their ESL Reading Class

Item 23: Frequency of EL teachers inclusion of analytical thinking skills in their instruction and Learning activities		Frequency	Percent	Valid Percent
Never	1	-	-	-
Sometimes	2	-	-	-
Often	3	5	3.8	3.8
Always	4	127	96.2	96.2
Total number of respondents (n)		132	100.0	100.0

Item 24 attempts to gain insight into the teachers questioning techniques by asking them to indicate to how often they employ questioning to stimulate their students' analytical thinking skills. For this item, 7 teachers (5.3%) indicated 'often' and 125 teachers (94.7%) selected 'always'(see Table 4.9). Clearly, all the participants (100%) revealed that they used questioning techniques to enhance their students' analytical thinking skills.

Table 4.19:

Analysis of frequency of Teacher using Questions to Stimulate Analytical Thinking Skills in the ESL Reading Class

Frequency of using questions		Frequency	Percent	Valid Percent
Never	1	-	-	-
Sometimes	2			
Often	3	7	5.3	5.3
Always	4	125	96.7	96.7
Total number of respondents (n)		132	100.0	100.0

Item 25 attempts to investigate if the EL teachers encourage their students to talk and share ideas during their English lesson. All 132 (100%) respondents indicated that they encourage their students to participate actively during their ESL reading class. Five teachers (3.8%) responded by selecting ‘often’ while the remaining 125 (96.2%) selected ‘always’ which is a clear indication that the teachers treated interactive lessons as crucial when teaching analytical thinking skills during the ESL reading class (see Table 4.20).

Table 4.20:
Analysis of frequency of EL Teachers’ encouragement for student interaction during the incorporation of Analytical Thinking Skills in the ESL Reading Class

Frequency of encouragement given by the EL teacher in class	Frequency	Percent	Valid Percent
Never	1	-	-
Sometimes	2	-	-
Often	3	3.8	3.8
Always	4	96.2	96.2
Total number of respondents (n)	132	100.0	100.0

Having presented and discussed the analysis of all the items in the questionnaire, in relation to the three variables namely, knowledge, perception and teaching the impact of the teachers’ knowledge and their perception on their teaching practices were explored. For that, correlation between these three variables was computed. The findings would assist to establish the strength of the ‘conceptual framework’ as proposed in the 2nd chapter of this study. For this purpose, the Mean for all three variables namely Teacher knowledge, Teacher Perception and Teacher Practices were computed.

Mean for Teacher Knowledge

Mean for teacher knowledge was calculated using the EL teachers' responses to items 8 – 15 in the ASKP questionnaire. Analysis showed the Mean for the EL teachers' knowledge to be 91.74 with a Standard Deviation of 10.30 (see Table 4.21).

Table 4.21:
Mean' score of Teacher Knowledge

N	Valid	132
	Missing	0
Mean for ESL teachers' Knowledge		91.74
Std. Deviation		10.301

Mean for Teacher-Perception

Similarly, the Mean for the EL teachers' perception is determined using the frequencies of the teachers' responses for items 16 - 20 of the ASKP Questionnaire. And the Mean for 'Teacher Perception' is tabulated at 3.8833 with a Standard Deviation of .23708 (see Table 4.22).

Table 4.22:
'Mean' score of Teacher Perception

	N	Mean	Std. Deviation
Mean Perception	132	3.8833	.23708
Valid N (listwise)	132		

Mean for Teacher Practices

Finally, the Mean for 'Teacher Practices' in this study is computed based on the participants' responses to Items 21 -25 in the questionnaire. And it was found that

Mean for Teacher Practices is 3.9455 with a Standard Deviation of .18175 as indicated in Table 4.23.

Table 4.23:
Mean score of Teacher Practices

	N	Mean	Std. Deviation
Mean Perception	132	3.9455	.18175
Valid N (listwise)	132		

4.1.4 Research Hypothesis 1

The analysis found significant correlation between Teacher Knowledge and Teacher Practices at 0.05 level (see Table 4.24), thus, confirming Hypothesis 1. In other words, the teachers' knowledge level is said to impact the teachers' practices. So, it is safe to conclude that the more profound the teachers' knowledge is, the better the teachers' practices would be.

Table 4.24:
Correlation between Teacher Knowledge and Teacher Practices

		Percentage	Mean Practices
		Knowledge Score	
Percentage Knowledge Score	Pearson Correlation	1	.190*
	Sig. (2-tailed)		.029
	N	132	132
Mean Practices	Pearson Correlation	.190*	1
	Sig. (2-tailed)	.029	
	N	132	132

*. Correlation is significant at the 0.05 level (2-tailed).

From the above findings, it can be concluded that ‘teacher knowledge’ has significant impact on the teachers’ practices. Therefore, it is important that the EL teachers get a sound grasp of the analytical thinking skills to effectively teach it in their ESL reading class.

4.1.5 Research Hypothesis 2

Similarly, a significant correlation was established between teacher perception and teacher practices at 0.01 level (see Table 4.25). This finding confirms that teacher perception does impact teacher practices. In other words, teachers’ beliefs and disposition towards the teaching of analytical thinking skills in their ESL reading class will influence the quality of their teaching.

Table 4.25:

Correlation between Teacher Perception and Teacher Practices

		Mean Perception	Mean Practices
Mean Perception	Pearson Correlation	1	.319**
	Sig. (2-tailed)		.000
	N	132	132
Mean Practices	Pearson Correlation	.319**	1
	Sig. (2-tailed)	.000	
	N	132	132

** . Correlation is significant at the 0.01 level (2-tailed)

The findings indicate that teachers’ perception has considerable influence on their practices. In other words, the quality of their teaching depends upon how they feel about teaching a particular curriculum. On that basis, the positive perception of the EL teachers towards the teaching of analytical thinking skills in the ESL reading class may have influenced their practices in a positive way. Clearly, the correlation analysis supports the conceptual framework proposed in this study (refer Figure 2.13, Chapter 2).

4.2 Research Question 3

To answer research question 3, the two expert EL Teachers' classroom practices were observed. Data were collected through both quantitative and qualitative methods. While quantitative data was analysed using descriptive statistics.

Quantitative observation gathers information that are quantifiable and measurable. In this study, the survey questionnaire uses the 'likert scale' to help quantify the survey participants' responses. The quantified data is then measured using numerical values such as percentages and frequencies.

Both the expert EL teachers, Ms Mastura from SMK C and Ms Norma from SMK L were each observed twice by an independent evaluator. Ms.Mastura was observed on 24/11/21 and on 1/12/21. Ms Norma was observed on 29/11/21 and on 7/12/21. An observation checklist adapted and adopted from Horizon Research (2003) was used to quantify the data. The observations focused on five aspects (Lesson Design, Lesson Implementation, Lesson Content, Classroom Culture and Learning Outcome) and discusses each aspect based on the descriptors given.

4.2.1. Ms.Mastura's Observations 1 & 2 (Quantitative Analysis)

The lesson designs prepared by Ms. Mastura for both lessons were evaluated using the checklist by the evaluator (see Figure 4.6 & Figure 4.7). The descriptors in the checklist for lesson designs were used to describe the respondents' performance in this area.

Firstly, both lesson designs prepared by Ms.Mastura received a commendable score of 95%. The lesson designs showed that Ms.Mastura had paid attention to tasks, roles and interactions pertaining to the teaching of analytical thinking skills necessary in an ESL

reading class when preparing her lesson designs. On that score, Ms. Mastura also received 95% for both her lesson designs for meticulous preparation. A well designed lesson plan allows the teacher to translate the curriculum into effective learning activities (Farhang, et al. 2023).

Next, Ms. Mastura lesson plan showed that she had included her students' experiences, preparedness, prior knowledge and learning styles in selecting the instructional strategies and activities. For this aspect, Ms. Mastura scored 70% and 77.5% in her 1st and 2nd observation respectively. On the same note, Ms. Mastura's instructional strategies and activities had also taken into consideration students' accessibility, equity and diversity and received 75% and 77.5% for including these aspects in her lesson design. learning theories of Vygotsky Piaget and Bandura have all emphasized student-centred learning opposed to the 'traditional chalk and talk' teaching process. Student -centred learning is a philosophy or an approach in education that is designed to meet the needs of each student individually' (Green & Harrington, 2020).

Next, Ms. Mastura scored 87.5% in both of her observations for the use of appropriate teaching aids and resources. Teaching aids, resources and instructional materials are crucial in the teaching and learning process. 'Apart from making the learning environment interesting, teaching materials also engage students' other senses thus giving the students opportunities to learn in their own way' (Sudhakar, J. 2017).

Besides that, Ms. Mastura's lesson plan had included the collaborative approach in her lesson design which encouraged active student participation in the lesson. And for this aspect, the evaluator gave Ms. Mastura 75% in her first observation and 82.5% in her second observation. Active participation in class motivates the students to learn better.

‘Students who are actively involved in the learning process are likely to perform well on assignment and exams’ (Oxford Learning, 2023).

No.	Aspects to Observe in the Research Design	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Percent
1.	The design of this lesson incorporated tasks, roles and interactions consistent with the reading comprehension lesson.				38	95%
2.	The design of this lesson reflected careful planning and organization.				38	95%
3.	The instructional strategies and activities used in this lesson reflected attention to students’ experience, preparedness, prior knowledge and/or learning styles.			28		70%
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction.				35	87.5%
5.	The instructional strategies and activities reflected attention to issues of access, equity and diversity for students.			30		75 %
6.	The design of the lesson encouraged a collaborative approach to learning among the students.			30		75%
7.	Adequate time and structure were provided for ‘sense-making’.			30		75%
8.	Adequate time and structure were provided for ‘wrap-up.			28		70%

Figure 4.6: Evaluation of Ms. Mastura’s Lesson Design for 1st Observation

Finally, Ms. Mastura had allocated in both her lesson designs 1 and 2, time for students to comprehend the lesson content as well as time for the teacher to consolidate the lesson. For allocating time to students to comprehend the content Ms.Mastura was given 75% and 77.5% in her 1st and 2nd observation respectively. And, for the allocation of time for consolidation of the lesson Ms.Mastura earned 70% and 77.5% respectively. Effective time management in class is essential for successful teaching

and learning process. Otherwise, the lesson can become chaotic with unclear procedures, time wastage on unimportant activities or unfinished lessons or 'rocky transition' due to time-constraint (Petty, nd).

A well-designed lesson plan ensures smooth transition and enables effective teaching and learning process. The analysis of Ms.Mastura's lesson design (Figures 4.6 & 4.7) showed that Ms.Mastura had planned her lessons meticulously that reflects best practices in enhancing both the reading skill and analytical thinking skills in the ESL class.

No.	Aspects to Observe in the Research Design	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Percentage
1.	The design of this lesson incorporated tasks, roles and interactions consistent with the reading comprehension lesson.				38	95%
2.	The design of this lesson reflected careful planning and organization.				38	95%
3.	The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge and/or learning styles.				31	77.5%
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction.				35	87.5%
5.	The instructional strategies and activities reflected attention to issues of access, equity and diversity for students.				31	77.5%
6.	The design of the lesson encouraged a collaborative approach to learning among the students.				33	82.5%
7.	Adequate time and structure were provided for 'sense-making'.				31	77.5%
8.	Adequate time and structure were provided for 'wrap-up'.				31	77.5%

Figure 4.7: Evaluation of Ms. Mastura's Lesson Design for 2nd Observation

Ms. Mastura's implementation of her lessons was the second aspect observed during both her classroom observations. There were six areas that the evaluator observed during the implementation of the lessons – i). Consistency of strategy with lesson objectives, ii). Teacher confidence, iii). Classroom management iv). Pace of the lessons, v). Teacher's understanding of student ability, and vi). Teacher Questioning Technique. The scores given by the evaluator for Ms.Mastura's lesson implementation for observation1 (see Figure 4.8) and observation 2 (see Figure 4.9) are presented and discussed in the following section.

Ms.Mastura scored 95% and 90% in her 1st and 2nd Observation respectively for consistency in implementing instructional strategies that can enhance analytical thinking skills in the ESL reading class. Students learn more effectively when they have a clear understanding of the classroom procedures and the teaching strategies. Consistency allows the students a fair certainty of what to expect in the lesson (Amaro, 2022).

The observations showed Ms.Mastura had confidently conducted her lessons in incorporating analytical thinking skills in the ESL reading class. On that premise, the evaluator gave 87.5% in the 1st observation and 90% in the 2nd observation. Teacher confidence relates to one's belief in one's teaching skills and abilities (Oxford University Press ELT, 2023). Teacher confidence depends on the teacher's subject knowledge, pedagogical knowledge, knowledge of the students involved, the learning process and teaching skills which generally are improved over time and practice. Ms.Mastura's high scores for self-confidence may reflect her excellence in all of these areas.

Ms.Mastura earned a fairly good score for her classroom management and teaching strategies (77.5%) for both her lessons teaching the analytical thinking skills (observation 1 and 2). Classroom management is another crucial factor that can impact the teaching and learning process. ‘The ability of teachers to organize classrooms and manage the behaviour of their students is critical to achieving positive educational outcomes (Olver & Reschly, 2017). Based on this explanation of classroom management, Ms.Mastura’s scores for classroom management showed her competence in that aspect.

The next aspect of ‘Lesson Implementation’ which was investigated was the ‘pace of conducting the class’. Ms.Mastura scored a reasonably high percentage of 77.5% and 80% in the 1st and 2nd observation respectively. The evaluator found that Ms. Mastura had paced her lessons appropriately to meet the development levels and needs of the students in alignment with the purposes of the lesson. On the other hand, Ms.Mastura’s implementation of her 1st lesson showed that she did not read her students’ mind well enough to adjust her classroom instruction scoring only 55% for this area. However, Ms.Mastura had improved this part of her instruction considerably in her 2nd observation and scored 77.5%.

The last aspect observed in Mastura’s implementation of lesson was her questioning techniques. Ms.Mastura scored 82.5% in her 1st observation and 87.5% in her 2nd observation for the use of questioning techniques. Evaluation of Mastura’s questioning techniques revealed that her questions were likely to enhance the development of the students’ conceptual understanding of analytical thinking skills. Questioning technique is one of the most effective teaching strategies to engage the

students, to assess their learning and stimulate higher order thinking (Ganesan, et al. 2020).

No.	Aspects to observe for Implementation	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Total 40 Marks
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.				38	95%
10.	The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.				35	87.5%
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.				31	77.5%
12.	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.				31	77.5%
13.	The teacher was able to "read " the students' level of understanding and adjusted instruction accordingly.			22		55%
14.	The teachers' questioning techniques were likely to enhance the development of the students' conceptual understanding of analytical skills.				33	82.5%

Figure 4.8: Evaluation of Ms. Mastura's Lesson Implementation for 1st Observation

No.	Aspects to observe for Implementation	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Total 40 Marks
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.				36	90%
10.	The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.				36	90%
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.				31	77.5%
12.	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.				32	80%
13.	The teacher was able to "read " the students' level of understanding and adjusted instruction accordingly.				31	77.5%
14.	The teachers' questioning techniques were likely to enhance the development of the students' conceptual understanding of analytical skills.				35	87.5%

Figure 4.9: Evaluation of Ms. Mastura's Lesson Implementation for 2nd Observation

The evaluator noted that Ms. Mastura handled her lessons confidently. Her classroom management was well organized and effective. The strategies used were consistent with enhancing analytical skills. In a nutshell, Ms. Mastura's implementation of her lessons is reflective of her best practices.

Next, Mastura's use of the lesson content was scrutinized. The evaluator's scores for the various areas observed under 'lesson content' are discussed with reference to Figures 4.10 (1st Observation) and 4.11 (2nd observation). The lesson content is the backbone of any learning context. 'It (the lesson content) gives the necessary information and guidance for learners to grasp new concept, acquire new skills and

broadens their understanding of the subject matter' (Rivera, 2023). On that premise, Ms.Mastura's lesson content was scrutinized in both her 1st and 2nd observation. Her choice and delivery of the lesson content were evaluated under 6 areas of interest (see Figures 4.10 & 4.11).

Firstly, the significance of her choice of the reading skills and the analytical thinking skills were found to be excellent with a score of 90% for both her lessons (observation 1 and 2). Next, for the appropriacy of the two skills taught in relation to the students' developmental level, Ms.Mastura again received an excellent score of 90% in both her lessons (observation 1 and 2). Thirdly, Ms.Mastura was given 90% for the accurate and relevant use of lesson content in relation to the curriculum taught during both her 1st and 2nd observation.

Next, based on the students' engagement in the ESL reading class their understanding of the lesson content received a score of 80% for her 1st observation and 70% for her 2nd observation which is relatively lower than her scores for the earlier aspects. Next, the evaluator gave 80% for Ms. Mastura's own understanding of the skills taught for both her 1st and 2nd observation. Finally, in this section Ms.Mastura received 80% (1st observation) and 70% (2nd observation) for her effort in incorporating the analytical thinking skills in the ESL reading class. This point in Ms. Mastura's lesson content can be further improved for a more effective teaching and learning process.

No.	Aspects to observe for Lesson Content	Weak 0-10	Average 11-20	Good 21-30	Excellent 31-40	Total 40 marks
15.	The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson				36	90%
16.	The language skills and analytical skills were appropriate for the developmental levels of the students in this class				36	90%
17.	'Teacher-provided' content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson				36	90%
18..	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson			28		70%
19.	The teacher displayed good understanding of the language and analytical skills' concepts in his/her dialogue with students				32	80%
20.	Students' English language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson			28		70%

Figure 4.10: Evaluation of Ms. Mastura's Lesson Content for 1st Observation

No.	Aspects to observe for Lesson Content	Weak	Average	Good	Excellent	Total 40 marks
15.	The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson				36	90%
16.	The language skills and analytical skills were appropriate for the developmental levels of the students in this class				36	90%
17.	'Teacher-provided' content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson				36	90%
18..	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson				32	80%
19.	The teacher displayed good understanding of the language and analytical skills' concepts in his/her dialogue with students				32	80%
20.	Students' English language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson				32	80%

Figure 4.11: Evaluation scores of Ms. Mastura's Lesson Content for 2nd Observation

The statistics (see Figure 4.10 & Figure 4.11) revealed that Ms.Mastura's choice and use of the lesson content to be effective in teaching the analytical thinking skills in the ESL reading class. It showed that the contents taught by Ms.Mastura in both her lessons to be very appropriate, accurate and relevant to the lessons. Further, Ms.Mastura's selection of the contents encouraged the students to be engaged intellectually during the lessons. Ms. Mastura's contents and dialogue during the lessons displayed a sound understanding of the language skills and analytical thinking skills. Her use of analytical thinking skills in the ESL reading class helped enhanced the students' English language proficiency. To surmise, the lesson content i.e. the language skills and analytical skills taught were significant and worthwhile in the ESL reading class.

Classroom culture refers to atmosphere of interactions between students and students, teacher and students, the space for constructive criticism and discussions as well as the collegial climate among the occupants of the class. On that premise, Ms.Mastura's observations had focused on 5 pointers, (i) the teacher's extent of initiative in encouraging student participation, (ii) the climate of respect among students (iii) the collegiality between students (iv) teacher-student interaction and (v) the space for intellectual improvement in the class.

In the 1st observation, Ms.Mastura received 62.5% for her effort in encouraging her students to participate in her lesson. And for mutual respect and trust among students in the class the evaluator gave 62.5% while students' collegiality level was evaluated at 62.5%. The aspect of teacher-student interactions was given 60% and the space for intellectual development during this lesson was evaluated at 55%. The scores given by the evaluator showed the classroom culture was at the satisfactory level in Ms.Mastura's 1st observation (see Figure 4.12). However, Ms.Mastura managed better

scores in all these 5 aspects in her 2nd observation. Her scores had improved to 70% in all the 5 aspects of classroom culture (see Figure 4.12).

No.	Aspects to observe in Classroom Culture	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
21.	Active participation of all students was encouraged and valued by teacher			25		62.5%
22.	There was a climate of respect for students' ideas, questions and contributions during the lesson			25		62.5%
23.	Interactions reflected collaborative working relationships among students			25		62.5%
24.	Interactions reflected collaborative working relationships between teacher and students			24		60%
25.	Intellectual rigor, constructive criticism and the challenging of ideas were evident			22		55%

Figure 4.12: Evaluation of Ms.Mastura's Classroom Culture for 1st Observation

No.	Aspects to observe in Classroom Culture	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
21.	Active participation of all students was encouraged and valued by teacher			28		70%
22.	There was a climate of respect for students' ideas, questions and contributions during the lesson			28		70%
23.	Interactions reflected collaborative working relationships among students			28		70%
24.	Interactions reflected collaborative working relationships between teacher and students			28		70%
25.	Intellectual rigor, constructive criticism and the challenging of ideas were evident			28		70%

Figure 4.13: Evaluation of Ms.Mastura's Classroom Culture for 2nd Observation

The scores for this aspect of the classroom practices observed suggest a need for greater focus from Ms.Mastura because this aspect is critical to create a conducive atmosphere for leaning. The creation of dynamic learning space which focusses on student involvement, teacher-students trust and sharing ideas and experiences are critical for effective learning (Meluch and Hannah, 2021).

Learning outcomes are what the teacher expects the students to achieve at the end of a lesson. Learning outcomes are specifically stated in the preparatory stage of the lesson. They are always written in a student-centred fashion and needs to be measurable. Other aspects of teaching and learning such as the teaching context, learning activities and assessment schemes are designed in alignment with the learning outcomes of that lesson/programme or course (Mahajan and Singh, 2017).

For this study, the learning outcomes for the two lessons observed were evaluated based on 5 important criteria (see Figure 4.14 for observation 1 and Figure 4.15 for observation 2). Firstly, the evaluator found the incorporation of analytical thinking skills in the ESL reading class had only mildly enhanced the students' English language proficiency, so he rated this aspect at 52.5%. Next, students' understanding of analytical thinking skills in the ESL reading class was rated at 60%, and students' achievement of learning reading comprehension through analytical thinking skills was rated at 62.5%. And the students' ability to apply analytical thinking skills in other disciplines and in real life situations was rated at 52.5%. Finally, to the question whether the students gained self-confidence in using analytical thinking skills through the reading class, the learning outcome was rated at 52.5%. Based on these ratings, it can be inferred that Ms.Mastura' success in the 1st observation was only average.

However, Ms.Mastura's performance was much better in her 2nd observation. She received 60% for enhancement of the students' English language proficiency, 60% for students' understanding of the analytical skills, 70% for improvement of students' reading skills, 70% for students' ability to apply analytical thinking skills in other disciplines and in real-life situations and 60% for building students' self-confidence in using analytical thinking skills through the reading lesson. The improved scores for learning outcomes in the 2nd observation showed that Ms.Mastura had corrected some of the weaknesses of the earlier observation. But, the ratings of this aspect still low.

Items	Aspects to observe for Learning Outcome	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
26.	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.			21		52.5%
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson.			24		60%
28.	Students improved their performance in the reading comprehension lesson using the analytical skills.			25		62.5%
29.	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.			21		52.5%
30.	Students gained self-confidence in using the analytical skills through the reading comprehension lesson.			21		52.5%

Figure 4.14: Evaluation scores of Ms.Mastura's Learning Outcomes for 1st Observation

Items	Aspects to observe for Learning Outcome	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
26.	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.			24		60%
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson.			24		60%
28.	Students improved their performance in the reading comprehension lesson using the analytical skills.			28		70%
29.	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.			28		70%
30.	Students gained self-confidence in using the analytical skills through the reading comprehension lesson.			24		60%

Figure 4.15: Evaluation of Ms.Mastura's Learning Outcomes for 2nd Observation

4.2.2 Ms.Norma's Observations 1 & 2 (Quantitative Analysis)

Ms. Norma, the second expert EL teacher, was also observed twice by the same independent evaluator and the researcher. The 1st observation was conducted on Monday, 29/11/21 from 9am to 10.30 am. It was a 90minute lesson on 'reading comprehension' and her second observation was conducted by the same independent evaluator on Monday, 7/12/21 from 9.00am – 10.30am. It was also a "Reading Comprehension' lesson. Both of Ms.Norma's classroom teaching were evaluated using the observation checklist. Marks were given for each criterion mentioned under the five aspects of classroom teaching (lesson design, lesson implementation, lesson content, classroom culture and learning outcome). The evaluators scores were converted into percentages as illustrated in the diagrams and discussed quantitatively.

The importance of a well-designed lesson plan in ensuring smooth flow of the lesson enabling effective teaching and learning does not need over-emphasis. All five aspects mentioned earlier were evaluated and scored (see Figure 4.16 for observation 1).

Ms.Norma's lesson design showed her strength of incorporating analytical thinking skills in the reading comprehension lesson (80%), for meticulous preparation of the lesson (80%) and in the use of appropriate resources (80%). Meanwhile, Ms.Norma's strategies and activities were found to have given due attention to the student factors such as access, equity and diversity (75%) and the collaborative approach in the design provided room for student interaction during activities (75%). However, there were other areas that needed improvement. For instance, the instructional strategies could have given more attention to students' prior knowledge and past experiences (55%) to allocation of time for students' 'sense-making' (55%) and to allocation of wrap-up time for the teacher (50%).

Ms.Norma's second observation showed improvement on all these areas (see Figure 4.17). Probably, Pn.Norma had become more familiar with the criteria used to evaluate the lesson design. In the second observation, Ms.Norma scored 80% for incorporating analytical skills in the reading class, for meticulous planning of the lesson plan, for the use of appropriate teaching resources, and for instructional strategies that gave due consideration to student factors such as access, equity and diversity. In the second observation, Ms.Norma showed a slight improvement in her lesson design on the criterion of paying attention to students' prior knowledge and past experiences (60%). But the criteria of time allocation for students' 'sense-making' and for 'wrap-up' of lesson remained low at (55%). Clearly, Ms.Norma's lesson design can improve if these

areas are given greater attention.

No.	Aspects to Observe in the Research Design	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Percentage
1.	The design of this lesson incorporated tasks, roles and interactions consistent with the reading comprehension lesson.				32	80%
2.	The design of this lesson reflected careful planning and organization.				32	80%
3.	The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge and/or learning styles.			22		55%
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction.				32	80%
5.	The instructional strategies and activities reflected attention to issues of access, equity and diversity for students.			30		75%
6.	The design of the lesson encouraged a collaborative approach to learning among the students.			30		75%
7.	Adequate time and structure were provided for 'sense-making'.			22		55%
8.	Adequate time and structure were provided for 'wrap-up'.		20			50%

Figure 4.16: Evaluation of Ms.Norma's Lesson Design for 1st Observation

No.	Aspects to Observe in the Research Design	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Percentage
1.	The design of this lesson incorporated tasks, roles and interactions consistent with the reading comprehension lesson.				32	80%
2.	The design of this lesson reflected careful planning and organization.				32	80%
3.	The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge and/or learning styles.			24		60%
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction.				32	80%
5.	The instructional strategies and activities reflected attention to issues of access, equity and diversity for students.				32	80%
6.	The design of the lesson encouraged a collaborative approach to learning among the students.			30		75%
7.	Adequate time and structure were provided for 'sense-making'.			22		55%
8.	Adequate time and structure were provided for 'wrap-up'.			22		55%

Figure 4.17: Evaluation of Ms.Norma Lesson Design for 2nd Observation

Ms. Norma's implementation of lesson during observation 1 showed a strong trend with scores on all 6 criteria being 75% and above. First, her consistency in her instructional strategies for including analytical thinking skills in the reading comprehension class earned her 77.5%. Next, she showed great self-confidence while teaching and earned 87.5%. Thirdly, the teaching strategies and classroom management clearly enhanced the teaching of analytical skills in the reading class for

which she scored 80%. Ms.Norma's pace of the lesson conducted was appropriate for the developmental levels and needs of her students for which she scored 75%. Ms.Norma's was able to read her students' level of understanding and adjusted her instruction accordingly. For that she scored 75%. Finally, for her questioning techniques that helped to stimulate the students analytical thinking skills she scored 77.5%. Her implementation of the lesson during her 1st observation was commendable (see Figure 4.18).

No.	Aspects to observe for Implementation	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Total 40 Marks
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.				31	77.5%
10.	The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.				35	87.5%
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.				32	80%
12.	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.			30		75%
13.	The teacher was able to "read " the students' level of understanding and adjusted instruction accordingly.			30		75%
14.	The teachers' questioning techniques were likely to enhance the development of the students' conceptual understanding of analytical skills.				31	77.5%

Figure 4.18: Evaluation of Ms. Norma's Lesson Implementation for 1st Observation

Interestingly, Ms.Norma's scores for all the 6 criteria for her implementation of her lesson during her 2nd observation (see Figure 4.19) were exactly the same as her scores during observation 1. This consistency could be due to her long years of experience in teaching.

No.	Aspects to observe for Implementation	Weak 0 - 10	Average 11 - 20	Good 21 -30	Excellent 31 - 40	Total 40 Marks
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.				32	77.5%
10.	The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.				35	87.5%
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.				31	80%
12.	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.			30		75%
13.	The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.			30		75%
14.	The teachers' questioning techniques were likely to enhance the development of the students' conceptual understanding of analytical skills.				32	77.5%

Figure 4.19: Evaluation of Ms. Norma's Lesson Implementation for 2nd Observation

Lesson content as explained earlier is the backbone of any lesson. Without that, the class will be an interaction void of cognitive actions. The evaluation of the lesson content used during observation 1 and 2 by Ms.Norma were very impressive on all the aspects except for the enhancement of the students' English language proficiency.

Firstly, on the significance of the analytical and language skills taught in the reading class, Ms.Norma scored 87.5% during both her observations. Next, for the appropriacy

of content used for the teaching of the language skills and the analytical thinking skills to fit the students' developmental level Ms.Norma scored 87.5% both in the 1st and 2nd observation. The score puts Ms.Norma in the excellent level. Following that, the evaluation for accuracy and relevancy of the content that focused on the teaching of analytical thinking skills in the reading class earned her 87.5% in the 1st observation and 90% in her 2nd observation. As for the contents ability to intellectually engage the students in analytical thinking skills in the reading lesson, Ms.Norma received 80% in both her 1st and 2nd observations. Ms.Norma displayed excellent understanding of the language and analytical thinking skills during her dialogue with her students that earned her 82.5% for this aspect in both her observation 1 and 2. Finally, on the use of analytical thinking skills to enrich students' English language proficiency, Ms.Norma scored 62.5% in her 1st observation but improved it to 75% in her 2nd observation. Basically, Ms.Norma's scores in observation 1 (see Figure 4.20), and in observation 2 (see Figure 4.21) showed that she has excellent ability in choosing the lesson contents.

No.	Aspects to observe for Lesson Content	Weak	Average	Good	Excellent	Total 40 marks
15.	The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.				35	87.5%
16.	The language skills and analytical skills were appropriate for the developmental levels of the students in this class.				35	87.5%
17.	'Teacher-provided' content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.				36	90%
18..	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.				32	80%
19.	The teacher displayed good understanding of the language and analytical skills' concepts in his/her dialogue with students.				33	82.5%
20.	Students' English language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson.			25		62.5%

Figure 4.20: Evaluation of Ms.Norma's Lesson Content for 1st Observation

No.	Aspects to observe for Lesson Content	Weak	Average	Good	Excellent	Total 40 marks
15.	The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.				35	87.5%
16.	The language skills and analytical skills were appropriate for the developmental levels of the students in this class.				35	87.5%
17.	'Teacher-provided' content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.				35	87.5%
18..	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.				32	80%
19.	The teacher displayed good understanding of the language and analytical skills' concepts in his/her dialogue with students.				33	82.5%
20.	Students' English language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson.			30		75%

Figure 4.21: Evaluation of Ms.Norma's Lesson Content for 2nd Observation

Next, Ms. Norma's class culture was examined. Classroom culture as defined earlier, is critical for creating a conducive learning environment. For this section, evaluation was done by observation of five main areas namely; students' participation, climate of respect among students, collaborative working relationships among students, teacher-student interaction and room for intellectual discourse.

It was found that Ms.Norma had scored 55% for student participation in both her 1st and 2nd observation. She also scored 55% for climate of respect among students, 55% for collaborative working relationships among students, 55% for teacher-student interaction and a mere 50% for opportunity for intellectual discourse in her lesson. Although the scores received were consistent in both her observations, the scores were rather low (see Figures 4.22 & 4.23) which means the teacher needs to work on creating a more conducive classroom environment. The criteria scrutinized to evaluate this section needs to be given serious attention to improve the learning environment.

No.	Aspects to observe in Classroom Culture	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
21.	Active participation of all students was encouraged and valued by teacher.			22		55%
22.	There was a climate of respect for students' ideas, questions and contributions during the lesson.			22		55%
23.	Interactions reflected collaborative working relationships among students.			22		55%
24.	Interactions reflected collaborative working relationships between teacher and students.			22		55%
25.	Intellectual rigor, constructive criticism and the challenging of ideas were evident.		20			50%

Figure 4.22: Evaluation of Ms.Norma's Classroom Culture for 1st Observation

No.	Aspects to observe in Classroom Culture	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
21.	Active participation of all students was encouraged and valued by teacher.			22		55%
22.	There was a climate of respect for students' ideas, questions and contributions during the lesson.			22		55%
23.	Interactions reflected collaborative working relationships among students.			22		55%
24.	Interactions reflected collaborative working relationships between teacher and students.			22		55%
25.	Intellectual rigor, constructive criticism and the challenging of ideas were evident.			22		55%

Figure 4.23: Evaluation of Ms.Norma's Classroom Culture for 2nd Observation

Finally, Ms. Norma's learning outcomes of her lessons were scrutinized. Learning outcomes are the desired results at the end of a lesson that the teacher intends to achieve. To evaluate this aspect of teaching 5 sub-divisions of criteria were scrutinized and the scores of the 1st observation are presented in Figure 4.24, while scores of the 2nd observation are presented in Figure 4.25 and the findings are then discussed.

Firstly, it was found that teaching of analytical thinking skills in the reading comprehension lesson during both the 1st observation and 2nd observation of Ms.Norma's class, achieved only minimal success with a score of 55%. Next, on the

aspect of students gaining a sound understanding of analytical thinking skills, Ms.Norma again had only achieved mild success with the score of 55% in both her 1st and 2nd observations. On the third criterion which examines the students improvement of performance in the ESL class, Ms.Norma had 57.5% showing only minimal improvement in both her 1st and 2nd observations. The fourth aspect of students being able to use the analytical thinking skills in other disciplines and in real-life situation the score was 52.5% in her 1st observation and 55% in her 2nd observation.

Items	Aspects to observe for Learning Outcome	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
26.	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.			22		55%
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson.			22		55%
28.	Students improved their performance in the reading comprehension lesson using the analytical skills.			23		57.5%
29.	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.			22		55%
30.	Students gained self-confidence in using the analytical skills through the reading comprehension lesson.			222		55%

Figure 4.24: Evaluation of Ms.Norma's Learning Outcomes for 1st Observation

Although, there was improvement from the 1st observation to the 2nd observation, both scores are low showing a weak level of achievement of the learning outcome. Finally, students' self-confidence to use analytical thinking skills also showed weak achievement, 52.5% in the 1st observation and 55% in the 2nd observation.

Ms.Norma's scores for learning outcome showed that there is an urgent need for her to address this area to accomplish better standards in the teaching of analytical thinking skills in the ESL reading class.

Items	Aspects to observe for Learning Outcome	Weak 0 -10	Average 11- 20	Good 21 - 30	Excellent 31 - 40	Total 40 marks
26.	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.			22		55%
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson.			22		55%
28.	Students improved their performance in the reading comprehension lesson using the analytical skills.			23		57.5%
29.	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.			21		52.5%
30.	Students gained self-confidence in using the analytical skills through the reading comprehension lesson.			21		52.5%

Figure 4.25: Evaluation of Ms.Norma's Learning Outcomes for 2nd Observation

The above analysis provides insight into the teaching processes of the two expert EL teachers. More importantly it gives guidance to teachers on the areas that needs to be considered for the successful integration of analytical thinking skills in the ESL reading class. While Part I of this chapter presents the analysis and findings of quantitative data, Part II presents the analysis and findings of the expert EL teachers classroom teaching and the challenges they encountered qualitatively.

Classroom Observations are effective for assessing teacher's activities directly in their natural environment (Dignath & Veenman, 2020). For this study, while quantitative data was gathered using the Classroom Observation Protocol (ELT-COP) and analysed in using descriptive statisticss, qualitative data in the form of researcher's notes were collected and analysed using thematic analysis. Essentially, the observation scrutinized both the expert EL teachers' (Ms. Mastura and Ms. Norma) lesson plan document and

the process of their teaching. Thematic analysis of the data gathered through the researcher's observations of the two expert EL teachers help answer research question 3.

4.2.3 Ms. Mastura's Observations 1 & 2 (Qualitative Analysis)

The first observation of Ms. Mastura's teaching was conducted on Wednesday, 24/11/21 from 9.00-10.30am. It was a 90 minutes' lesson teaching 'Reading Comprehension'. While the language skill focused was 'Reading', the analytical thinking skills such as 'gathering data, logical reasoning, inferencing, critical and creative thinking skills' were integrated in the lesson in almost all the learning activities. The topic of the lesson was 'Literature' and the theme was 'People and Culture'. The lesson was based on a passage in page 21 of the 'Student's Book: PULSE 2' (the official English language textbook used in Malaysian secondary schools), regarding a Japanese girl named Akiko who wrote a novel using her handphone and posted it in the website.

It was found that the lesson plan template used by Ms.Mastura was one of the factors that enabled her to successfully integrate the analytical thinking skills in the ESL reading class. The template had special columns for essential information stipulated in the syllabus, such as the main focused skill, complementary skills, integrated skills and learning objectives as well as the lesson activities. The lesson plan ensured that the learning activities for this lesson were systematically organized. At the bottom of the lesson plan template there is space for teachers for self- assessment and reflection (see Appendix M1).

The lesson plan document used by Ms.Mastura was based on the traditional PPP lesson plan format. However, it was adapted and adopted with special features that specially

enabled the integration of analytical thinking skills in the ESL reading class. For instance, Mastura's lesson plan template has a column to state the types of higher order thinking skills (analytic, evaluative or synthesis) that will be integrated in this lesson. Ms.Mastura had clearly stated in this column that her lesson's focus was on data gathering, logical reasoning, inferencing, critical and creative thinking which are important processes of analytical thinking skills. By specifying those analytical thinking skills in the lesson plan, Ms.Mastura found it easier to prepare her teaching content, activities, and resources appropriately. The meticulously prepared lesson plan ensured the smooth flow of the teaching-learning process. The students participated actively during this reading lesson, successfully completed the tasks given and answered teacher's questions using the analytical thinking skills. This reading lesson went on smoothly and successfully as the whole lesson was organized systematically using the lesson plan template. Thus, the study found that lesson planning is crucial for meticulous preparation and successful implementation of the lesson. Ms.Mastura was enquired on the use of this lesson plan template and recorded her statements.

Researcher: Where did you get this lesson plan format? And are you supposed to state the specific thinking skills in the lesson plan?

Pn.Mastura: "This lesson plan was created by our school's English language Panel. All EL teachers in this school must use this standardized lesson plan to prepare their lessons. In the column for integrated skills we (EL teachers) are required to state the higher-order thinking skills that will be taught in the lesson, like analytical, evaluative or synthesis. But I decided to state specifically the type of analytical thinking skills i.e. data gathering, logical reasoning, inferencing, critical and creative thinking in this lesson plan as it is easier for me to select the strategies and activities for the lesson. It also helps keep me focused on the skills to be taught in this lesson."

It is evident from this observation that the lesson plan template used by Ms.Mastura to prepare her lesson contributed to the effective and meaningful integration of the analytical thinking skills in the ESL reading class.

The study also found that analytical thinking skills can be effectively integrated through pair-work and interesting activities. Ms.Mastura introduced her topic to the class through a task designed to draw on the students' prior knowledge and experience. This activity was conducted in pairs. Students showed interest and excitement participating in pairs. Peer collaboration to complete tasks encouraged the students to think analytically to complete the given task.

For example, Ms.Mastura started the lesson by asking her students to list down the various uses of a mobile phone. Students worked in pairs and came up with numerous answers, such as "call friends, text messages, take pictures, store messages". This activity enabled Ms.Mastura to gain information on her students' prior knowledge and experience. By getting to know the students' prior knowledge and experiences, Mastura found it easier to draw her students' attention to the day's topic. Ms.Mastura explained the reason for selecting this activity as her set induction as follows,

Researcher: Why did you select a task to start this lesson instead of conducting the usual Q & A session as is usually done in the beginning of a lesson?

Ms.Mastura: Today's lesson concerns the reading of a passage on using the handphone to write a novel. The activity to identify the various uses of the handphone is directly connected to today's topic. Giving students the opportunity to do pair work encourages them to participate as well as gives them the self-confidence. I also find students prefer doing tasks in collaboration than answer oral questions individually.

Next, it was found that Ms.Mastura's usage of open-ended questions in her ESL reading class helped to stimulate the students' analytical thinking skills. For instance, she engaged her students into reading the passage on Akiko from page 21 of their textbook. The students were posed with two open-ended questions to be answered and to compare their answers with their peers. Clearly, both the questions posed at this stage of the lesson were 'thought provoking'. Questions. The questions are,

1. *"Why do you think Akiko is posting her novel in the face-book?"*
2. *and "How does the handphone help you in learning English?"*

To answer the first question the students needed to use logical reasoning skills. And to answer the second question the students had to reflect on their experiences. In other words, they need to think critically on information saved in their memories. Clearly open-ended questions enabled the students to engage effectively in analytical thinking skills.

Students cannot find answers from the text for the two questions above. Students had to rely on their prior knowledge and experiences to answer these questions and to justify their answers they had to use their logical reasoning skills. Clearly asking open-ended questions is another exercise that stimulates the students' analytical thinking skills. The effectiveness of open-ended questions to instil analytical thinking skills is further seen in the next activity.

In the next activity, Ms.Mastura directed her students to listen to an audio presentation of the passage on Akiko. Apart from promoting reading through this novel technique, Ms. Mastura posed several open-ended questions related to the passage which involved 'analysing and inferencing skills'. The open-ended questions used by Ms.Mastura are as follows:

1. *Why do you think mobile phone novels are popular among the younger generation?*
2. *Would you like to read a mobile phone novel? Why?*
3. *State three differences between a mobile phone novel and a paperback novel.*

The first question prompts the students to use their logical reasoning skills to justify their answers. The second question encouraged the students to reflect on their own experiences and knowledge. Reflection encourages critical thinking. And the third question draws the students to compare and contrast between the use of reading a paperback novel and the digitally published novel. It must be emphasised here that the thinking skills used to answer in this reading class are underpinned with analytical thinking skills.

Besides, students were happy to give answers to the teachers' questions because there were no wrong answers. Their answers were accepted by the teacher as long as they could justify their answers with logical reasoning. These questions not only encouraged reading but was also effective in integrating analytical thinking skills. Open-ended questions encourage active student participation as well as encourage them to think out of the box.

In addition, it was found that the use of the audio recording in the reading class was an effective strategy to teach reading and analytical thinking skills. Following the passage in the text-book by listening to the audio demands exquisite attention that invokes critical thinking. This activity added excitement to the students as well as improved their critical thinking via critical listening. The findings established that appropriate usage of modern technologies are equally essential in promoting reading.

In the next activity, the students were asked to work in groups to design an ultra-modern mobile phone. This activity prompted the students to think creatively using information that they gathered through the internet. Firstly, this activity enhanced the students' data gathering skills which involves analytical thinking skills. Secondly, working in groups facilitated information sharing and collaboration in completing the task. While designing an ultra-modern mobile phone enhanced the students' creativity (analytical thinking skills) collaborative learning encouraged the students to read in English as any inhibitions to use English was overcome when students worked in groups. Ms.Mastura explained her choice of activities as quoted below.

Researcher: Why did you choose audio recording for your reading class?

Ms.Mastura: Actually the audio recording for this reading lesson is given in the prescribed text-book with the CD. I found it to be interesting and different from the usual reading from the book, so I chose to use the audio recording. But, the open-ended questions related to the topic were designed by me because the questions in the text-book are closed-ended and doesn't give much room for higher order thinking skills.

Researcher: Why did you choose the task of designing an ultra-modern mobile phone as an activity in this lesson?

Ms.Mastura: First, this task of designing an ultra-modern handphone is a creative exercise which enhances analytical thinking skills. Second, completing the lesson using the analytical thinking skills taught, I feel is the best way of consolidating a lesson.

Observation of this lesson revealed that a meticulously planned lesson, use of open-ended questions, use of modern technology, collaborative learning, as well as task-

based learning are some of Ms.Mastura's best practices that can be used for the integration of analytical thinking skills such as logical reasoning, critical and creative thinking, making comparisons and gathering information in the ESL reading class.

The second observation of Ms.Mastura's teaching was conducted on Wednesday, 01/12/21 from 9am to 10.30am. This 90minutes lesson was carried out at the same Form 1 class.

The Topic was 'Free-time Activities' and the theme was 'People and Culture' as stipulated in the Malaysian Secondary school syllabus. The main language skill focussed in this lesson was 'reading' and the supplementary language skill was 'writing'. The analytical thinking skills integrated were 'examining details', 'compare and contrast' and making 'inferences' based on the given text (page 11, Student Book, Pulse 2). The objective of this lesson was to enable students to search for specific details and information from various sources on 'Urban Sports'. Ms. Mastura had prepared the lesson in detail with the use of the school's standardized lesson plan template (see Appendix M2).

Ms.Mastura used the same lesson plan template for her second lesson. As such, her lesson plan was meticulously prepared enabling a systematic organizing of the lesson and smooth flow of the teaching process.

The scrutiny of both the lesson plans of Ms.Mastura identified five features as crucial in a lesson plan specially designed to teach analytical thinking skills in the ESL reading class (see Figure 4.26)

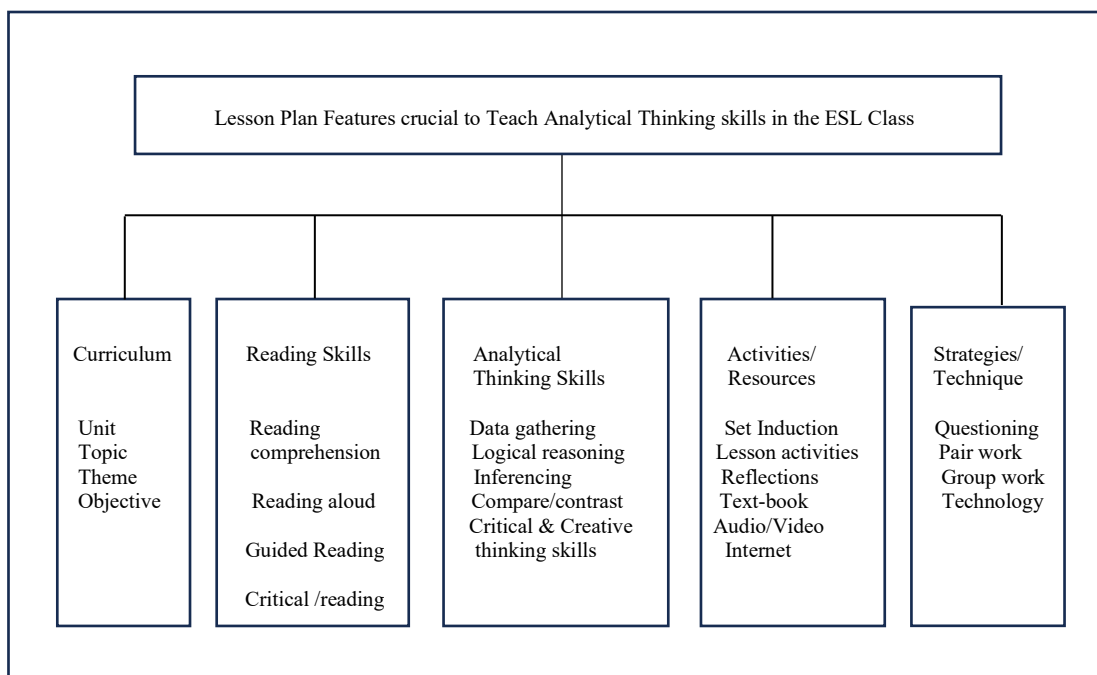


Figure 4.26: Summary of the Crucial Features to be included in a Lesson Plan for the teaching of Analytical Thinking Skills in the ESL Reading Class

The second observation, showed that class activities such as answering questions based on students' prior knowledge and experiences are effective in introducing the topic of the lesson. Ms. Mastura started this lesson by asking the students to mention names of sports that starts with the letter 'B'. Students called out several names such as, 'badminton, basketball, biking, billiards, boxing' by reflecting on their experiences in the field of sports. Reflecting on prior knowledge and experiences stimulates the students' critical thinking skills. Critical thinking skills, on the other hand, is a tool of analytical thinking skills. There was much interaction among the students during this activity. This interactive approach encouraged the students to participate actively in the lesson. Further, this activity enhanced the students' analytical thinking skills as they dug deep into the vast amount of information in their memory to select appropriate answers.

Next, Ms.Mastura asked students to source for more information from the text-book and the internet. Students were asked to list the type of sports that they liked and write

down the information they had gathered about these sports. The students were told to compare their answers with their friends. Both the activities, ‘selecting relevant information’ and ‘comparing their answers’ carries the element of analytical thinking skills. Selecting relevant information involves critical reading that enhances students’ analytical thinking skills. Ms. Mastura completed her lesson by setting the students a task to create new rules to existing sports. Creative thinking is also a part of analytical thinking skills.

Overall, the 2nd observation of Ms.Mastura’s classroom teaching showed that the lesson was effective in infusing analytical thinking skills such as reflecting on experiences, gathering appropriate information, making comparisons and thinking critically and creatively in the English reading class.

Based on the observation of Ms.Mastura’s teaching practices in both her lessons four features were identified as crucial to successfully teach analytical thinking skills in the ESL reading class (see Figure 4.27)

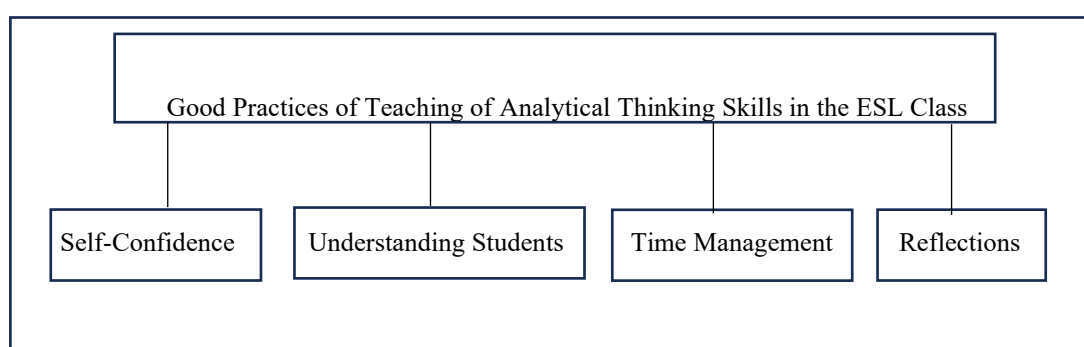


Figure 4.27: Summary of Good Practices of Teaching Analytical Teaching Skills in the ESL Reading Class

4.2.4 Ms. Norma’s Observations 1 & 2 (Qualitative Analysis)

The 1st observation of Ms. Norma’s classroom teaching was conducted by the same independent evaluator on Monday, 29/11/21 from 9.00am – 10.30am. The topic was “Cultural Awareness” and the theme of this lesson was ‘People and Culture’. The

focused language skill of this lesson was 'Reading' and the complementary skill integrated was 'Analytical Thinking Skills'. The objective of the lesson was to enable the students to read critically with 'eye' for specific details in the text as well as answer comprehension questions with logical reasoning. In addition, this lesson also aims to enable the students to analyse and identify similarities and differences between two festivals. All of the above specifications are stipulated in the Malaysian Secondary school's Form 1 English language syllabus and from the students' prescribed text 'PULSE 2'.

Ms. Norma also used a standardized template for her lesson plan which she informed was designed by her school English language Panel. Though this template is not the same as the template used by Ms. Mastura, it had many common features. Ms. Norma's lesson plan has three major sections, namely syllabus specifications, lesson implementation and Reflection. The activities were divided into Pre-lesson, Lesson Development and Post lesson (see Appendix N1).

Three analytical thinking skills, 'making comparison', logical reasoning' and 'critical and creative thinking' formed the baseline of this lesson.

Ms. Norma started her lesson by playing a video about Fringe Festival in Edinburgh from youtube (<https://youtu.be/RNY1bSAh72o>) and invited the students to discuss the details of the video-show. The students enjoyed watching the video-show but only a few students participated in the discussion. The students were then asked to read the article aloud in the text book (page 24 of Student Book – PULSE 2). Ms. Norma later explained that this activity is carried out once a week to enhance the students' reading skill with a focus on their pronunciation. Ms. Norma then played another video clip (<https://youtu.be/fnhtxe2zcjo>). This video clip was about Thaipusam in Batu Caves (an

Indian festival in Malaysia). Students were asked to identify 2 similarities and 2 differences between these two festivals (making comparisons). Students were asked to justify their answers (logical reasoning). Finally, Ms. Norma asked the students to discuss any Malaysian festival that could attract tourists to Malaysia (critical and creative thinking).

However, this lesson did not give the desired outcome. Except for a few students' the others were passive. Poor time management also affected the quality of this lesson. Ms. Norma had overlooked the time-factor of the video session. The time taken for the video session was too long that it affected students' concentration.

The quality of the questions posed in this lesson failed to instill analytical thinking skills. The questions posed did not match the objective of the lesson. For example, the lesson plan had proposed to infuse analytical thinking skills via three techniques - comparison, logical reasoning and critical and creative thinking in this reading class. However, the teachers' questions were rather general and failed to stimulate the students analytical thinking skills. Ms. Norma's questions were more inclined to lower order thinking skills as shown below.

Question 1: Have you heard about the Fringe Festival?

This question needs only a 'yes' or a 'no' answer. The students need not think deep to answer it.

Question 2: Can you see any similarities between the Edinburg's Fringe festival and Malaysia's Thaipusam?

This question also needs a 'yes' or 'no' answer, and does not create opportunity for the students to use their analytical thinking skills.

Question 3: Show two differences between the Fringe Festival and Thaipusam.

This question is a little better than the first two as it indirectly involves the students to make comparisons. Making comparisons involves analytical thinking skills.

Questions 4: Which festival attracted a bigger crowd?

Question 4 merely gets the students to recall or refer to the passage for the answer. Blooms Taxonomy places this type of questions at the knowledge level which is the lowest level of the thinking skills.

Apart from weak time management and poor quality of the questions there were other factors such as poor student attendance, students' disorientation in learning due to the unprecedented Covid-19 pandemic and the students' poor proficiency of the English language that affected the quality of this lesson which will be discussed under challenges.

The second observation of Ms. Norma's classroom teaching was conducted by the same independent evaluator on Monday, 7/12/22 from 9.00am – 10.30am. It was a "Reading Comprehension" lesson. The topic for this lesson was 'Fact or Fiction' and the theme was 'People and Culture'. The language skill focused was 'Reading' and the complementary skill integrated was 'Analytical Thinking Skills'. The objective of this lesson was to enable the students to read critically and answer logically. These specifications are stipulated from the Malaysian Secondary schools' Form I English language syllabus. All of the above information is contained in Ms. Norma's lesson plan (see Appendix N2).

Observation of this lesson showed that the teachers' questions were specific and led the students towards analytical thinking skills. The activities encouraged interaction. Students participated actively during the lessons. Teacher confidently conducted the

lesson and had full control of the class. The teacher managed the lesson-time efficiently. Overall, this lesson went on smoothly as described below.

The teacher started the lesson by inviting the students to discuss Malaysian legendary warriors (Hang Tuah and Hang Jebat). Teacher's questions (see below) were very helpful in stimulating the students' thinking.

1. *Who is more popular Hang Tuah or Hang Jebat, why?*
2. *Which is more important, 'Patriotism' or 'Truth'? Explain why?*

Students found this activity interesting and readily participated in the discussion. Students were familiar to this topic, and that could be a reason for their active participation in this discussion. Though the students' answers differed from each other, their answers had acceptable justifications. For example, students who chose Hang Tuah justified their choice by praising Hang Tuah's loyalty to the King, his obedience to the state and his willingness to suffer injustice. Conversely, students who chose Hang Jebat praised his principle to stand up against injustice and his courage to uphold truth.

Next, students were given reading-aloud task of the passage on 'King Arthur's Labryinth (page 26, Student Book, PULSE 2). Students were then shown a video on a short tour to King Arthur's Labryinth (http://youyu.be/HSmeSKf3_ts). The students then listened to the audio and answered the comprehension questions orally. The questions were successful in prompting students to think critically and creatively.

1. *Do you believe dragons existed in the olden days? Why?*
2. *Which do you prefer, the olden days' life or the modern life? Why?*

The students were then asked to listen to another audio and prepare a dialogue of their own. (STEP3, page 27, Student Book, PULSE 2). At the end of the lesson the students' analysed the similarities and differences between King Arthur's Labryinth and the Malaysian 'Kelle's Castle'. This lesson succeeded in integrating analytical thinking skills – critical and creative thinking.

Crucial Features in Ms.Norma's Lesson Plan Templates

The lesson plans prepared by the Ms.Norma were slightly different from Ms.Masrura's lesson plans. It was not as detailed as Ms.Mastura's but contained the major features found in Ms.Mastura's lesson plans. The major features highlighted in Ms.Norma's lesson plan are, curriculum, the skills focused, and Lesson Process referred to as lesson development.(see Figure 4.28)

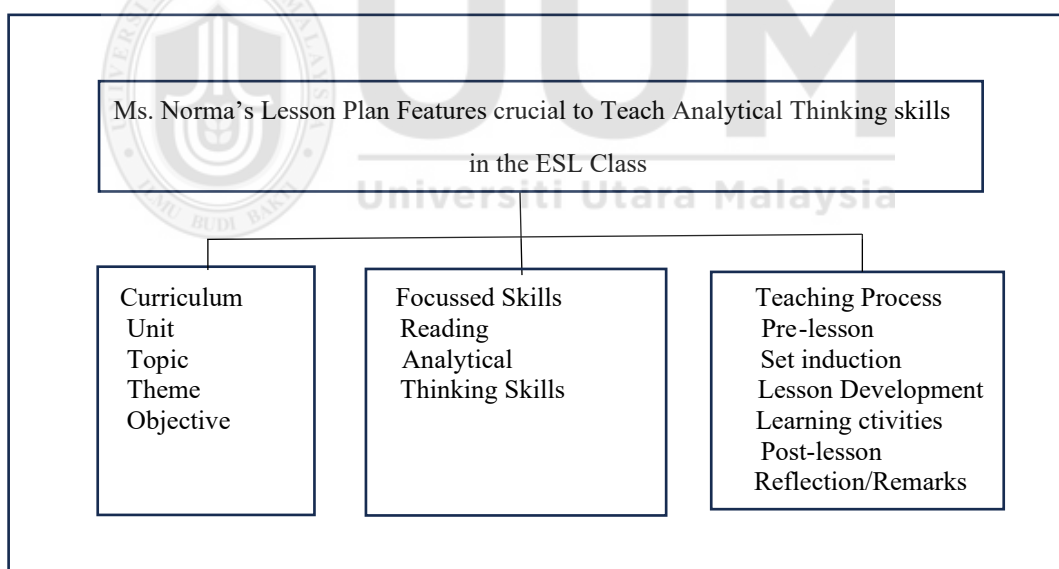


Figure 4.28: Summary of the Crucial Features included in Ms.Norma's Lesson Plan for the Teaching of Analytical Thinking Skills in the ESL Reading Class

Observation of Ms.Norma's classroom teaching showed that 'teachers self-confidence, teacher's understanding of the students' prior knowledge and experiences, time management of the lesson and reflections'(see Figure 4.29) were the crucial factors that could affect the successful implementation of a lesson. In fact in

Ms.Norma's 1st lesson, the lack in these four aspects had affected the quality of her teaching. However, her second observation showed vast improvement in these four aspects which subsequently improved her 2nd lesson. The four aspects highlighted here are the same as in Ms.Mastura's teaching practices.

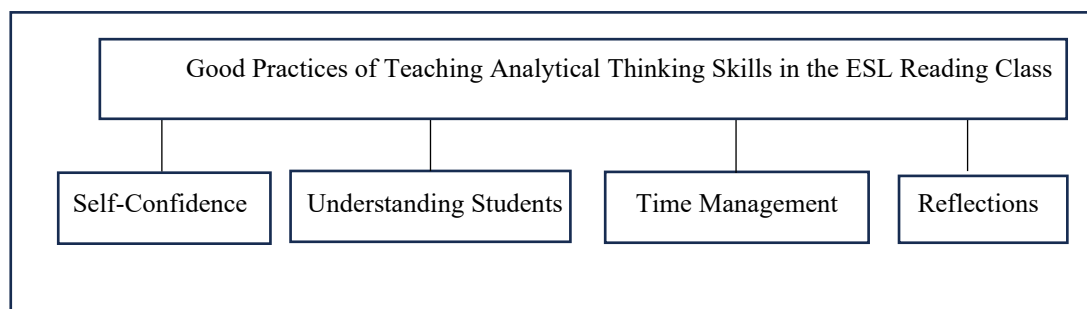


Figure 4.29: Summary of Good Practices of Teaching Analytical Teaching Skills in the ESL Reading Class

4.3. Research Questions 4 (Qualitative Analysis)

To answer research question 4, both the teachers were interviewed using the Classroom Teacher Interview Protocol (ELT-CIP) specifically designed for this research. The interview protocol had 25 questions divided under 5 headings, namely 'lesson design, lesson implementation, lesson content, classroom culture and learning outcome. The teachers' responses to the interview questions emerged thematically as, lesson planning, sourcing teaching materials, students' English language proficiency.

(i) Lesson Design

To questions on the lesson design, both the teachers informed that they used the lesson plan templates designed by their school English language panel. Researcher: How did you get this lesson plan template?

Ms. Mastura: *My school English language Panel designed it a few years ago when we were asked to include higher order thinking skills in our English lessons.*

Ms. Norma: *My school prepared this standardized format for all English language teachers to use.*

Though the lesson plans used by the two expert EL teachers were not exactly the same they had many common features. Both the lesson plans provided space to specifically state the analytical thinking skills focused in that lesson. They had designed their lessons based on the Student Book used in Malaysian secondary schools (PULSE 2). In other words, the topics and themes are already stipulated in the curriculum. However, the teachers had designed their own activities that could effectively integrate the analytical thinking skills in the ESL reading class. The use of audios and videos during a reading comprehension lesson was new but effective.

Both the teachers articulated that ‘time constraint’ and ‘selecting activities and materials to suit the students’ level of understanding and language proficiency were their biggest challenge at the lesson planning stage.

Question: What was the biggest challenge in designing these lesson plans?

Ms.Mastura: *The biggest problem in designing these lesson plans was ‘time’. Because I introduced new activities and resources not given in the textbook, it takes a lot of time to prepare and as teachers’ we have also other duties that puts a lot of constraints. Another issue is adjusting the lessons to suit the students’ level of understanding and English language proficiency.*

Ms.Norma: *We have many more work like extracurricular activities, setting test-papers, marking and sending reports to the Education departments. Preparing a detail lesson plan in between these duties is very stressful because it is very time consuming. Another challenge is getting texts appropriate to the students’ level of language proficiency.*

Clearly, time constrain and students' English language proficiency were two aspects that the teachers considered challenging at the lesson preparatory stage.

(ii) Implementation of lesson

When implementing the lessons, both teachers informed that while they taught the topic and theme stipulated in the curriculum but took their own initiative to focus on analytical thinking skills in the reading comprehension lessons. The analytical thinking skills commonly integrated in both of their reading classes were logical reason, analyzing and inferencing, critical and creative thinking, and making comparisons.

Ms Mastura's lessons promoted critical reading by focusing on details in the given text, her activities emphasized collaborative learning and creativity. Meanwhile Ms Norma's lessons which also promoted focusing on details in the given text, her activities were more towards analytical skills such as 'compare and contrast'. Both teachers expressed that their students enjoyed their English lessons especially when audios and videos were used.

However, there were aspects during the lesson implementation stage that posed challenges as articulated by the teachers.

Researcher : *What was your biggest challenge when teaching analytical thinking skills in the ESL reading class?*

Ms.Mastura: *The students' poor English language proficiency was my biggest problem when teaching analytical thinking skills. I had to explain some of the words and terms in their mother tongue (Bahasa Malaysia) for them to understand my instruction.*

Ms.Norma: *The students' can understand my instruction in English but unable to respond in English. They had weak command of the English language which hindered their learning of language skills and analytical skills.*

The study found the students' low proficiency in the English language as a major challenge to both the expert ESL teachers. Teaching a complex concept such as the analytical thinking skills in the English language to students who lack the vocabulary and grammar in that language is surely an uphill task for the teachers.

(iii) Lesson Content

The Syllabi for the different subjects at different levels of the school system for Malaysian schools are decided by Malaysia's Ministry of Education. In addition, a prescribed text-book for the different levels of schools with stipulates the curriculum units with topics and skills are provided by the government which common to all Malaysian secondary schools. However, the freedom to translate the curriculum into lessons (content and activities) is vested upon the teachers in schools. It is this freedom that brings about different levels of achievements from different teachers while teaching the same topics.

On the premise of discussing lesson contents of their lessons, both teachers expressed that teaching of analytical thinking skills is stipulated in their syllabus. More importantly, both Ms. Mastura and Ms. Norma expressed that analytical thinking skills can be effectively taught in critical reading and reading comprehension activities. However, both these two teachers felt unhappy that there were no guidelines or frameworks for the integration of analytical thinking skills

Researcher: *What led you to include analytical thinking skills in this lesson?*

Ms. Mastura: *Well, the teaching of higher order thinking skills is stipulated in the syllabus, and the government has emphasized teaching of higher order thinking skills to prepare Malaysian students to negotiate successfully in the real world.*

Ms. Norma: *The teaching of higher order thinking skills is compulsory as per the Form 1 English language syllabus. Teachers must include higher order thinking skills in the English language class whether they like it or not.*

Next, it was found that interpreting the curriculum in their ESL class as activities, strategies and techniques to match the levels of understanding of the students to be crucial at the lesson content stage. Besides that, the absence of any guidelines or frameworks to integrate analytical thinking skills in the ESL reading class is seen as an added problem. The excerpts of the interview gives a clear picture of the issues in teaching the lesson content in the ESL class.

Researcher: *Do you have any guidelines to choose a specific analytical thinking skills to integrate in the ESL reading class?*

Ms. Mastura: *So far, we have no guidelines to teach analytical thinking skills or any other higher order thinking skills in the ESL class. I use my own strategies and techniques based on my knowledge of the higher order thinking skills.*

Ms. Norma: *No, there isn't any guidelines or frameworks for us (EL Teachers) to use as samples to incorporate analytical thinking skills in the English class. If the Curriculum Development Centre (CDC) under the Malaysian Ministry of Education can come up with such frameworks, teachers' life will be easier.*

Researcher: *Have you ever made changes to the prescribed lesson content. Explain why?*

Ms. Mastura: *Yes, I have very often made changes to the prescribed lesson content. Firstly, the curriculum unit such as topics and themes are unchangeable. But we the teachers are free to use other contents (texts, audios or videos) to teach the stipulated topics, themes and skills. I change the content suggested in the textbook to introduce more local based information which Malaysian students are familiar with. For instance, discussing the Thaipusam (a popular Indian festival in Malaysia) is easier for the students to discuss compared to the Fringe Festival.*

Ms. Norma: *Students understand contents with which they are familiar with rather than some foreign content. So, I change the contents given in the textbook to texts that I find my students are familiar with.*

Both the expert EL teachers also articulated that they modified the lessons because questions in the student book do not probe the students' thinking. For example, the passage titled "The Story of the Mobile Phone Novel" in the Student Book (PULSE 2, pg 21) which was taught by Ms. Mastura carries weak questions such as

1. Was 'Dreams come true' about true experiences?
2. Did readers like "Dreams come True"?

Both these questions are close-ended and needs only "Yes" or "No" answers. In contrast, Ms.Mastura's self-designed questions for the same passage were more thought provoking. For example, 'How much time do you spend doing this activity (using the mobile phone) and how does it benefit you?' demands the students to reflect on their experiences which involves critical thinking.

Similarly, Ms.Norma's lesson 2 which is based on Student book (PULSE 2, pg 26) on the article titled 'A Visit to King Arthur's Labyrinth carries the following questions:-

1. When is the boy going to visit King Arthur's Labryinth?
2. Who is he going with?

Both these questions are slightly better than the 'Yes/No' type questions mentioned earlier, but they are still too simple as these questions merely demands the students to retrieve information from the passage which does not need the students to think deeper. On the other hand, Ms. Normas's self-designed questions for this passage were found to be engaging the students to think at a higher level. The questions have two parts.

The first part of the question may seem simple but it is followed with another question that needs the students to dig deeper into their thought. For instance,

1. Do you believe dragons existed in the olden days – Why?
2. Which do you prefer, (living in the) olden days or the modern days – Why?

Both the expert EL teachers also informed that sourcing for materials and teaching aids in support of the lesson content is another challenge for them.

Researcher: *What is the biggest challenge when integrating the analytical thinking skills in the lesson content?*

Ms.Mastura: *As far as lesson content is concerned, selecting appropriate materials relevant to the units stipulated in the syllabus is a tedious job. Firstly, we have to spend a lot of time searching for the materials that students are familiar with. Next, we must ensure that the materials selected match the students' level of understanding and English proficiency. Finally, we don't have any guidelines, frameworks or templates to assist us in interpreting the curriculum.*

Ms. Norma: *Selecting the right materials to fit the students' English language proficiency and level of thinking is very challenging especially with so many other duties to do. We are hard pressed for time. Next, till today, there has not been any guidelines or framework to assist the teachers.*

Once again time constraint and students' poor proficiency in English emerged as major challenges for ESL teachers when integrating analytical thinking skills in the ESL reading class.

(iv) Classroom Culture

Both the teachers expressed that the students in their respective classes were friendly to each other as they come from the same or close surroundings. They have been taught to respect each other especially when they are giving different opinions on issues. They maintain collegial relationships with each other. Both the teachers told that their

students are obedient but passive. The teachers expressed satisfaction that the climate in the classroom was conducive to learning.

Excerpts of the interview show clearly the classroom culture of both the schools.

Researcher: Describe the students' interaction among themselves.

Ms.Mastura: Interaction among the students is excellent. They show trust and mutual respect to each other.

Ms.Norma: The students come from the same vicinity, so they know each other from homes. They enjoy learning together in the class.

Researcher: Describe the students' relationship with you.

Ms. Mastura: I have very good relationship with them. I know them all by their names. I even know their parents and that makes teaching them very much easier.

Ms.Norma: I find no difficulty in communicating with my students. They follow my instructions obediently and cause no disruptions.

Researcher: Describe the students' participations during the lessons.

Ms.Mastura: My students' are usually passive during the ESL class. In my opinion, their low level of English proficiency is the main reason for this.

Ms.Norma: I find that the students can understand when I speak to them in English, but find difficulty to reciprocate in English, simply because of their lack in English language proficiency.

Researcher: Describe the students' teamwork when completing projects in the ESL reading class.

Ms.Mastura: Actually my students enjoy the teamwork the most. They like the freedom, and are happy to work with their peers.

Ms.Norma: *The students prefer groupwork to individual assignments. They feel less stressed when they work as a team.*

Researcher: What is the biggest challenge you encountered in maintaining a conducive classroom cultures when teaching analytical thinking skills in the ESL reading class?

Ms.Mastura: *I don't find any problem in maintaining a conducive classroom culture in my class because in rural schools in our country classes have a conducive atmosphere for learning.*

Ms.Norma: *Basically the classroom culture in my school does not pose any challenge to me except that students are passive during English lessons.*

Apart from the physical conditions of a class, 'opportunities to interact, space for students to give opinions as well as respect opinions of others and collegial relationships among classmates are crucial elements of a conducive learning environment. Studies have shown (Ogedi & Obionu, 2017; Mupa & Chinooneka, 2017) have established that unconducive classroom environment affects effective teaching and learning. However, this study found that classroom culture/environment was not a stumbling block for teaching in these two schools unlike in some other schools.

(v) Learning Outcomes

Learning outcome is the objective that the teacher expects to achieve at the end of the lesson. It is usually evaluated through assignments and assessments of the students during the lesson. Failure to achieve the learning outcome would mean failure of the teaching and learning process. And such a failure could be caused by many factors. The two expert EL teachers were interviewed to seek information on the learning outcome of their lesson and to investigate what factors enhanced or hindered the achievement of the learning outcome.

Ms. Mastura from SMK C expressed satisfaction on both her lessons. She felt that the students' performances in the group activities and team projects were impressive. However, the students oral and written responses were dismal due to their poor English language proficiency. Similarly, Ms. Norma also expressed that the achievement of learning outcomes in her lessons were unsatisfactory due to the students' pure command of the English language.

The two teachers' responses give a clear picture of how they assessed their learning outcome and what hindered its achievement.

Researcher: Do you think you achieved the learning outcome set for these two lessons?

Ms. Mastura: I know that my students participated well in the activities especially the groupwork and the task-based activities. But I must say, I am disappointed to see them unable to give responses both in the oral and written form. Once again it is due to their poor command of the English language.

Ms. Norma: My students understood the concepts of analytical thinking skills, and I am sure they can use these skills in other disciplines using Bahasa Malaysia. But the projected learning outcome of the lesson is to use the analytical thinking skills in the ESL reading class which unfortunately was not fully achieved. I would say, with a better proficiency level they could have achieved that.

Researcher: How did you assess the learning outcome of these lessons?

Ms. Mastura: From the students' oral and written performances during the reading comprehension activity.

Ms. Norma: From the students answers to the comprehension questions both orally and in written form.

Researcher: What was the biggest challenge that you encountered in trying to achieve the projected learning outcome of these lessons?

Ms.Mastura: *Of course, the students' poor English language proficiency. More reading lessons should be conducted for them so that they can improve their English language proficiency.*

Ms. Norma: *Naturally, it was the students' poor English proficiency that affected the achievement of the desired leaning outcome. Extensive reading in English is the only answer for the students to grasp a better command of English.*

4.4 Discussion of Key Findings

Clearly, observations of both these two expert teachers helped to identify some of the effective practices that were used to teach analytical thinking skills in the ESL reading class. The observations showed both the strengths and weaknesses in the teaching process.

The analysis of the expert EL teachers' observations emerged thematically as 'lesson planning, questioning techniques (inquiry learning), group activities (cooperative and collaborative learning) and task-based learning (see Figure 4.30).

Among the themes, Lesson planning is a pre-lesson activity. It helps the teacher to familiarize with the requirements of the syllabus and to translate the curriculum appropriately and accurately in the classroom. Aspects such as, Curriculum Unit, Topic, Theme, Main skills and Integrated skills are crucial aspects in a lesson that the teacher needs to understand to implement the lesson systematically.

Next, questioning technique emerged as an important theme in this study. Questions when appropriately used help to foster analytical thinking skills. However, there are specifications that need to be observed to use questions effectively to stimulate students' thinking skills. For instance, questions need to be open-ended. Open-ended

questions were found to encourage students to explore different perspectives, justify their reasoning, and apply their knowledge to solve problems. Question tags such as 'why', 'what if', 'how', 'compare', 'contrast', 'explain' and 'justify' requires more than the 'yes, or 'no' responses. In this situation, the students need to explain, elaborate or justify their answers which compel analytical thinking skills such as critical and creative thinking.

Task-based learning is the next theme that emerged in this study. Task-based learning is an approach where the students interact to complete a task. This approach is student-centred, and gives freedom to students to manage their learning by themselves. More importantly, task-based learning is effective in promoting critical thinking which is an analytical thinking skill. (Zhou, Huang & Tian, 2013).

Similarly, group-work is the other theme identified in this study as the expert EL teachers' best practices. Group-work is an effective method that motivates student participation. It develops stronger communication among the students and emphasizes teamwork and sharing responsibilities. The benefits of group work are two folds. While it helps to create a conducive classroom culture, it is equally important in developing students analytical thinking skills such as critical thinking, problem solving and decision making. Collaborative learning and cooperative learning are two learning strategies embedded in Group work. While collaborative learning involves group participation and collective problem solving, cooperative learning involves dividing the tasks among groups to achieve a common goal. Nevertheless, both these strategies were found to effectively enhance the integration of analytical thinking skills in the ESL reading class.

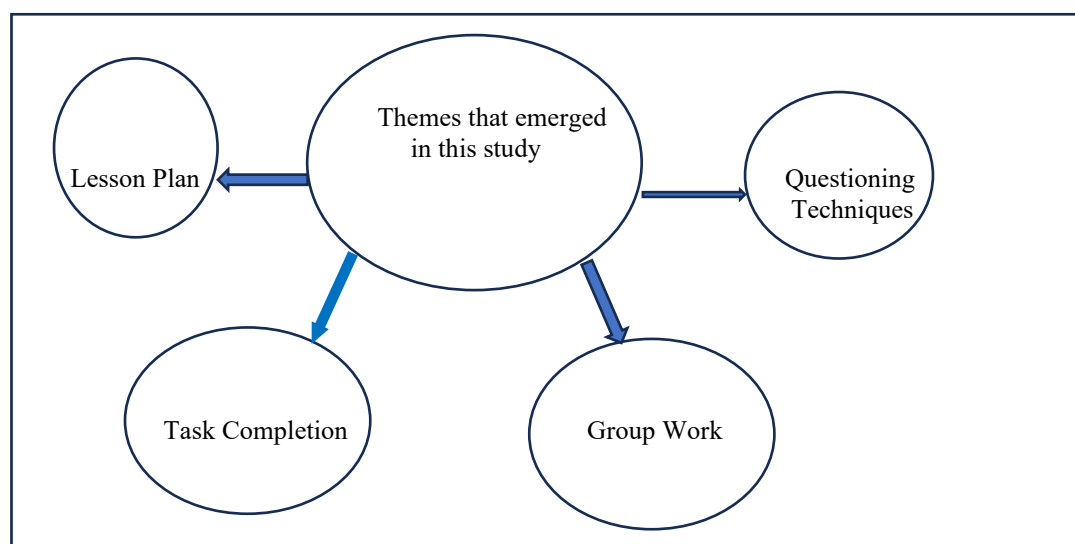


Figure 4.30: Themes from the Observations of the Expert EL Teachers' Classroom Teaching

Meanwhile, the post-observation interviews conducted with the expert EL teachers helped to identify four main challenges encountered by them. Both the teachers were critical in their reflection of their classroom teaching and had answered the questions posed to them honestly.

Both Ms. Mastura and Ms. Norma said that most of their students from the respective schools were of average abilities but had poor proficiency in the English language to follow the lessons. The expert teachers expressed that more reading lessons would help improve their English language proficiency that will help in integrating analytical thinking skills.

Next, the teachers expressed that getting relevant materials from other sources apart from the school text was very challenging and time consuming. These teachers had utilised activities other than those suggested in the textbooks to match the students' level of understanding and their English proficiency level.

Besides that, both the teachers expressed that preparing thought-provoking questions as another challenge because questions in the text books were closed-ended and did

not give students the space to view answers from different perspectives. Comprehension questions in the textbooks require ‘Yes/No’ answers or have questions which involves lower order thinking skills such as knowledge or understanding (Blooms’ Taxonomy, 1956).

The expert EL teachers’ responses to the interview questions emerged thematically as

- designing the lesson
- sourcing for relevant materials
- designing thought provoking questions
- students’ poor proficiency level

These four challenges need to be addressed to successfully create a framework of guidelines to integrate analytical thinking skills in the ESL reading class.

4.5 Summary

This chapter presented the analysis techniques, findings and discussion of the findings using quantitative analysis (applying descriptive statistics) of the data collected via the questionnaire to investigate teacher knowledge, teacher perception and teacher practices of the EL teachers. In addition, the results of the coefficient correlation tests are presented establishing significant relationships between teacher knowledge and teacher practices (0.05 level) and between teacher perception and teacher practices (0.01 level). Meanwhile, qualitative analysis of the classroom observation and the expert teachers’ responses to the interviews using thematic analysis are presented. Finally, the findings of the exploration of the expert teachers’ classroom practices and the challenges they encountered are presented to arrive at meaningful answers to the third and fourth research questions. The next chapter discusses the implications, recommendations and conclusions of this study.

CHAPTER FIVE

IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This chapter gives an overview of the whole study (see Figure 5.1). The discussions include the contribution of this study to the existing knowledge on integrating analytical thinking skills in the ESL reading class. Further the implications of this study and recommendations are brought to the attention of relevant stakeholders – the policy makers, the curriculum designers, publishers, school administrators, teachers and students. Subsequently, this chapter proposes a framework of guidelines for the effective integration of analytical thinking skills in the ESL reading class. Finally, this chapter concludes by highlighting the limitations of this study and suggests proposals for future studies.

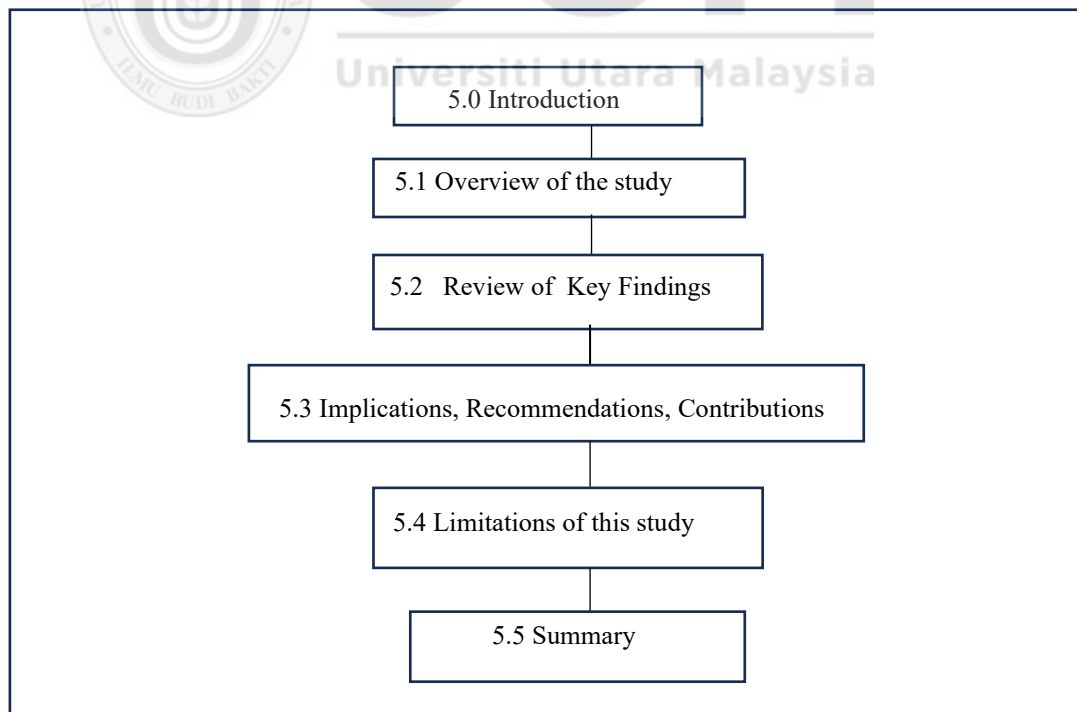


Figure 5.1: The Organisation of Chapter Five

5.1 Overview of the Study

This study was conducted to investigate the EL teachers' knowledge, perceptions and their teaching practices in relation to the integration of analytical thinking skills in the ESL reading class in Malaysian secondary schools. The study also intended to examine the existence of coefficient correlation of teacher knowledge and teacher perceptions to teacher practices. Finally, the study intended to explore the EL teachers' classroom practices of integrating analytical thinking skills in the ESL reading class and the challenges that the EL teachers encountered in that process.

It has been reported that Malaysian student' proficiency in the English language and in analytical thinking skills to be dismal (Malaysia Educational Blueprint, 2013). Rusli, Yunus and Hashim (2018) emphasized that the inadequacy of the Malaysian EL teachers as a major cause for this situation. Nawal (2018) states that Malaysian EL teachers 'struggle to teach higher order thinking skills in their class'. In that vein, EL teachers have to be equipped with new strategies and techniques founded on empirical research, specifically to integrate analytical thinking skills in the ESL reading class.

Besides, a review of previous studies (Rajendran, 2004; Rosmawati, 2009) has shown that research on the teaching of higher order thinking skills has been superficial and had not examined the different levels of higher order thinking skills (analyse, synthesise and evaluate) separately as structured in Bloom's Taxonomy (1956). The dearth in research on the teaching of analytical thinking skills in the ESL reading class compelled this research.

Finally, there has not been any empirical study so far that had proposed models or frameworks of guidelines to EL teachers to use as scaffolding to teach analytical

thinking skills in the ESL reading class. This current study is an effort to fill these gaps.

The research fundamentally concerns analytical thinking skills proposed in Bloom's taxonomy. As such, central in the theoretical framework of this study is Bloom's Taxonomy (1956). In addition, four notable learning theories underpin the theoretical framework as presented in Chapter Two.

Bloom's taxonomy (1956) separates the cognitive level of learning into six components. While, 'Knowledge, Comprehension and Application' are considered as the lower order of thinking, 'Analysis, Synthesis and Evaluation' are considered as the higher order of thinking. This study predominantly involves the 'analysis component' referred as 'analytical thinking skills.'

Skinner's Operant Conditioning Theory (1938) states that children's learning is enhanced when they experience positive consequences. On that vein, positive reinforcement by the respondents in this study during their classroom teaching will be an aspect of focus in this research.

Bandura's Social Cognitive Theory (1986) emphasizes the importance of social context and cognitive context for effective learning. 'Learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment and behaviour, and a cognitive context that considers past experiences that shape engagement in behaviour' (La Morte, 2019). The current study will examine the social interaction among the students in the ESL class and the respondents' effort in getting the students to recall their past experiences.

Vygotsky's Sociocultural Theory (1978) views learning as a socially mediated process. It stresses the role of social interaction with a more knowledgeable person or

group in the development of a person. (Zone of Proximal Development). Community plays a central role in the process of ‘meaning making’. The current study also includes investigation of the respondents’ efforts in creating a conducive social cognitive context in their ESL reading class.

Lastly, Piaget’s Theory (1936) places human cognitive development into four stages,

- Sensorimotor stage: Birth to 2 years
- Preoperational stage: Ages 2 – 7
- Concrete operational stage: Ages 7 – 11
- Formal operational stage: Ages 12 onwards

Piaget states that children’s higher order thinking skills begin in the Concrete Operational Stage and gradually progresses to the Formal Operational Stage. Yeomans (2023) describes cognitive thinking skills as the mental process that allow us to perceive, understand and analyse information. Piaget’s work on cognitive development includes “logic”, “Reasoning and Judgement” and “Constructivism” (Main, 2021). Piaget’s works on cognitive processes helps teachers to identify what to teach and at which stage to teach. On that basis, Piaget’s Theory has been included in the Theoretical Framework of this study.

Based on the problem statement and the literature review in Chapter One and Two, this study pursued the following objectives:

1. To identify the EL teachers’ understanding of analytical thinking skills in terms of its concept, process and activities.
2. To examine the EL teachers’ perceptions towards the integration of analytical thinking skills in the reading class.

3. To explore the EL teachers' classroom practices in integrating the analytical thinking skills in the reading class.
4. To explore the challenges that the EL teachers encounter when teaching analytical thinking skills in the reading class.
5. To determine the extent of correlation between teacher knowledge and teacher practices.
6. To determine the extent of correlation between teacher perception and teacher practices.

Taking into consideration the research objectives and arguments presented in Chapters One and Two, a conceptual framework was formulated involving teacher knowledge and teacher perception as independent variable and teacher practices as dependent variable and presented in Chapter Two.

A mixed method research design was employed to evaluate the Conceptual Framework of this study. For that purpose, data was collected using both quantitative and qualitative methods. A survey questionnaire adapted and adopted from Horizon Research, (2003) was used to gather quantitative data from 132 EL teachers. Quantitative data was analysed using descriptive statistics – frequencies, percentages and coefficient correlation. Meanwhile qualitative data was collected via classroom observations of two expert EL teacher and post-observation interviews of them using the English Language Teachers' Classroom Observation Protocol (ELT-COP) and a Classroom Interview Protocol (C-TIP) both adapted and adopted from Horizon Research (2003). Thematic analysis was used to analyse the qualitative data.

All three research instruments used in this study was reviewed by three experts. Reliability of the research instruments was calculated using Inter-Rater Reliability test and determined using Cronbach Alpha. The Cronbach alpha for the survey questionnaire was 0.93, for the Classroom Observation Protocol was 0.78 and lastly

the alpha for Classroom Interview Protocol was 0.86. All the three research instruments' content validity was calculated using Lawshe's Content Validity Ratio (CVR). The CVR for all three research instruments was found to be at 0.99 using appropriate statistical analysis. Construct validity and Criterion Validity was calculated using the experts' remarks and indicators on the expert review forms. In addition, the questionnaire was pilot tested among 35 EL teachers from three Malaysian secondary schools in Kedah to establish credibility of the research instruments. Based on the feedback from the EL teachers, changes were made to some of the wordings in the questionnaire for better understanding of the EL teachers, for example 'analytic skills' was changed to 'Analytical Thinking Skills'.

A sample of 132 EL teachers from 10 Malaysian secondary schools in the state of Kedah participated in the survey. In addition, two expert EL teachers from two different schools were observed and interviewed. Main findings of this study and discussions are revised in the following section.

5.2 Review of Key Findings

This study was conducted on 132 EL teachers from 10 national secondary schools in the state of Kedah. The study determined the EL teachers' knowledge level of analytical thinking skills in relation to its concept, process and its activities. From the sample of 132 EL teachers, 78.8% were found to have an excellent level of knowledge of analytical thinking skills, 18.9% had a good level of knowledge and 2.3% had an average level of knowledge. The study found the EL teachers' perception towards the integration of analytical skills in the ESL reading class in relation to their beliefs and disposition to be very encouraging with 99.2 % (131 participants) having positive perception and 0.8% (1 participant) having negative perception. The study established

significant correlation between teacher knowledge and teacher practices at 0.05 level and between teacher perception and teacher practices at 0.01 level.

Meanwhile, from the classroom observation of the two expert EL teachers on 5 important features, i.e., lesson design, lesson implementation, lesson content, classroom culture and learning outcome which were quantitatively analysed, it was found that both expert EL teachers had attained good scores showing a high level of competency in lesson designing, lesson implementation and lesson content. However, their scores for classroom culture and learning outcome were below satisfactory.

The qualitative analysis of the researcher's observation of both the expert EL teachers' classroom teaching emerged thematically as 'lesson planning, questioning techniques (inquiry learning), group activities (cooperative and collaborative learning) and task-based learning. Lastly, the two expert EL teachers' responses to the interview questions on challenges encountered by them when integrating analytical thinking skills emerged thematically as (i) designing the lesson, (ii) sourcing for relevant materials (iii) designing thought provoking questions and (iv) students' poor proficiency level.

Research Question one had focused on the level of analytical thinking skills knowledge of the EL teachers to integrate it in the ESL reading class. The EL teachers' level of analytical thinking skills knowledge was determined based on their performances in the knowledge test in the questionnaire. The study showed that 104 respondents (78.78%) scored either 9 to 10 marks indicating excellent level of knowledge, 25 respondents (18.93%) scored between 7 to 8 marks showing a 'good' level of knowledge in analytical thinking skills, and 3 participants (2.27%) had 5 to 6 marks showing an average level of knowledge of analytical thinking skills. Further,

the EL teachers' performances in the different aspects of analytical thinking skills knowledge in the test showed that 90.6% of the EL teachers gave correct answers to the concept of analytical thinking skills, 75% gave correct answers to questions on analytical thinking skills process and 80% of the teachers answered the activity aspect of analytical thinking skills correctly. The findings of this study suggest that the present cadre of English language teachers have acquired adequate knowledge of higher order thinking skills/analytical skills and are capable of integrating analytical thinking skills successfully in their ESL reading class. This could be due to the fact that EL teachers had attended in-service courses periodically on higher order thinking skills under the 'Continuous Professional Development' (CPD) programme.

Excerpts of the expert EL teachers' interviews:

Ms. Mastura: I have attended in-service course (6 weeks') on higher order thinking skills organized by the Kedah State Education department in 2019. We got enough notes on the concepts and processes of higher order thinking skills.

Ms. Norma: English Teachers were given special in-service courses on higher order thinking skills organised by JPN Kedah (Kedah State Education Department) sometime in 2019. It was week-end courses for six weeks under CPD (Continuous Professional Development) programmes which provided us with a lot of information on higher order thinking skills.

Research Question Two investigated the perception of the EL teachers towards the integration of analytical thinking skills in the ESL reading class.

All the 132 participants' responses to the 'perception' section of the ASKP Questionnaire showed that they perceived that analytical thinking skills is not exclusive for Mathematics and Science subjects only, but is also relevant for language learning.

Participant 1: I don't think HOTS is only for Science and Maths. I believe it is equally relevant in English classes too.

Participants 2: We can teach analytical thinking skills in the language classroom, too.

Participant 3: We sure can use analytical thinking skills in the English classes especially in the reading comprehension lesson.

Their responses also showed that they did not perceive teaching analytical skills as a burden. The participants also indicated that they have been integrating analytical thinking skills in their reading comprehension lesson for a long time.

Participant 1: We don't find teaching analytical thinking skills in our class a burden because we have been already doing this for some time.

Participants 2: I don't look at it as a burden. Maybe in the beginning it was but now I am very used to it.

Participant 3: No, I don't see any problem. In fact, I have been teaching higher order thinking skills in the reading comprehension lesson all the while.

Research Question Three is posed to explore and identify the two expert teachers' best practices with the aim of creating a framework of guidelines that other teachers can utilize in their teaching. Both these teachers were specially selected based on their credentials as expert EL teachers as well as their excellent performances in the Analytical Skills Knowledge and Perception questionnaire. In that connection, four major themes emerged namely, (i) lesson plan; (ii) questioning techniques (iii) group activities, and (iv) task completion.

Lesson Plan

The participants' responses in the post observation interview, highlights the importance of the lesson plan as well as the importance these teachers give for the use of the lesson plans.

Question: Did you plan this lesson essentially as it was organized in the Student Book or did you modify it in important ways?

Mastura: I modified the lesson because activities and questions in the Student Book is rather simple. In my lesson plan, I include new materials and learning activities from other sources for my reference.

Norma: I use the lesson plan to modify my lesson specially to cater for the inclusion of analytical thinking skills. The lesson plan is very helpful for preparing and make (making) changes to suit my students' level of understanding.

This shows that both the expert teachers have used their school lesson plan templates to design their lessons. Besides the Student book, materials from other sources such as the internet and you-tube were used in their teaching. Learning activities and assessments/questions were also self-designed by these two teachers. The lesson plan template was used to record all these information. As such, the lesson plan is seen as an effective document of reference by the teachers.

Questioning Techniques

The next theme that emerged from the qualitative analysis of the data was 'questioning technique'. The lesson plans showed that both the expert teachers used self-designed open-ended questions extensively throughout their lessons. Moreover, the teachers

also articulated that one of the main reasons that they modified their lessons was because questions posed in the prescribed textbook are rather simple and close-ended.

Ms. Mastura: The textbook questions are too simple and students don't have to think deep to answer them. So, I designed my own questions that probes my students to think critically and creatively and use their logical reasoning.

Ms. Norma: I always come up with my own questions which are unlike the textbook questions which are closed-ended. Open-ended questions provide space for the students to think from different perspectives and supports creativity.

Both the teachers opted for open-ended questions during their lessons, thus giving the students space to think and analyse. The teachers opined that open-ended questions allowed their students to indulge in analytical thinking skills. The expert teachers had also expressed that they accepted their students' answers as long as the students can justify their answers.

Ms. Mastura: I, very often asked my students' to elaborate on their answers. This makes my students to look for more information or details related to the question, for example,. 'Elaborate why you think Akiko prefers to write a digital novel rather than a paper?'

Ms. Norma: I used questions that demands students to justify their answers. For example, in my lesson on Hang Tuah and Hang Jebat, I asked my students "Which is more important, 'Patriotism or Righteousness'? Explain why"

Clearly, the two expert EL teachers practiced questions that emphasized in-depth thinking i.e. thinking analytically. Both the expert EL teachers' usage of question tags such, 'Why, How, Elaborate and Explain' prompted students to think at a higher level.

They have to dig deep into their prior knowledge and experiences to answer such probing questions.

‘Questioning Techniques’ certainly deserves to be placed as one of the guidelines to enhance the teaching of analytical skills in the English lesson.

Group Work

Group work is another prominent theme that emerged from the analysis of the qualitative data. It was found that both the expert teachers had modelled their lessons rich with activities that encouraged group work.

For instance, Ms. Mastura’s 1st and 2nd lessons conducted on 24/11/21 and 1/12/21 respectively, started her pre-lesson activity by getting the students to discuss in pairs, the lesson topics, namely (i) uses of mobile phone and (ii) sports and their features. Next, her lesson proper contained three activities (i) discussion of the text read (ii) answer comprehension questions based on the text and (iii) to compare and defend their answers. All three activities were conducted in groups of four and then presented to the whole class. Students participated actively in these activities. Similarly, Ms. Norma’s 2nd lesson, conducted on 7/12/21, divided the students into groups of four and gave them a topic on local legends ‘Hang Tuah and Hang Jebat’ to discuss and come up with points for and against these legends. Clearly, group work dominated both their lessons and contributed to its success.

Surely, working in groups makes learning meaningful. It provides students the opportunity to compare, share and scrutinise their answers with other students in the group. Vygotsky’s Socio-cultural learning strongly advocates group work in learning. Students are not inhibited when discussing with their peers. In addition, the weaker students can learn from the smarter ones.

Task Completion (Task-based learning)

The fourth and final theme that emerged from the qualitative data obtained in this study is 'Task Completion'. It was found that both the expert EL teachers had closed their lessons with a task to be completed. For instance, after conducting reading of the passage titled "The story of the Mobile Phone Novel" in her 1st lesson Ms.Mastura gave her students the task of designing an ultra-modern mobile phone. This task invoked the students' creativity.

Similarly, Ms.Norma closed her lesson by giving the students a task of identifying similarities and differences between King Arthur's Labryinth and Malaysia's Kellie's Castle. This task was done in groups of four. The students had to read critically the passage on King Arthur's Labryinth to complete this task. This task invoked critical reading and analytical thinking skills in the students during their discussion in completing the task.

The efficacy of task-based learning in strengthening the students' English language skills and the students' analytical thinking skills promotes this aspect to be given serious consideration when integrating the analytical thinking skills in the ESL reading class.

Research Question Four identified the major challenges encountered by the expert EL teachers when integrating analytical thinking skills in the ESL reading class. Answer to this question is derived from the two expert EL teachers' responses to the post-classroom observation interviews. Both the respondents have unequivocally expressed that sourcing for appropriate teaching materials for their lessons was one of their biggest challenges. They articulated that the prescribed textbook is inadequate. Both

the expert teachers opined that materials given in the prescribed textbook were insufficient to effectively teach analytical thinking skills.

Excerpts of the expert EL teachers' interview:

Ms.Mastura: I like the Student Book because it gives me the general idea of the unit to be taught but the problem is the activities and questions are too simple and are not so useful to promote the (analytical) thinking skills, So I have to spend a lot of time searching for materials from other sources like commercial workbooks and the internet.

Ms.Norma: The textbooks have limited contents and materials to teach analytical thinking skills in the reading class. We need more reading passages and more thought-provoking activities in the textbook. Currently, we are always spending a lot of time in searching for materials and activities in the internet.

The expert EL teachers also expressed that the comprehension questions given in the textbook were generally close-ended which limit the students' thinking at the lower level - knowledge and understanding. The teachers had to design their own questions that can invoke the students critical, creative and logical thinking. The expert teachers expressed that designing open-ended questions, that can probe students' higher order thinking skills, pose serious challenge to them. A lot of time and thinking has to be allocated to design quality questions to teach analytical thinking skills.

Ms.Mastura: We have many other duties in school like setting and marking exam papers, carrying out extra-curricular activities, attend meetings and prepare reports, on top of sitting and preparing quality questions is very stressful. Activities and higher order thinking questions should be readily available in the Teachers' Handbook.

Ms. Norma: Designing questions than can instill analytical thinking skills in the students' mind is time consuming and the toughest part of teaching analytical thinking skills in my reading lesson.

The teachers also indicated that preparing their lessons as an equally challenging part of teaching analytical thinking skills in the ESL class. The teachers expressed that they need to take into account their students' level of understanding and the students' English language proficiency before they can design an effective lesson. The teachers' informed that the suggested activities and lesson content in the textbook for ESL teaching do not explicitly state analytical thinking skills. Designing an appropriate and effective lesson plan to fit the students' level of English language proficiency and cognitive ability poses a serious challenge to the EL teachers.

Ms. Mastura: My greatest challenge is preparing the lessons to fit my students' level of English proficiency and thinking. I also have to modify my lesson plans to include the analytical thinking skills into the reading comprehension lessons as the textbooks do not explicitly suggest what analytical thinking skills to be included.

Ms. Norma: My biggest challenge in teaching analytical skills is lesson preparation. I have to design my own questions that can probe students to think analytically. I have to come up with my own activities to suit my students (English) proficiency and level of thinking. This is very demanding and stressful.

In the same vein, both these expert English language teachers found their students' poor command of the English language as another major challenge. The EL teachers informed that their students come from rural areas where no one used the English language. So, both the expert teachers felt that teaching their students English coupled with the arduous task of teaching analytical skills is their toughest challenge. The teachers' explained that their students lack of vocabulary and grammar knowledge impedes their participation in the ESL class.

Ms.Mastura: All my students come from rural areas and they don't speak English at home. The only exposure to English is during the English class in school. So their English language proficiency is very poor and this affects their participation in English classes.

Ms.Norma: My students don't come from English speaking homes. So, my students vocabulary is limited. My students' grammar knowledge is equally bad. So, my students shy away from participating in the ESL class.

Having reviewed the findings of the four research questions, the next section discusses the implications of this research and makes appropriate recommendations that can help improve the quality of integrating analytical thinking skills in the ESL reading class.

5.3 Implications and Recommendations

Implications and recommendations are equally important aspects as findings are in a research work. Implications discuss the impact of the findings on the researched field and offer justification for further exploration of the researched topic. Recommendations, on the other hand, offer suggestions to improve the field researched.

5.3.1 Implications of the Study

This study has enriched the existing canons of knowledge on educational research in several ways. Firstly, this study has introduced a new approach to research on higher order thinking skills by focusing specifically on one particular level of thinking from Bloom's Taxonomy i.e. the analytical thinking skills. Higher order thinking skills is a complex concept and as such it is pertinent to investigate the different levels of higher order thinking skills separately. Previous studies ((Rajendran, 2001, Rosmawati, 2009, Vijayaratnam, 2011; Tan, & Mohamad, 2014; Rania Deeb, 2015; Tan & Siti 2015;

Caleb, et. al. 2015; Khairon, et al. 2017; Charanjit, et al. 2018) did not investigate the three levels of higher order thinking skills separately as analysis, synthesis and evaluative. On that premise, this study is the first of its kind that distinguished the different levels of higher order thinking skills by investigating specifically the analytical thinking skills in the teaching of English.

Secondly, the study had also added to the existing knowledge on English language teaching by proposing a new strategy to teach reading in the ESL class. Integrating the analytical thinking skills in the ESL reading class to enhance the teaching of English is the alternative option that this study has contributed. This study had further, added valuable information by identifying critical reading skills as the predominant skill that facilitates the integration of analytical thinking skills in the ESL reading class.

Next, this study had highlighted the need for 'a state of the art' lesson plan to teach the 21st century skills along with the English language. Considering the fact that higher order thinking skills are deemed as highly necessary skills for the 21st century, it is pertinent that lesson plans are futuristic i.e. should have provisions to state specifically which thinking skills is to be incorporated and how it is going to be done. Therefore, traditional lesson plans such as the PPP format which is widely used in the ESL classes need modification to include the combined teaching of language skills as well as thinking skills. The expert EL teacher's statement supports such an innovative format.

Ms. Mastura: My greatest challenge is preparing the lessons to fit my students' level of English proficiency and thinking. I also have to modify my lesson plans to include the analytical thinking skills into the reading comprehension lessons as the textbooks do not explicitly suggest what analytical thinking skills to be included.

The proposed template of lesson plan should have space for the infusion of higher order thinking skills in the English lesson as well as space to describe the processes. A lesson plan of that nature called the 'Learning Element' was introduced and used by the New London Group (1998) in its multiliteracies project. Calling it 'Learning by Design' the lesson plan demands the teachers to state the thinking skills to be included in the learning process and explain how it is done.

Next, this study has added strength to learning theories of Vygotsky and Bandura which emphasis social interaction in the class for students' cognitive performances, and Piaget's theory that emphasizes accommodation and assimilation of new knowledge to previous knowledge - which occurs when students' work on projects or tasks. The expert EL teachers successful and consistent use of group work and task-based learning in their ESL class is testimony to the efficacy of these two teaching strategies.

This study has also contributed to the constructivist learning theory by way of highlighting the consistent use of thought-provoking questions by the expert EL teachers in their reading class. Asking insightful or probing questions are part of inquiry learning which finds its antecedents in constructivist learning theory. This study had also contributed through its findings the importance of teacher knowledge and teacher perceptions as two variables that considerably influences the teachers' classroom practices. EL teachers can improve their quality of teaching using effective questioning techniques, bettering their pedagogical and subject-matter knowledge and developing a positive perception towards the teaching of reading and analytical thinking skills in the ESL class. Finally, this study has given deeper insight into the challenges encountered by EL teachers in the ESL reading class. Thus its findings

together with the findings of past studies provide copious knowledge to the teaching of English.

5.3.2 Recommendations

Recommendations are action plans proposed by the researcher based on the findings of the study. In this section, the study makes several proposals to the relevant stakeholders in the Malaysian Education System that can improve the quality of education in Malaysia particularly in the integration of analytical thinking skills in the ESL reading class.

Considering the fact that lesson plan is a very useful tool in preparing for an effective lesson, it is suggested that the Curriculum Development Centre in the Ministry of Education designs a 'state of the art' lesson plan template to assist EL teachers to teach in the new millennium. In fact, it is recommended that the State Education Departments or the Malaysian Ministry of Education design a standardized template to teach higher order thinking skills in the English lessons for all English language teachers in the country. In addition, this study proposes that the use of lesson plans by teachers is made compulsory in all Malaysian schools. On that vein, it is also suggested that the Ministry of Education improves the current teachers' record books by including in it this standardized lesson plan template.

On that same note, this study suggests that the current textbook (PULSE 2) used in Malaysian secondary schools is revised. More open-ended questions that probes the students to think analytically need to be included in reading comprehension exercises. As it is, close-ended questions and short answer questions dominate the comprehension passages. Besides that, the text books should increase the number of

activities for the reading comprehension lessons that encourages groupwork and provide tasks that can enhance the students' critical and creative thinking. Textbook writers and publishers need to take these points into consideration when producing textbooks in the future. Currently, the teachers have to spend a lot of time surfing the internet and other print media for relevant and appropriate materials. This they find is very time consuming and challenging.

Ms. Norma: My biggest challenge in teaching analytical skills is lesson preparation. I have to design my own questions that can probe students to think analytically. I have to come up with my own activities to suit my students (English) proficiency and level of thinking. This is very demanding and stressful.

It is also suggested that the Curriculum Development Centre (CDC) under the Malaysian Ministry of Education comes up with a comprehensive Teacher Handbook. Besides the usual publishing of the syllabus and its specifications the Handbook should comprise detailed explanations of higher order thinking skills, suggests activities that can promote the teaching of different levels of higher order thinking skills, provides a glossary of questions that can probe students' thinking for the teachers' reference, and even contain tasks that teachers can refer to, while preparing their lessons. Currently teachers refer to the 'Handbook – 'Formative Assessment Principles and Practices' (Cambridge, 2018) which is a general guide for EL teachers all over the world. As such it is recommended that a handbook specifically prepared for Malaysian teachers with reference to the Malaysian secondary school syllabus would be more appropriate for Malaysian teachers. Such a comprehensive Teacher's Handbook will help the teachers to improve the quality of their teaching, especially in integrating analytical thinking skills or other levels of higher order thinking skills in the ESL class.

Teacher-training programmes in Malaysia should also be improved to confront the challenges of the 21st century. These programmes should have components that provide pedagogical knowledge geared specifically towards the teaching of higher order/analytical skills in their English lessons. On that score, the current PPP lesson plan used in Malaysian Teacher Education institution needs to be revised to include the standardized lesson plan template that Curriculum Development Centre help design. These changes are necessary for teaching of English in Malaysia to remain relevant in the 21st century.

On that premise, practicing English language teachers also need to be given Continuous Professional Development (CPD) courses to upgrade their teaching standards so that they can cope with the dramatic changes in the global education realm. In fact, all 132 (100%) participants had answered in the questionnaire that they wish to attend more in-service courses on the teaching of analytical thinking skills to further strengthen their pedagogical skills.

Excerpts of 3 participants answers to Item 7 in the questionnaire:

Participant 1: Yes, we all need courses to equip ourselves with new strategies and techniques to teach analytical teaching skills in the ESL class.

Participant 2: We all definitely need courses to teach higher order thinking skills effectively. Our knowledge now is by self-reading and from colleagues.

Participants 3: Yes, I will appreciate if I can attend in-service courses on the teaching of higher order thinking skills. I need guidance on how to incorporate high order thinking skills in the English lesson.

In addition, more than 90% of the English language teachers indicated that they hope to get some sort of models or framework that they can use as guidance to prepare their lessons. On that score, this study proposes a framework designed based on the themes that emerged in its findings. The four themes identified in this study were most prominent among the expert teachers' best practices and are strongly recommended to be included as guidelines for the teaching of analytical thinking skills in the ESL reading class (see Figure 5.2).

Lesson Plan	encourages learning by design where teachers can draft their ideas, collection of materials, mode of delivery in a standardized framework which propels the teacher for effective instruction
Questioning Techniques	teacher designs questions particularly open-ended questions that probe the students' thinking; avoid close-ended and short answer questions
Group Work	encourage students to work in groups which helps active processing of information and cross-modelling/imitation
Task Completion	supports interaction, experiential learning, and provides opportunity for creativity

Figure 5.2 The Proposed Framework of Guidelines for Teaching Analytical Thinking Skills in the ESL Reading Class

Next, questions used in assignments and assessments needs improvement. The study suggests that more open-ended questions be used in the reading comprehension class. This may pose a problem to the teachers when marking as there will be multiple answers to a single question but it is necessary to unleash the student' higher order thinking. Otherwise, students' thoughts will be very much curtailed. Thus, the State Education Departments and District Education Departments and schools should come up with question-banks that stores questions that involves higher order thinking skills

for teachers' reference. Malaysian Examination Board that oversees the Sijil Pelajaran Malaysia public examination should also give more space to probing questions instead of knowledge level and comprehension level questions.

This study also suggests that the Ministry of Education officially set up professional chat groups where teachers can share their materials related to the teaching of English, such as lesson plans, reading passages, assessment papers and teaching modules with fellow teachers all over the country. This professional chat-group should solicit the services of language experts both from local and abroad to attend to the teachers' questions and doubts related to the teaching of the English language and the infusion of analytical thinking skills. Such an effort will be the state-of-art strategy to meet the challenges of teaching analytical thinking skills in the 21st century which can benefit the teaching fraternity in Malaysia.

Along with these recommendations to the stake holders, this study also calls upon higher education institutions and researchers to increase their effort to conduct more studies related to the integration of higher order thinking skills in the English lessons. Past studies were more concerned in looking at higher order thinking skills holistically. Acknowledging the fact that higher order thinking skills have different categories, studies should be conducted separately on the incorporation of each of these skills (analysis, synthesis and evaluative) in the teaching of English. The integration of these skills should also be investigated in the different language skills, such as reading, writing, listening and speaking. As it is, the present study is the first of its kind that has investigated the inclusion of analytical thinking skills particularly in the reading comprehension lesson. Clearly, there is a huge dearth in the field of research on the integration of the different levels of higher order thinking skills in the English lessons.

5.4 Limitations of the Study

This study was conducted to investigate how EL teachers integrated analytical thinking skills in the ESL reading class. In that process, the EL teachers' knowledge of analytical thinking skills, their perception towards the integration of the analytical skills in the ESL reading class and the EL teachers' classroom practices were explored. Though a sample of 132 EL teachers participated in the survey, only two expert EL teachers' classroom teachings were observed. More EL teachers' classroom teaching should be observed – but time constraints and the unprecedented Covid-19 pandemic hampered observation of more EL teachers.

For the same reason, focus group interview of the survey participants could not be carried out. As such, EL teachers' considerations and ideas regarding the integration of analytical thinking skills were derived from the EL teachers' comments solicited via the questionnaire. Focus group interview is a valuable qualitative method that provides comprehensive insight into the participants' perceptions, attitudes and experiences. On that note, future studies must seriously consider focus group interviews.

Thirdly, this study investigated the integration of the analytical thinking skills in the ESL reading lessons only. The integration of analytical thinking skills in listening, speaking and writing lesson is still uncovered. In fact, to obtain a comprehensive understanding of incorporating higher order thinking skills in the ESL class, the teaching of synthesis and evaluative thinking skills also need to be explored. There is a dearth of research on higher order thinking skills that explored the integration of the different levels of higher order thinking skills separately.

The current study focused only on the EL teachers. In fact, most studies in higher order thinking skills in Malaysia had focused only on the teachers. The student factor has not been given the due weightage. This is a gap that needs to be filled. A successful implementation of the teaching and learning process involves both the teachers and the students in the class. On that vein, future studies should also investigate students' perspectives of learning higher order thinking skills in their English lesson.

The findings of this study can benefit future researchers to conduct similar studies and add to the body of knowledge on integrating analytical thinking skills in the ESL reading class. Meanwhile, research on the incorporation of higher order thinking skills in the ESL class is still in the infant stage in Malaysia. Major limitations of this study have been presented here together with proposals for future research on the teaching of higher order thinking skills in the ESL class.

5.5 Conclusion

In view of the dramatic changes in the global education scenario which emphasis higher order thinking skills and English language proficiency, Malaysia needs to revamp its education system to remain relevant and competitive in the international market. For that, all of the above recommendations need serious considerations and concerted effort from the Malaysian Ministry of Education and all other stakeholders.

This study has managed to investigate the integration of analytical thinking skills, particularly in the English reading comprehension lesson. This study identified four aspects namely, the use of lesson plan, the technique of questioning, groupwork and task-based learning which were phenomenal in the expert EL teachers' classroom teaching. Besides that, the use of analogies, open-ended questions, allowing space and time for students to reflect and the use of real-life situations were also apparent in the

expert teachers' best practices. On that basis the study proposes a framework of guidelines (refer Figure 5.1) for English language teachers' reference when teaching analytical thinking skills in the ESL reading class.

The use of lesson plans was very helpful to the teachers to conduct their lessons orderly and systematically, within the boundaries of the English language curriculum of Malaysian secondary schools. The lesson plans were also very useful to manage the time and pace of the lessons. While the topic and theme of the lesson follow the curriculum the learning activities were designed by the teachers using the lesson plan. Both these expert teachers used standardized lesson plan format prepared by their respective schools. Though their lesson plans were not exactly identical, they have many similarities and covered almost all pertinent aspects that should be in a good lesson plan. Both their lesson plans are underpinned by the PPP (Presentation, Practice and Production) lesson plan format. The PPP lesson plan model is commonly used in TEFL (Teaching English as Foreign Language) and TESOL (Teaching English to Speakers of Other Languages) certification courses (British Council, nd). The PPP model is the lesson plan format taught to trainee-teachers in Teacher-training Institutes in Malaysia.

Based on the observation of their classroom teaching, both the teachers had prepared their lesson plans meticulously. The design clearly reflects the focus on language skills as well as the analytical thinking skills. The lesson plan had taken into consideration the students' experience and prior knowledge. Besides the resources from the prescribed text, the teachers had also taken their own initiative to procure resources from the internet. The teachers have utilized their lesson plans to design an effective lesson. The lesson plan had contributed to accomplishing the purpose of their lessons.

Clearly, the teachers exhibited confidence in their ability to incorporate analytical skills in the ESL reading class. The many years of teaching experiences coupled with their sound knowledge of analytical thinking skills and the language skills as well as their pedagogical knowledge have given them this confidence and competence.

The teachers kept the class active with their questions which were effective in prompting the students to think analytically. Both the expert teachers' instructions were consistent and supported the enhancement of analytical thinking skills in the reading comprehension lessons. The analytical thinking skills taught by the teachers, such as 'compare and contrast, examining details, thinking of alternative answers and justifying them' were relevant and accurate to the focus of the lessons. However, students' participation during the lessons was hampered by their poor proficiency in English.

Group activities during the lessons encouraged collaborative learning and were helpful in getting the students to participate. Interactions between students were collegial. There was a climate of respect for each other's ideas, questions and contributions. The time allotted for these lessons (1½ hours for each lesson) were sufficient to carry out the activities planned. Appropriate connections were made between the content taught and real-life situations, which made the lesson meaningful to the students. The lessons were made interesting by the use of audio and video resources. Both the teachers had effectively utilized questions that stimulates analytical thinking skills. The teacher's instruction and classroom management were found to be purposeful and engaging and the lessons were well designed and implemented. The fact the teachers knew the purpose of these observations could be an added reason for such exemplary lesson plans.

Thinking skills have been identified as the single most important skills in the 21st Century. Teaching thinking skills in educational institutions is not only to prepare the students to remember facts and figures to pass their examinations with but to equip the students with abilities to apply their knowledge in real-life situations. On that basis, this study has unveiled deeper insight into the teaching of analytical thinking skills in the English reading comprehension lesson and has added to the canon of knowledge on teaching English



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Analytical Skills Knowledge and Perception Questionnaire (ASKP Questionnaire)
(Adapted and adopted from Socio-scientific Issue-Based Teaching [SIT] Questionnaire)

Section A : (Item 1 – 7)

- Gender..... Age..... Highest Qualification
1. How long have you been teaching?
 2. How long have you been teaching English?
 3. At what Form are you teaching English in this school?
 4. How long have you been teaching English at this Form?
 5. How many students are in your class?
 6. Have you attended any professional development course in incorporating analytical skill in your English lesson? If yes, what course was it and who were the organisers?

 7. Do you need any course to incorporate analytical skill in your English lessons?
 Why

Section B : (Items 8 – 15)

8. Mark (✓) at the statement below that best defines analytical skill.
 - () Thinking critically
 - () Thinking for learning
 - () Thinking out of the box
 - () Thinking at a complex level
9. Mark (✓) the process which involves analytical skill?
 - () Rote learning
 - () Detecting patterns
 - () Remembering facts
 - () Memorising formulas
 - () Acquisition of new knowledge

APPENDIX A

10. Mark (✓) the process below that best explains analytical skill.
- () Creative process
 - () Learning process
 - () Risk taking process
 - () Anticipatory process
 - () Communicating process
11. Which activity below best represents analytical skill?
- () Scientific equations
 - () Application of formulas
 - () Compare and contrasting
 - () Mathematical relationship
 - () Examining little information to form a whole
12. Which **two** activities need analytical skill.
- () Examining data
 - () Storing past knowledge
 - () Documenting outcomes
 - () Solving complex problems
 - () introduce new information
13. Identify the **two** statements that best describe analytical skill.
- () Analytical skill helps to make rational decisions
 - () Analytical skill is learned to excel in school assessments..
 - () Analytical skill can help solve problems in workplace.
 - () Analytical thinking is more for tertiary education rather than elementary schools.
 - () Analytical skill in divergent thinking calls for serial and persistent processing of a single answer.
14. Analytical skill can be enhanced from the activities below **except**
- () Rote leaning
 - () Brainstorming
 - () Problem solving
 - () Decision making
 - () Working in groups

APPENDIX A

15. Analytical skill consists of the following categories **except**

- () Research
- () Team work
- () Critical thinking
- () Logical reasoning
- () Following directives

Section C (Items 16 – 25)

16. Analytical skill cannot be incorporated in a language learning context.

1	2	3	4
strongly disagree	disagree	agree	strongly agree

Why ?

17. Incorporating analytical skill does not help enhance English language proficiency.

1	2	3	4
strongly disagree	disagree	agree	strongly agree

Why ?

18. Incorporating analytic skill is actually a burden to teachers.

1	2	3	4
strongly disagree	disagree	agree	strongly agree

Why ?

19. Analytical skill is better taught in Science and Mathematics classes.

1	2	3	4
strongly disagree	disagree	agree	strongly agree

Why ?

20. Students find my lesson interesting when I incorporate higher-order thinking skills in my English lessons.

1	2	3	4
strongly disagree	disagree	agree	strongly agree

Why ?

APPENDIX A

21. I design my lessons so that there is opportunity to incorporate analytical skill in my English lesson.

1	2	3	4
Never	sometimes	often	always

22. I take into account prior knowledge of my students when designing my English lesson.

1	2	3	4
Never	sometimes	often	always

23. The instructional methods and activities I use in my English lesson reflect attention on analytical skill.

1	2	3	4
Never	sometimes	often	always

24. My questioning techniques enhance the development of students analytical skill.

1	2	3	4
Never	sometimes	often	always

25. I encourage my students to talk and share ideas.

1	2	3	4
Never	sometimes	often	always

APPENDIX B

English Language Teachers' Classroom Observation Form (ELT-COP)

Adapted and adopted from Horizon Research, Inc. 2003

School:

District/State :

Teacher:

Gender: Male Female

Age:

Years of Teaching English:

Observation Date/Time:

PART ONE: Basic Descriptive Information

1. Subject Observed: **English**

2. Grade Level(s): **Form**

3. Class Enrolment:

Males:

Females:

4. Topic:

5. Focussed Language Skill:

6. Focussed Thinking Skill:

7. Have you prepared a lesson plan for this lesson? Yes No.

Explain:

8. What is the purpose of this lesson ?

Explain:

Part TWO: Lesson Ratings by Researcher/Observer

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1	2	3	4	5
Not at all	A little	Fairly	to a great extent	Totally

P- I. Lesson Design (Items 1 -8)

1. The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson..

1	2	3	4	5
---	---	---	---	---

2. The design of this lesson reflected careful planning and organization.

1	2	3	4	5
---	---	---	---	---

3. The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.

1	2	3	4	5
---	---	---	---	---

4. The resources available in this lesson contributed to accomplishing the purposes of the instruction.

1	2	3	4	5
---	---	---	---	---

5. The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies/materials).

1	2	3	4	5
---	---	---	---	---

6. The design of the lesson encouraged a collaborative approach to learning among the students.

1	2	3	4	5
---	---	---	---	---

7. Adequate time and structure were provided for "sense-making"

1	2	3	4	5
---	---	---	---	---

8. Adequate time and structure were provided for wrap-up.

1	2	3	4	5
---	---	---	---	---

P-II. Implementation of Lesson (Items 9 – 14)

9. The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.

1 2 3 4 5

10. The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.

1 2 3 4 5

11. The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.

1 2 3 4 5

12. The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.

1 2 3 4 5

13. The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.

1 2 3 4 5

14. The teacher's questioning strategies were likely to enhance the development of students conceptual understanding of analytical skills.

1 2 3 4 5

P-III. Content : English language and Analytical Skills (Items 15 - 20)

15. The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.

1 2 3 4 5

16. The language skills and analytical skills were appropriate for the developmental levels of the students in this class.

1 2 3 4 5

17. Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 4 5

18. Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 4 5

19. The teacher displayed good understanding of the language and analytical skills concepts in his/her dialogue with students.

1 2 3 4 5

20. Students' English Language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson..

1 2 3 4 5

P-IV. Classroom Culture (Items 21 – 25)

21. Active participation of all students was encouraged and valued by teacher.

1 2 3 4 5

22. There was a climate of respect for students' ideas, questions, and contributions during the lesson.

1 2 3 4 5

APPENDIX B

23. Interactions reflected collaborative working relationships among students (e.g. students worked together, talked with each other about the lesson).

1 2 3 4 5

24. Interactions reflected collaborative working relationships between teacher and students.

1 2 3 4 5

25. Intellectual rigor, constructive criticism, and the challenging of ideas were evident.

1 2 3 4 5

P-V. Learning Outcome (Items 26 - 30)

1	2	3	4	5
Very poor	Poor	Satisfactory	Good	Excellent

26. Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.

1 2 3 4 5

27. Students' acquired sound understanding of analytical skills through the reading comprehension lesson.

1 2 3 4 5

28. Students' improved their performance in the reading comprehension lesson using the analytical skills.

1 2 3 4 5

29. Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.

1 2 3 4 5

30. Students' gained self-confidence in using the analytical skills through the reading comprehension lesson.

1 2 3 4 5

Classroom Teacher Interview Protocol

Adapted and adopted from Horizon Research, Inc. 2003)

P-1: Resources Used to Design the Lesson

1. What resources did you use to plan this lesson?
2. Were these resources/materials/activities designated for this class/course or did you choose to use them yourself?
3. What do you like about these resources/materials/activities? What do you not like?
4. Did you plan this lesson essentially as it was organized in Student Book or did you modify it in important ways?
5. *If modified* : Can you describe the modifications you made and your reasons for making them?

P-2 : Implementation of the Lesson

6. Did you select the topic for this lesson? Why?
7. How do you feel about teaching this topic? Did you enjoy teaching it? Why?
8. How well prepared do you feel to guide student learning analytical skills in the reading comprehension lesson ?
9. Which part of the lesson do you feel your students' enjoyed most? Why?
10. What are the analytical skills that you included in this reading comprehension lessons? Was it difficult to incorporate analytical skills in the reading comprehension lessons? Why?

P-3 : Content/Topic

11. What led you to teach analytical skills in this lesson?
12. Is it included in the curriculum/course of study and how important was that in your decision to teach analytical skills with this topic?
13. Please help me understand where this lesson fits in the sequence of the unit you are working on. What have the students experienced prior to today's lesson?
14. Do you include analytical skills only during the reading comprehension lesson or also when teaching other language skills? Why?
15. Are analytical skills tested in the English language assessments? (both School/National level Assessments). And what are the consequences if students don't do well in the test?

APPENDIX C

P-4 : Classroom Culture

16. Tell me about the ability levels of students in this class and how do they compare to students in the school as a whole?
17. How proficient are these students in the English language and how do they feel about learning English?
18. What kind of language activities do your students enjoy most and why?
19. How do the students relate to each other in the classroom? Are they friendly amongst themselves or have groups and how does it affect the lessons?
20. How conducive is your classroom for teaching and learning? (e.g. arrangement of chairs and tables/fans/aircond, safety, noise level, facilities, equipment) that can enhance the teaching of English?

P-5 : Learning Outcome

21. How do you feel about how the lesson turned out, today? Do you think you achieved the objective of the lesson? Explain why?
22. Do you think you need to teach this topic again for the students to get a better understanding of the focussed skills? Why?
23. Does incorporating analytical skills in the reading comprehension lesson help the students to acquire the language easier?
24. Which analytical skills you find easier to teach and which analytical skills were difficult to incorporate?
25. What is the biggest challenge in teaching analytical skills in the English lesson? (e.g. students' English language proficiency, students' attitude towards learning English, availability of resources, etc? And how do you propose to overcome these challenges?



Ruj. Kami: UUFV/SLCP/P-48
Tarikh : 3 Ogos 2021

Yang Berusaha
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YBrs. Dr.,

LANTIKAN SEBAGAI PAKAR PENILAI UNTUK INSTRUMEN-INSTRUMEN PENYELIDIKAN CALON KEDOKTORAN (SACHITHANANTHAM TACHINA MOORTHY)

Dengan segala hormatnya merujuk perkara di atas.

2. Adalah dimaklumkan bahawa pelajar seperti butiran berikut merupakan calon Kedoktoran di Pusat Pengajian Bahasa, Tamadun dan Falsafah (SLCP), Awang Had Solleh Graduate School, Universiti Utara Malaysia (UUFV).

Nama Pelajar : Sachithanontham o/l Tochino Moorthy
No. Mo@k : 90J577
Program : Ph.D in Applied Linguistics
Tajuk Penyelidikan : Teaching of Analytical Skills in the Reading Comprehension lesson : A Case Study in Kuala Muda District, KEDAH
Penyelidik : Dr. Rozifah binti Mohd Rowan

3. Sehubungan dengan YBrs. Dr. telah dilantik sebagai Pakar Penilai bagi instrumen-instrumen berkenaan. Bersama ini disertakan dokumen-dokumen berikut untuk tindakan YBrs. Dr.:

- i) Questionnaire
- ii) Classroom Observation Form
- iii) Teacher interview Protocol

Kerjasama dan perhatian yang diberikan oleh YBrs. Dr. amatlah dihargai dan didahului dengan ucapan terima kasih.

"BERKHIDMAT UNTUK NEGARA"

"PERHATIAN RAKYAT: DARURAT MEMERANGI COVID-19"

"WAWASAN KEMAKMURAN BERSAMA 2030"

"KEDAH SEJAHTERA - NIKMAT UNTUK SEMUA"

"ILMU BUDI, #QKTI"

Saya yang menjalankan amanah,

(PROF. DR. SHUKRI AHMAD)

Dekan

Pusat Pengajian Bahasa, Tamadun dan Falsafah
Universiti Utara Malaysia

Expert Review of 'ESL Teachers' Analytical Skill - Knowledge and Perception
Questionnaire (Please circle the appropriate value and comment where necessary)

No.	Items	Rating
1.	How long have you been teaching?	1 2 3 4 5 6 7 8 9 10
2.	How long have you been teaching English?	1 2 3 4 5 6 7 8 9 10
3.	What Forms are you teaching English in this school?	1 2 3 4 5 6 7 8 9 10
4.	How long have you been teaching English at this Form?	1 2 3 4 5 6 7 8 9 10
5.	How many students are in your class?	1 2 3 4 5 6 7 8 9 10
6.	Have you attended any professional development course in incorporating analytical skills in your English lesson? If yes, what course was it and who were the organisers?	1 2 3 4 5 6 7 8 9 10
Comment:	These are pertinent questions to establish the teachers' teaching experience and the related courses attended.	
7.	Do you need any course to incorporate analytical skills in your English lessons? Why	1 2 3 4 5 6 7 8 9 10
Comment	This question addresses the teachers' training needs such as on the strategies to incorporate analytical skills in their lessons.	
8.	Mark (✓) at the statement below that best defines analytical skills. () Thinking critically () Thinking for learning () Thinking out of the box () Thinking at a complex level	1 2 3 4 5 6 7 8 9 10
Comment	This question is crucial as it gauges the teachers' understanding about analytical skills.	
9.	Mark (✓) at the processes which in your opinion involves analytical thinking? () Rote learning () detecting patterns () remembering facts () Memorizing formulas () acquisition of new knowledge	1 2 3 4 5 6 7 8 9 10
Comment	This is a highly relevant question to give insight of the teachers' cognition on analytical thinking.	

10.	Mark (✓) the process below that best explains analytical skill () Creative process () Learning process () Risk taking process () Anticipatory process () Communicating process	1 2 3 4 5 6 7 8 9 10
Comment	This question is crucial as it gauges the teachers' understanding about analytical skills.	
11.	Which activity below best represents analytical skill? () Scientific equations () Applications of formulas () Compare and contrast () Mathematical relationship () Examining little information to form a whole	1 2 3 4 5 6 7 8 9 10
Comment	This question provides link between the teachers' content knowledge about analytical skills and their practical knowledge on the matter.	
12.	Which two activities need analytical skill? () Examining data () Storing past knowledge () Documenting outcomes () Solving complex problems. () Introduce new information	1 2 3 4 5 6 7 8 9 10
Comment	This question further enlightens the researcher about the teachers' practical knowledge on the subject matter.	
13.	Identify the two statements that best describe analytical skill. () Analytical skill helps to make rational decisions. () Analytical skill is learned to excel in school assessments. () Analytical skill can help solve problems in workplace. () Analytical thinking is more for tertiary education rather than elementary schools. () Analytical skill in divergent thinking calls for serial and persistent processing of a single answer.	1 2 3 4 5 6 7 8 9 10

Comment	This question is crucial as it gauges the teachers' understanding about analytical skills.	
14.	Analytical skill can be enhanced from the activities below except () Rote learning () Brainstorming () Problem solving () Decision making () Working in groups	1 2 3 4 5 6 7 8 9 10
Comment	This question further enlightens the researcher about the teachers' practical knowledge on the subject matter.	
15.	Analytical skill consists of the following categories except () Research () Team work () Critical thinking () Logical reasoning () Following directives	1 2 3 4 5 6 7 8 9 10
Comment	This question probes deeper into the teachers' understanding about analytical skills.	
16.	Analytical skill cannot be incorporated in a language context. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This is a highly relevant question to give insight of the teachers' cognition on analytical thinking.	
17.	Incorporating analytical skill does not help enhance English language proficiency. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10

Comment	This is a highly relevant question as it sheds light on the teachers’ cognition about the relationship between analytical thinking and English Language Proficiency.	
18.	Incorporating analytical skill is actually a burden to teachers. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This is an important question as it gives idea to the researcher about the teachers’ willingness to incorporate analytical thinking in their lessons.	
19.	Analytical skill is better taught in Science and Mathematics classes. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This question reinforces the teachers’ responses in Question 18 above.	
20.	Students find my lesson interesting when I incorporate analytical skill in my English lesson. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This question links the incorporation of analytical thinking in the lessons to students’ engagement.	
21.	I design my lessons so that there is opportunity to incorporate analytical skill in my English lesson. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This question examines teachers’ willingness and ability to design lesson that entails analytical skill.	
22.	I take into account prior knowledge of my students when designing my English lesson.	1 2 3 4 5 6 7 8 9 10

	1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	
Comment	This is a general question and no relation is made on the students' analytical skill.	
23.	The instructional method and activities I use in my English lesson reflect attention on analytical skill. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This question shows the degree of analytical skills adopted in the teachers' pedagogical practices.	
24.	My questioning techniques enhance the development of student analytical skill. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This question helps respondents to reflect on their questioning technique in regards to students' analytical skills.	
25.	I encourage my students to talk and share ideas. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	This is a general question and its relation to analytical skill is implicit.	

Reviewed by,


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Institut Pendidikan Guru
Kampus Sultan Abdul Halim
Sungai Petani Kedah Darul Aman

Expert Review - Classroom Observation Form

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1 2 3 4 5
Not at all A little Fairly to a great extent Totally

No.	I. Lesson Design	Ratings
1.	The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment	This is generally about reading comprehension lesson per se and does not show any distinct feature of a design that requires analytical skills.	
2	The design of the lesson reflected careful planning and organization. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment	This is generally about the planning and implementation of a reading comprehension lesson.	
3.	The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		

5.	The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies & materials).	1 2 3 4 5 6 7 8 9 10
Comment		
6.	The design of the lesson encouraged a collaborative approach to learning among the students.	1 2 3 4 5 6 7 8 9 10
Comment		
7.	Adequate time and structure were provided for “sense-making”	1 2 3 4 5 6 7 8 9 10
Comment		
8.	Adequate time and structure were provided for wrap- up.	1 2 3 4 5 6 7 8 9 10
Comment		
	II. Implementation of lesson	
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment		

Appendix D2

10.	The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment		
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson..	1 2 3 4 5 6 7 8 9 10
Comment		
12.	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.	1 2 3 4 5 6 7 8 9 10
Comment		
13.	The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.	1 2 3 4 5 6 7 8 9 10
Comment		
14.	The teacher's questioning strategies were likely to enhance the development of the students' conceptual understanding of analytic skills.	1 2 3 4 5 6 7 8 9 10
Comment		
III. Content: English language and Analytical Skills		
15.	The language skills and analytical skills taught were significant and worthwhile in the reading and comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment		

16.	The language skills and analytical skills were appropriate for the developmental levels of the students in this class.	1 2 3 4 5 6 7 8 9 10
Comment		
17.	Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading and comprehension lesson;	1 2 3 4 5 6 7 8 9 10
Comment		
18.	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading and comprehension lesson;	1 2 3 4 5 6 7 8 9 10
Comment		
19.	The teacher displayed good understanding of the language and analytical skills' concepts in his/her dialogue with students.	1 2 3 4 5 6 7 8 9 10
Comment		
20.	Students' English Language proficiency was continually enriched by the use of analytical skills in the reading and comprehension lesson;	1 2 3 4 5 6 7 8 9 10
Comment		

	IV. Classroom Culture	
21.	Active participation of all was encouraged and valued by teacher. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
22.	There was a climate of respect for students' ideas, questions, and contributions during the lesson 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
23.	Interactions reflected collaborative working relationships among students. (e.g. students worked together, talked with each other about the lesson) 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
24.	Interactions reflected collaborative working relationships between teacher and students. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
25.	Intellectual rigor, constructive criticism, and the challenging of ideas were evident. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		

	V. Learning Outcome	
26..	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 (10)
Comment		
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 (10)
Comment		
28..	Students improved their performance in the reading and comprehension lesson using the analytical skills. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 (10)
Comment		
29..	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 (10)
Comment		
30.	Students gained self-confidence in using the analytical skills through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 (10)
Comment		

Reviewed by,


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Institut Pendidikan Guru
Kampus Sultan Abdul Halim
Sungai Petani Kedah Darul Aman



Expert Review: Classroom Teacher Interview Protocol :

N0.	Interview Questions	Rating
	P-1: Resources used to design the Lesson	
1.	What resources did you use to plan this lesson?	1 2 3 4 5 6 7 8 9 10
Comment		
2.	Were these resources/materials/activities designated for this class/course or did you do them yourself?	1 2 3 4 5 6 7 8 9 10
Comment		
3.	What do you like about these resources/materials/activities? What do you not like?	1 2 3 4 5 6 7 8 9 10
Comment		
4.	Did you plan this lesson essentially as it was organized in [the Student Book or did you modify it in important ways?	1 2 3 4 5 6 7 8 9 10
Comment		
5.	<i>If modified:</i> Can you describe the modifications you made and your reasons for making the modifications?	1 2 3 4 5 6 7 8 9 10
Comment		
	P- 2 : Implementation of the lesson	
6.	Did you select the topic for this lesson? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
7.	How do you feel about teaching this topic? Did you enjoy teaching it? Why?	1 2 3 4 5 6 7 8 9 10
Comment		

Appendix D3

8.	How well prepared do you feel to guide student learning analytical skills in the reading comprehension lesson?	1 2 3 4 5 6 7 8 9 10
Comment		
9.	Which part of the lesson do you feel your students' enjoyed most? Why ?	1 2 3 4 5 6 7 8 9 10
Comment		
10.	What are the analytical skills that you included in this reading comprehension lessons? Was it difficult to incorporate analytical skills in the reading comprehension lessons? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
C. Content/Topic		
11.	What led you to teach analytical skills in the reading comprehension lesson?	1 2 3 4 5 6 7 8 9 10
Comment		
12.	Is it included in the curriculum/course of study and how important was that in your decision to teach analytical skills with this topic?	1 2 3 4 5 6 7 8 9 10
Comment		
13.	Please help me understand where this lesson fits in the sequence of the unit you are working on. What have the students experienced prior to today's lesson?	1 2 3 4 5 6 7 8 9 10
Comment		

Appendix D3

14.	Do you include analytical skills only during the reading comprehension lesson or also when teaching other language skills? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
15.	Are analytical skills tested in the English language assessments (both School/National level assessment). And what are the consequences if students don't do well in the test?	1 2 3 4 5 6 7 8 9 10
Comment		
P-IV : Classroom Culture		
16.	Tell me about the ability levels of students in this class and how do they compare to students in the school as a whole?	1 2 3 4 5 6 7 8 9 10
Comment		
17.	How proficient are these students in the English language and how do they feel about learning English?	1 2 3 4 5 6 7 8 9 10
Comment		
18.	What kind of language activities do your students enjoy most and why?	1 2 3 4 5 6 7 8 9 10
Comment		

Appendix D3

19.	How do the students relate to each other in the classroom? Are they friendly amongst themselves or have groups and how does it affect the lessons?	1 2 3 4 5 6 7 8 9 10
Comment		
20.	How conducive is your classroom for teaching and learning? (arrangement of chairs and tables/ fans /aircond, safety, noise level, facilities, equipment) that can enhance the teaching of English?	1 2 3 4 5 6 7 8 9 10
Comment		
P-V : Learning Outcome		
21.	How do you feel about how the lesson turned out, today? Do you think you achieved the objective of the lesson? Explain Why?	1 2 3 4 5 6 7 8 9 10
Comment		
22.	Do you think you need to teach this topic again for the students to get a better understanding of the focussed skills? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
23.	Does incorporating analytical skills in the reading comprehension lesson help the students to acquire the language easier?	1 2 3 4 5 6 7 8 9 10

Appendix D3

Comment		
24.	Which analytical skills you find easier to teach and which analytical skills were difficult to incorporate? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
25.	What is the biggest challenge in teaching analytical skills in the English lesson? (e.g. students English language proficiency, students' attitude towards learning English, availability of resources, etc? And how do you propose to overcome these challenges?	1 2 3 4 5 6 7 8 9 10
Comment		

Reviewed by,


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 Institut Pendidikan Guru
 Kampus Sultan Abdul Halim
 Sungai Petani Kedah Darul Aman

APPENDIX E



PUSAT PENGAJIAN BAHASA, TAMADUN DAN FALSAFAH
SCHOOL OF LANGUAGES, CIVIL AND PHILOSOPHY
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48 TARIKH 3 OGOS
2021

YANG BERUSAHA
PROFESOR MADYA DR. RAJA NOR SAFINAS
RAJA HARUN DEKAN
INSTITUTE OF GRADUATE SCHOOLS
ENGLISH LANGUAGE AND LITERATURE
DEPARTMENT FACULTY OF
LANGUAGES AND COMMUNICATION
UNIVERSITI PENDIDIKAN SULTAN IDRIS, TANJUNG

MALIM, PERAK YBRS. PROF. MADYA DR.,

LANTIKAN SEBAGAI PAKAR PENILAI UNTUK INSTRUMEN-INSTRUMEN PENYELIDIKAN CALON
KEDOKTORAN (SACHITHANANTHAM TACHINA MOORTHY)

DENGAN SEGALA HORMATNYA MERUJUK PERKARA DI ATAS.

2. ADALAH DIMAKLUMKAN BAHAWA PELAJAR SEPERTI BUTIRAN BERIKUT
MERUPAKAN CALON KEDOKTORAN DI PUSAT PENGAJIAN BAHASA, TAMADUN
DAN FALSAFAH (SLCP), AWANG HAD SALLEH GRADUATE SCHOOL, UNIVERSITI
UTARA MALAYSIA (UUM).

NAMA : SACHITHANANTHAM A/TACHINA MOORTHY
PELAJAR : 901577
NO. MATRIK : PH.DIN APPLIED LINGUISTICS
PROGRAM : TEACHING OF ANALYTICAL SKILLS IN THE READING
TAJUK : COMPREHENSION
PENYELIDIKAN : A CASE STUDY IN KUALA MUDA DISTRICT. KEDAH.
LESSON : DR. RAFIZAH BINTI MOHD RAWIAN
PENYELIA

3. SEHUBUNGAN DENGAN ITU YBRS. PROF. MADYA DR. TELAH DILANTIK
SEBAGAI PAKAR PENILAI BAGI INSTRUMEN-INSTRUMEN BERKENAAN. BERSAMA
INI DISERTA KAN DOKUMEN-DOKUMEN BERIKUT UNTUK TINDAKAN YBRS. PROF.
MADYA DR. :

- I) QUESTIONNAIRE
- II) CLASSROOM OBSERVATION FORM
- III) TEACHER INTERVIEW PROTOCOL

KERJASAMA DAN PERHATIAN YANG DIBERIKAN OLEH YBRS. PROF. MADYA DR.
AMATLAH DIHARGAI DAN DIDAHULUI DENGAN UCAPAN TERIMA KASIH.

"BERKHIDMAT UNTUK NEGARA"

"PERHATIAN RAKYAT: DARURAT MEMERANGI COVID-19"

"WAWASAN KEMAKMURAN BERSAMA 2030"

"KEDAH SEJAHTERA - NIKMAT UNTUK SEMUA"

"ILMU BUDI; 8'KTI"

SOYA YA 6 LANKAN AMANAH.

(PROF. D HUKRIAHMAD)
DEKAN
PUSAT PENGAJIAN BAHASA, TAMADUN DON
FALSAFAH UNIVERSITI UTARA MALAYSIA



Appendix E1

Expert Review of ‘ESL Teachers’ Analytical Skill - Knowledge and Perception Questionnaire. Please circle the appropriate value and comment where necessary)

No .	Items	Rating				
1.	How long have you been teaching?	1 6	2 7	3 8	4 9	5 10
2.	How long have you been teaching English†	1 6	2 7	3 8	4 9	5 10
3.	What Forms are you teaching English in this school?	1 6	2 7	3 8	4 9	5 10
4.	How long have you been teaching English at this Form?	1 6	2 7	3 8	4 9	5 10
5.	How many students are in your class?	1 6	2 7	3 8	4 9	5 10
6.	Have you attended any professional development course in incorporating analytical skills in your English lesson? If yes, what course was it and who were the organizers?	1 6	2 7	3 8	4 9	5 10
Comment	I suggest that you have instructions at the beginning and the purpose of this questionnaire You need to divide the questionnaire according to construct. E.g. the first section is the demographic section. This should be in the form of open ended questions rather than rating,					
7.	Do you need any course to incorporate analytical skills sn your English lessons? Why	1 6	2 7	3 8	4 9	5 10
Comment	You need to have this question as Yes or no option. Then only the why question					
8.	Park (/) at the statement below that best defines analytical skills. () Thinking critically () Thinking for learning () Thinking out of the box () Thinking at a complex level	1 6	2 7	3 8	4 9	S 10
Comment						
9.	Mark (/) at the processes which in your opinion involves analytical thinking? () Rote learning () detecting patterns () remembering facts () Memorizing formulas () acquisition of new knowledge	1 6	2 7	3 8	4 9	5 10
Comment	This question is appropriate.					

Appendix E1

10.	Mark (/) the process below that best explains analytical thinking skills. () Creative process () Learning process () Risk taking process () Anticipatory process () Communicating process	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
11.	Which activity below best represents analytical thinking skill? () Sci•ntific equations () Applications of formulas () Compare and contrast () Mathematical relationship () Examining little information to form a whole	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
12.	Which two activities need analytical skill? () Examining data () Storing past knowledge () Documenting outcomes () Solving complex problems. () Introduce new information	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
13.	Identify the two statements that best describe analytical skill. () Analytical skill helps to make rational decisions. () Analytical skill is learned to excel in school assessments. “) Analytical skill en help solve problems in workplace. () Analytical thinking is more for tertiary education rather than elementary schools. () Analytical skill in divergent thinking calls for serial and persistent processing of n single answer.	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	

Appendix E1

14.	Analytical skill can be enhanced from the activities below except () Rote learning () Brainstorming () Problem solving () Decision making () Working in groups	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
15.	Analytical skill consists of the following categories except () Research () Team work () Critical thinking () Logical reasoning () Following directives	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
16.	Analytical skill cannot be incorporated in a language context. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	16-25 make a different section in which all statements are answered using the likert scale.	
17.	Incorporating analytical skill does not help enhance English language proficiency. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	

Appendix E1

18.	Incorporating analytical skill is actually a burden to teachers. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	
19.	Analytical skill is better taught in science and Mathematics classes. 1 strongly disagree 2 : disagree 3. agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	
20.	Students find my lesson interesting when i incorporate analytical skill in my English lesson. 1 : strongly disagree 2. disagree 3. agree 4:strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	
21.	I design my lessons so that there is opportunity to incorporate analytical skill in my English lesson. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	
22.	I take into account prior knowledge of my students when designing my English lesson. 1 : strongly disagree 2. disagree 3. agree 4. Strongly disagree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	
23.	The instructional method and activities I use in my English	1 2 3 4 5

Appendix E1

	lesson reflect attention on analytical skill. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	6 7 8 9 10
Comment	Statement is appropriate	
24.	My questioning techniques enhance the development of student analytical skill. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	
25.	encourages my students to talk and share ideas in order for me to evaluate my students' analytical skills. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	


 Prof. Madya Dr. Raja Nor Safinas Binti Raja Harun
 Dekan
 Institut Pengajian Siswazah
 Universiti Pendidikan Sultan Idris

Expert Review - Classroom Observation Form

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1 2 3 4 5
Not at all A little Fairly to a great extent Totally

No.	I. Lesson Design	Ratings
1.	The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment	It is best that you have the scale at the top and all the statements that follow. Need to separate the variables in different statements.	
2.	The design of the lesson reflected careful planning and organization.	1 2 3 4 5 6 7 8 9 10
Comment	There are two variables.	
3.	The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.	1 2 3 4 5 6 7 8 9 10
	Too many variables in one statement	
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction.	1 2 3 4 5 6 7 8 9 10

Appendix E2

5.	The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies & materials).	1 2 3 4 5 6 7 8 9 10
	1 2 3 4 5	
	3 variables measure at the same time	
6.	The design of the lesson encouraged a collaborative approach to learning among the students.	1 2 3 4 1 6 7 8 9 10
	1 2 3 4 5	
Comment		
7.	Adequate time and structure were provided for "sense-making"	1 2 3 4 5 6 7 8 9 10
	1 2 3 4 5	
Comment	Meaning is not explicit	
8.	Adequate time and structure were provided for wrap-up.	1 2 3 4 5 6 7 8 9 10
	1 2 3 4 5	
Comment	Two variables cause ambiguity	
	II. Implementation of lesson	
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.	1 2 3 4 5 6 7 8 9 10
	1 2 3 4 5	
Comment	Tense	

Appendix E2

10.	The teacher appeared confident in his/her ability incorporate analytical skills in the reading comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment		
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson..	1 2 3 4 5 6 7 8 9 10
COMMOPI	Meaning not clear	
12	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.	1 2 3 4 5 6 7 8 9 10
Comment	3 different variables	
13	The teacher was able to 'read' the students' level of understanding and adjusted instruction accordingly.	1 2 3 4 5 6 7 8 9 10
Comment	Evaluate or assess	
14.	The teacher's questioning strategies were likely to enhance the development of the students' conceptual understanding of analytic skills.	1 2 3 4 5 6 7 8 9 10
Comment		
15.	II!. Content: English language and Analytical Skills	
	The language skills and analytical skills taught were significant and worthwhile in the reading and comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment	Not explicit	
	The language skills and analytical skills were	1 2 3 4 5

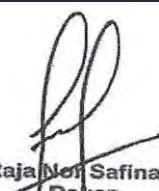
Appendix E2

16.	appropriate for the developmental levels of the students in this class. 1 2 3 4 5	6 7 8 9 10
Comment	Two different skills	
17.	Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading and comprehension lesson; 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment	Sentence structure	
18.	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading and comprehension lesson; 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
19.	The teacher displayed good understanding of the language and analytical skills' concepts in his/her dialogue with students, 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment	What if teachers' analytical skill is good but not the language skills or vice versa	
20.	Students' English Language proficiency was continually enriched by the use of analytical skills in the reading and comprehension lesson;; 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		

IV. Classroom Culture		
21.	Active participation of all was encouraged and valued by teacher.	1 2 3 4 5 6 7 8 9 10
Comment	What if encouraged but not valued or vice versa. Break the statements for clarity purposes.	
22.	There was a climate of respect for students' ideas, questions, and contributions during the lesson	1 2 3 4 5 6 7 8 9 10
Comment		
23.	Interactions reflected collaborative working relationships among students. (e.g. students worked together, talked	1 2 3 4 5 6 7 8 9 10
24.	Interactions reflected collaborative working relationships between teacher and students.	1 2 3 4 5 6 7 8 9 10
Comment		
25.	Intellectual rigor, constructive criticism, and the challenging of ideas were evident.	1 2 3 4 5 6 7 8 9 10
Comment	There are 3 variables. Break the statement into 3.	

Appendix E2

	V. Learning Outcome	
26..	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
28..	Students improved their performance in the reading and comprehension lesson using the analytical skills. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
29.	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
30..	Students gained self-confidence in using the analytical skills through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		


 Prof. Madya Dr. Raja Nor Safinas Binti Raja Harun
 Dekan
 Institut Pengajian Siswazah
 Universiti Pendidikan Sultan Idris

Expert Review: Classroom Teacher Interview Protocol

It is best to have instructions and introduction before the questions.

N0.	Interview Questions	Rating
	P-1: Resources used to design the Lesson	
1.	What resources did you use to plan this lesson?	1 2 3 4 5 6 7 8 9 10
Comment		
2.	Were these resources/materials/activities designated for this class/course or did you use them your staff?	1 2 3 4 5 6 7 8 9 10
Comment	Question not clear	
3	What do you like about these resources/materials/activities? What do you not like?	1 2 3 4 5 6 7 8 9 10
Comment		
4.	Did you plan this lesson essentially as it was organized in the Student Book or did you modify it in important ways?	1 2 3 4 5 6 7 8 9 10
Comment		
5.	<i>If modified:</i> Can you describe the modifications you made and your reasons for making the modifications?	1 2 3 4 5 6 7 8 9 10
Comment		
	P- 2 : Implementation of the lesson	
6.	Did you select the topic for this lesson? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
7.	How do you feel about teaching this topic? Did you enjoy teaching it? Why?	1 2 3 4 5 6 7 8 9 10
Comment		

Appendix E3

8.	How well prepared do you feel to guide student learning analytical skills in the reading comprehension lesson?	1 2 3 4 5 6 7 8 9 10
	Paraphrasing is needed	
9.	Which part of the lesson do you feel your students enjoyed most? 'Why?	1 2 3 4 5 6 7 8 9 10
Comment		
10.	What are the analytical skills that you included in this reading comprehension lessons? Was it difficult to incorporate analytical skills in the reading comprehension lessons? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
	C. Content/Topic	
11	What lett you to teach analytical skills in the reading comprehension lesson?	1 2 3 4 5 6 7 8 9 10
Comment		
12.	Is it included in the curriculum/course of study and how important was that in your decision to teach analytical skills with this topic?	1 2 3 4 5 6 7 8 9 10
Comment	Paraphrasing needed	
13,	Please help vie understand where this lesson fits in the sequence of the unit you are working on. What have the students experienced prior to today's lesson'?	1 2 3 4 5 6 7 8 9 10
Comment		

Appendix E3

14.	Do you include analytical skills only during the reacting comprehension lesson or also when teaching other language skills? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
15.	Are analytical skills tested in the English language assessments (both School/National level assessment). And what are the consequences if students don't do well in the test?	1 2 3 4 5 6 7 8 9 10
Comment		
P-IV Classroom Culture		
16.	Tell me about the ability levels of students in this class and how do they compare to students in the school as a whole?	1 2 3 4 5 6 7 8 9 10
Comment		
17.	How proficient are these students in the English language and how do they feel about learning English?	1 2 3 4 5 6 7 8 9 10
Comment		
18.	What kind of language activities do your students enjoy most and why?	1 2 3 4 5 6 7 8 9 10
	I think you have asked this question earlier on	

Appendix E3

19.	How do the students relate to each other in the classrooms? Are they friendly amongst themselves or have groups and how does it affect the lessons?	1 2 3 4 5 6 7 8 9 10
Comment		
20.	How conducive is your classroom for teaching and learning? (arrangement of chairs and tables/ fans /aircond, safety, noise level, facilities, equipment) that can enhance the teaching of English?	1 2 3 4 5 6 7 8 9 10
Comment		
P-V : Learning Outcome		
21.	How do you feel about how the lesson turned out, today? Do you think you achieved the objective of the lesson? Explain Why?	1 2 3 4 5 6 7 8 9 10
Comment		
22.	Do you think you need to teach this topic again for the students to get a better understanding of the focused skills? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
23	Does incorporating analytical skills in the reading comprehension lesson help the students to acquire the language easier?	1 2 3 4 5 6 7 8 9 10
Comment		

Appendix E3

24.	Which analytical skills you find easier to teach and which analytical skills were difficult to incorporate? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
25	What is the biggest challenge in teaching analytical skills in the English lesson? (e.g. students English language proficiency, students' attitude towards learning English, availability of resources, etc? And how do you propose to overcome these challenges?	1 2 3 4 5 6 7 8 9 10
Comment		



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Prof. Madya Dr. Raja Nor Safinas Binti Raja Harun
Dekan
Institut Pengajian Siswazah
Universiti Pendidikan Sultan Idris



APPENDIX F

Ruj. Kami : UUM/SLCP/P-48
Tarikh : 3 Ogos 2021

Yang Berusaha
Dr. Daljeet Singh Sedhu
Senior Lecturer
Academy of Language Studies
Universiti Teknologi MARA,
Perak Branch, 32610 Seri Iskandar

YBrs. Dr.,

LANTIKAN SEBAGAI PAKAR PENILAI UNTUK INSTRUMEN-INSTRUMEN PENYELIDIKAN CALON KEDOKTORAN (SACHITHANANTHAM TACHINA MOORTHY)

Dengan segala hormatnya merujuk perkara di atas.

2. Adalah dimaklumkan bahawa pelajar seperti butiran berikut merupakan calon Kedoktoran di Pusat Pengajian Bahasa, Tamadun dan Falsafah (SLCP), Awang Had Salleh Graduate School, Universiti Utara Malaysia (UUM).

Nama Pelajar : Sachithanantham a/l Tachina Moorthi
No. Matrik : 901577
Program : Ph.D in Applied Linguistics
Tajuk Penyelidikan : *Teaching of Analytical Skills in the Reading Comprehension Lesson*
Lesson : *A Case Study in Kuala Muda District, KEDAH.*
Penyelia : Dr. Rafizah binti Mohd Rawian

3. Sehubungan dengan itu YBrs. Dr. telah dilantik sebagai Pakar Penilai bagi instrumen-instrumen berkenaan. Bersama ini disertakan dokumen-dokumen berikut untuk tindakan YBrs. Dr. :

- i) Questionnaire
- ii) Classroom Observation Form
- iii) Teacher Interview Protocol

Kerjasama dan perhatian yang diberikan oleh YBrs. Dr. amatlah dihargai dan didahului dengan ucapan terima kasih.

"BERKHIDMAT UNTUK NEGARA"
"PERHATIAN RAKYAT: DARURAT MEMERANGI COVID-19"
"WAWASAN KEMAKMURAN BERSAMA 2030"
"KEDAH SEJAHTERA – NIKMAT UNTUK SEMUA"
"ILMU BUDI BAKTI"

Saya yang menjalankan amanah,

(**PROF. DR. SHUKRI AHMAD**)

Dekan

Pusat Pengajian Bahasa, Tamadun dan Falsafah
Universiti Utara Malaysia

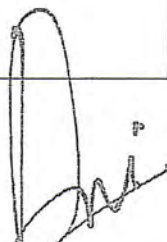
Expert Review of 'ESL Teachers' Analytical Skill - Knowledge and Perception
Questionnaire (Please circle the appropriate value and comment where necessary)

No.	Items	Rating										
1.	How long have you been teaching?	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td><u>10</u></td> </tr> </table>	1	2	3	4	5	6	7	8	9	<u>10</u>
1	2	3	4	5								
6	7	8	9	<u>10</u>								
2.	How long have you been teaching English?	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td><u>10</u></td> </tr> </table>	1	2	3	4	5	6	7	8	9	<u>10</u>
1	2	3	4	5								
6	7	8	9	<u>10</u>								
3.	What Forms are you teaching English in this school?	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td><u>10</u></td> </tr> </table>	1	2	3	4	5	6	7	8	9	<u>10</u>
1	2	3	4	5								
6	7	8	9	<u>10</u>								
4.	How long have you been teaching English at this Form?	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td><u>10</u></td> </tr> </table>	1	2	3	4	5	6	7	8	9	<u>10</u>
1	2	3	4	5								
6	7	8	9	<u>10</u>								
5.	How many students are in your class?	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td><u>7</u></td><td>8</td><td>9</td><td>10</td> </tr> </table>	1	2	3	4	5	6	<u>7</u>	8	9	10
1	2	3	4	5								
6	<u>7</u>	8	9	10								
6.	Have you attended any professional development course in incorporating analytical skills in your English lesson? If yes, what course was it and who were the organisers?	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td><u>10</u></td> </tr> </table>	1	2	3	4	5	6	7	8	9	<u>10</u>
1	2	3	4	5								
6	7	8	9	<u>10</u>								
Comment:	I suggest that you have instructions at the beginning and the purpose of this questionnaire. You need to divide the questionnaire according to construct. E.g. the first section is the demographic section. This should be in the form of open ended questions rather than rating.											
7.	Do you need any course to incorporate analytical skills in your English lessons? Why	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td><u>8</u></td><td>9</td><td>10</td> </tr> </table>	1	2	3	4	5	6	7	<u>8</u>	9	10
1	2	3	4	5								
6	7	<u>8</u>	9	10								
Comment	You need to have this question as Yes or no option. Then only the why question											
8.	Mark (✓) at the statement below that best defines analytical skills. () Thinking critically () Thinking for learning () Thinking out of the box () Thinking at a complex level	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td><u>10</u></td> </tr> </table>	1	2	3	4	5	6	7	8	9	<u>10</u>
1	2	3	4	5								
6	7	8	9	<u>10</u>								
Comment												
9.	Mark (✓) at the processes which in your opinion involves analytical thinking? () Rote learning () detecting patterns () remembering facts () Memorizing formulas () acquisition of new knowledge	<table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td><u>10</u></td> </tr> </table>	1	2	3	4	5	6	7	8	9	<u>10</u>
1	2	3	4	5								
6	7	8	9	<u>10</u>								
Comment	This question is appropriate.											

10.	Mark (✓) the process below that best explains analytical skill () Creative process () Learning process () Risk taking process () Anticipatory process () Communicating process	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
11.	Which activity below best represents analytical skill? () Scientific equations () Applications of formulas () Compare and contrast () Mathematical relationship () Examining little information to form a whole	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
12.	Which two activities need analytical skill? () Examining data (meaning?) () Storing past knowledge () Documenting outcomes () Solving complex problems. () Introduce new information	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
13.	Identify the two statements that best describe analytical skill. () Analytical skill helps to make rational decisions. () Analytical skill is learned to excel in school assessments. () Analytical skill can help solve problems in workplace. () Analytical thinking is more for tertiary education rather than elementary schools. () Analytical skill in divergent thinking calls for serial and persistent processing of a single answer.	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	

14.	Analytical skill can be enhanced from the activities below except () Rote learning () Brainstorming () Problem solving () Decision making () Working in groups	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
15.	Analytical skill consists of the following categories except () Research () Team work () Critical thinking () Logical reasoning () Following directives	1 2 3 4 5 6 7 8 9 10
Comment	This question is appropriate.	
16.	Analytical skill cannot be incorporated in a language context. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	16- 25 make a different section in which all statements are answered using the likert scale.	
17.	Incorporating analytical skill does not help enhance English language proficiency. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10
Comment	Statement is appropriate	

18.	Incorporating analytical skill is actually a burden to teachers. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10/
Comment	Statement is appropriate	
19.	Analytical skill is better taught in Science and Mathematics classes. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10/
Comment	Statement is appropriate	
20.	Students find my lesson interesting when i incorporate analytical skill in my English lesson. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10/
Comment	Statement is appropriate	
21.	I design my lessons so that there is opportunity to incorporate analytical skill in my English lesson. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10/
Comment	Statement is appropriate	
22.	I take into account prior knowledge of my students when designing my English lesson. 1 : strongly disagree 2 : disagree	1 2 3 4 5 6 7 8 9 10/



	3 : agree 4 : strongly agree	
Comment	Statement is appropriate	
23.	The instructional method and activities I use in my English lesson reflect attention on analytical skill. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10 /
Comment	Statement is appropriate	
24.	My questioning techniques enhance the development of student analytical skill. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10 /
Comment	Statement is appropriate	
25.	I encourage my students to talk and share ideas in order form me to evaluate my students' analytical skills. 1 : strongly disagree 2 : disagree 3 : agree 4 : strongly agree	1 2 3 4 5 6 7 8 9 10 /
Comment	Statement is appropriate	

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Akademi Pengajian Bahasa
Universiti Teknologi Mara (UiTM)
Cawangan Porsak Kampus Seri Iskandar

Expert Review - Classroom Observation Form

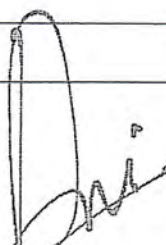
In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1 2 3 4 5
 Not at all A little Fairly to a great extent Totally

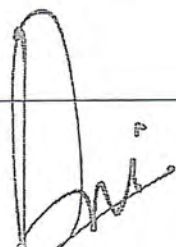
No.	I. Lesson Design	Ratings
1.	The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson.	1 2 3 4 5 1 2 3 4 5 6 7 8 9 10
Comment	It is best that you have the scale at the top and all the statements that follow. Need to separate the variables in different statements.	
2.	The design of the lesson reflected careful planning and organization.	1 2 3 4 5 1 2 3 4 5 6 7 8 9 10
Comment	There are two variables.	
3.	The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.	1 2 3 4 5 1 2 3 4 5 6 7 8 9 10
Comment	Too many variables in one statement	
4.	The resources available in this lesson contributed to accomplishing the purposes of the instruction.	1 2 3 4 5 1 2 3 4 5 6 7 8 9 10
Comment		

5.	The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies & materials).	1 2 3 4 5 6 7 8 9 10
Comment	3 variables measure at the same time	
6.	The design of the lesson encouraged a collaborative approach to learning among the students.	1 2 3 4 5 6 7 8 9 10
Comment		
7.	Adequate time and structure were provided for "sense-making"	1 2 3 4 5 6 7 8 9 10
Comment	Meaning is not explicit	
8.	Adequate time and structure were provided for wrap-up.	1 2 3 4 5 6 7 8 9 10
Comment	Two variables cause ambiguity	
II. Implementation of lesson		
9.	The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment	Tense	

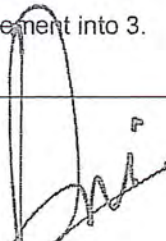
10.	The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment		
11.	The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson..	1 2 3 4 5 6 7 8 9 10
Comment	Meaning not clear	
12.	The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.	1 2 3 4 5 6 7 8 9 10
Comment	3 different variables	
13.	The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.	1 2 3 4 5 6 7 8 9 10
Comment	Evaluate or assess	
14.	The teacher's questioning strategies were likely to enhance the development of the students' conceptual understanding of analytic skills.	1 2 3 4 5 6 7 8 9 10
Comment		
III. Content: English language and Analytical Skills		
15.	The language skills and analytical skills taught were significant and worthwhile in the reading and comprehension lesson.	1 2 3 4 5 6 7 8 9 10
Comment	Not explicit	



16.	The language skills and analytical skills were appropriate for the developmental levels of the students in this class.	1 2 3 4 5 6 7 8 9 10
Comment	Two different skills	
17.	Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading and comprehension lesson;	1 2 3 4 5 6 7 8 9 10
Comment	Sentence structure	
18.	Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading and comprehension lesson;	1 2 3 4 5 6 7 8 9 10
Comment		
19.	The teacher displayed good understanding of the language and analytical skills' concepts in his/her dialogue with students.	1 2 3 4 5 6 7 8 9 10
Comment	What if teachers' analytical skill is good but not the language skills or vice versa	
20.	Students' English Language proficiency was continually enriched by the use of analytical skills in the reading and comprehension lesson;.	1 2 3 4 5 6 7 8 9 10
Comment		



	IV. Classroom Culture	
21.	Active participation of all was encouraged and valued by teacher. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment	What if encouraged but not valued or vice versa. Break the statements for clarity purposes.	
22.	There was a climate of respect for students' ideas, questions, and contributions during the lesson 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
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Comment		
25.	Intellectual rigor, constructive criticism, and the challenging of ideas were evident. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment	There are 3 variables. Break the statement into 3.	

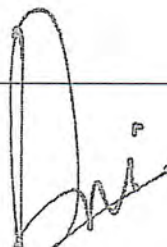


V. Learning Outcome		
26..	Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
27.	Students acquired sound understanding of analytical skills through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
28..	Students improved their performance in the reading and comprehension lesson using the analytical skills. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
29..	Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		
30.	Students gained self-confidence in using the analytical skills through the reading comprehension lesson. 1 2 3 4 5	1 2 3 4 5 6 7 8 9 10
Comment		

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DR. DALJEET SINGH SEDHU A/L JANAH SINGH
Pensyarah Kanan
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Universiti Teknologi Mara (UiTM)
Cawangan Perak Kampus Seri Iskandar



Expert Review: Classroom Teacher Interview Protocol :
It is best to have instructions and introduction before the questions.

NO.	Interview Questions	Rating
P-1: Resources used to design the Lesson		
1.	What resources did you use to plan this lesson?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment		
2.	Were these resources/materials/activities designated for this class/course or did you them yourself?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment	Question not clear	
3.	What do you like about these resources/materials/activities? What do you not like?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment		
4.	Did you plan this lesson essentially as it was organized in [the Student Book or did you modify it in important ways?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment		
5.	<i>If modified:</i> Can you describe the modifications you made and your reasons for making the modifications?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment		
P- 2 : Implementation of the lesson		
6.	Did you select the topic for this lesson? Why?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment		
7.	How do you feel about teaching this topic? Did you enjoy teaching it? Why?	1 2 3 4 5 6 7 8 <u>9</u> 10
Comment		

8.	How well prepared do you feel to guide student learning analytical skills in the reading comprehension lesson?	1 2 3 4 5 6 7 8 9 10
Comment	Paraphrasing is needed	
9.	Which part of the lesson do you feel your students' enjoyed most? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
10.	What are the analytical skills that you included in this reading comprehension lessons? Was it difficult to incorporate analytical skills in the reading comprehension lessons? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
C. Content/Topic		
11.	What led you to teach analytical skills in the reading comprehension lesson?	1 2 3 4 5 6 7 8 9 10
Comment		
12.	Is it included in the curriculum/course of study and how important was that in your decision to teach analytical skills with this topic?	1 2 3 4 5 6 7 8 9 10
Comment	Paraphrasing needed	
13.	Please help me understand where this lesson fits in the sequence of the unit you are working on. What have the students experienced prior to today's lesson?	1 2 3 4 5 6 7 8 9 10
Comment		

14.	Do you include analytical skills only during the reading comprehension lesson or also when teaching other language skills? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
15.	Are analytical skills tested in the English language assessments (both School/National level assessment). And what are the consequences if students don't do well in the test?	1 2 3 4 5 6 7 8 9 10
Comment		
P-IV : Classroom Culture		
16.	Tell me about the ability levels of students in this class and how do they compare to students in the school as a whole?	1 2 3 4 5 6 7 8 9 10
Comment		
17.	How proficient are these students in the English language and how do they feel about learning English?	1 2 3 4 5 6 7 8 9 10
Comment		
18.	What kind of language activities do your students enjoy most and why?	1 2 3 4 5 6 7 8 9 10
Comment	I think you have asked this question earlier on	

19.	How do the students relate to each other in the classroom? Are they friendly amongst themselves or have groups and how does it affect the lessons?	1 2 3 4 5 6 7 8 9 10
Comment		
20.	How conducive is your classroom for teaching and learning? (arrangement of chairs and tables/ fans /aircond, safety, noise level, facilities, equipment) that can enhance the teaching of English?	1 2 3 4 5 6 7 8 9 10
Comment		
P-V : Learning Outcome		
21.	How do you feel about how the lesson turned out, today? Do you think you achieved the objective of the lesson? Explain Why?	1 2 3 4 5 6 7 8 9 10
Comment		
22.	Do you think you need to teach this topic again for the students to get a better understanding of the focussed skills? Why?	1 2 3 4 5 6 7 8 9 10
Comment		
23.	Does incorporating analytical skills in the reading comprehension lesson help the students to acquire the language easier?	1 2 3 4 5 6 7 8 9 10

[Signature]

Comment		
24.	Which analytical skills you find easier to teach and which analytical skills were difficult to incorporate? Why?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment		
25.	What is the biggest challenge in teaching analytical skills in the English lesson? (e.g. students English language proficiency, students' attitude towards learning English, availability of resources, etc? And how do you propose to overcome these challenges?	1 2 3 4 5 6 7 8 9 <u>10</u>
Comment		

Disahkan benar seperti salinan asal

DR. DALJEET SINGH SEDHU A/L. JANAH SINGH
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Akademi Pengajian Bahasa
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Cawangan Perak Kampus Seri Iskandar

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No	Knowledge Level Test												Total	Total (%)	Perception								Total	Means
	Item 8	Item 9	Item 10	Item 11	Item 12 (a)	Item 12 (b)	Item 13 (a)	Item 13 (b)	Item 14	Item 15	Perception													
											Item 16	Item 17			Item 18	Item 19	Item 20	Item 21	Item 22	Item 23	Item 24	Item 25		
1	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	3.00	3.00	3.00	2.00	4.00	3.00	3.00	4.00	4.00	4.00	33.00	3.30
2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	90.00	4.00	3.00	3.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	36.00	3.60
3	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	80.00	4.00	4.00	3.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	37.00	3.70
4	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	80.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	50.00	4.00	4.00	4.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	39.00	3.90
6	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
7	-	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	80.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
8	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
9	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
11	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
12	1.00	1.00	1.00	-	1.00	1.00	1.00	1.00	-	1.00	1.00	80.00	3.00	3.00	3.00	3.00	4.00	3.00	4.00	4.00	4.00	4.00	35.00	3.50
13	1.00	1.00	1.00	1.00	4.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
16	1.00	-	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	80.00	3.00	3.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	36.00	3.60
17	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	3.00	3.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	36.00	3.60
18	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
20	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
21	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
22	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00	-	1.00	1.00	80.00	4.00	4.00	4.00	3.00	2.00	4.00	3.00	4.00	4.00	4.00	34.00	3.40
23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	3.00	2.00	4.00	3.00	4.00	4.00	4.00	36.00	3.60
24	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	3.00	2.00	4.00	4.00	4.00	4.00	4.00	37.00	3.70
25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	3.00	2.00	4.00	4.00	4.00	4.00	4.00	36.00	3.60
26	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	3.00	2.00	4.00	4.00	4.00	4.00	4.00	36.00	3.60
27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	3.00	3.00	4.00	4.00	38.00	3.80
28	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	3.00	2.00	4.00	3.00	3.00	4.00	4.00	4.00	34.00	3.40
29	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	3.00	2.00	4.00	3.00	4.00	4.00	4.00	35.00	3.50
30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
31	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	39.00	3.90
32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	39.00	3.90
33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
34	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	39.00	3.90
35	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
36	1.00	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	36.00	3.60
37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00	38.00	3.80
38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	38.00	3.80
39	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00	38.00	3.80
40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	38.00	3.80
41	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	38.00	3.80
42	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	38.00	3.80
43	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	80.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
46	1.00	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	90.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
47	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
48	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	40.00	4.00
49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.00	4.00	4.00	4.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00	39.00	3.90
												100.00	4.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	33.00	3.30

APPENDIX G

[illegible]

APPENDIX G

[illegible]

APPENDIX H

Questionnaire	ER 1	ER 2	ER 3	Total	Mean
Appendix A					
1	10.00	10.00	10.00	30.00	10.00
2	10.00	10.00	10.00	30.00	10.00
3	10.00	10.00	10.00	30.00	10.00
4	10.00	10.00	10.00	30.00	10.00
5	10.00	8.00	7.00	25.00	8.33
6	10.00	10.00	10.00	30.00	10.00
7	10.00	10.00	8.00	28.00	9.33
8	10.00	10.00	10.00	30.00	10.00
9	10.00	10.00	10.00	30.00	10.00
10	10.00	10.00	10.00	30.00	10.00
11	10.00	10.00	10.00	30.00	10.00
12	10.00	10.00	8.00	28.00	9.33
13	10.00	10.00	10.00	30.00	10.00
14	10.00	10.00	10.00	30.00	10.00
15	10.00	10.00	10.00	30.00	10.00
16	10.00	10.00	10.00	30.00	10.00
17	10.00	10.00	10.00	30.00	10.00
18	10.00	10.00	10.00	30.00	10.00
19	10.00	10.00	10.00	30.00	10.00
20	10.00	10.00	10.00	30.00	10.00
21	10.00	10.00	10.00	30.00	10.00
22	10.00	7.00	10.00	27.00	9.00
23	10.00	10.00	10.00	30.00	10.00
24	10.00	10.00	10.00	30.00	10.00
25	10.00	6.00	8.00	24.00	8.00
	250.00	241.00	241.00	2.71	0.90
				27.00	9.00

0.93711

APPENDIX J

Questionnaire Appendix B	ER 1	ER 2	ER 3	Total	Means
1	9.00	7.00	9.00	25.00	8.33
2	7.00	7.00	7.00	21.00	7.00
3	9.00	7.00	9.00	25.00	8.33
4	10.00	9.00	10.00	29.00	9.67
5	10.00	10.00	10.00	30.00	10.00
6	10.00	10.00	10.00	30.00	10.00
7	10.00	10.00	10.00	30.00	10.00
8	10.00	10.00	10.00	30.00	10.00
9	10.00	10.00	10.00	30.00	10.00
10	10.00	10.00	10.00	30.00	10.00
11	10.00	10.00	10.00	30.00	10.00
12	10.00	10.00	10.00	30.00	10.00
13	10.00	10.00	10.00	30.00	10.00
14	10.00	10.00	10.00	30.00	10.00
15	10.00	10.00	10.00	30.00	10.00
16	10.00	10.00	10.00	30.00	10.00
17	10.00	10.00	10.00	30.00	10.00
18	10.00	10.00	10.00	30.00	10.00
19	10.00	10.00	10.00	30.00	10.00
20	10.00	10.00	10.00	30.00	10.00
21	10.00	9.00	10.00	29.00	9.67
22	10.00	9.00	10.00	29.00	9.67
23	10.00	10.00	10.00	30.00	10.00
24	10.00	10.00	10.00	30.00	10.00
25	10.00	10.00	10.00	30.00	10.00
26	10.00	10.00	10.00	30.00	10.00
27	10.00	10.00	10.00	30.00	10.00
28	10.00	10.00	10.00	30.00	10.00
29	10.00	10.00	10.00	30.00	10.00
30	10.00	10.00	10.00	30.00	10.00
	295.00	288.00	295.00	4.06	1.35
				16.33	5.44

0.7772874

Appendix K1. Evaluation of
Ms. Mastura's Lesson 1

English Language Teachers' Classroom Observation Form (ELT-COP)

School: —

District/State : K Nuda

Teacher: — Ms. Mastura

Gender: Male Female

Age: 55 yrs

Years of Teaching English: 25 yrs

Observation Date/Time: 24/11/21 (9.30 am - 10.30 am)

PART ONE: Basic Descriptive Information

1. Subject Observed: English

2. Grade Level(s): Form I

3. Class Enrolment: 29 Males: 13 Females: 16

4. Topic: Literature (People & Culture)

5. Focussed Language Skill: Reading

6. Focussed Thinking Skill: Analytical Thinking

7. Have you prepared a lesson plan for this lesson? ☒ Yes ☐ No.

Explain:

Tchrs Ans: We use this lesson plan standardised
by our English language panel for all our
English language use.

8. What is the purpose of this lesson ?

Explain:

To promote analytical thinking skill
in the reading comprehension lesson.

Part TWO: Lesson Ratings by Researcher/Observer

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1	2	3	4	5
Not at all	A little	Fairly	to a great extent	Totally

P-1. Lesson Design (Items 1 -8)

1. The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson..

1	2	3	4	5
---	---	---	---	---

2. The design of this lesson reflected careful planning and organization.

1	2	3	4	5
---	---	---	---	---

3. The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.

1	2	3	4	5
---	---	---	---	---

4. The resources available in this lesson contributed to accomplishing the purposes of the instruction.

1	2	3	4	5
---	---	---	---	---

5. The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies/materials).

1	2	3	4	5
---	---	---	---	---

6. The design of the lesson encouraged a collaborative approach to learning among the students.

1	2	3	4	5
---	---	---	---	---

7. Adequate time and structure were provided for "sense-making"

1	2	3	4	5
---	---	---	---	---

8. Adequate time and structure were provided for wrap-up.

1	2	3	4	5
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Appendix K1. Evaluation of
Ms. Mastura's Lesson 1:

P-II. Implementation of Lesson (Items 9 – 14)

9. The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

10. The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

11. The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.

12. The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.

1 2 3 ~~4~~ 5

13. The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.

1 2 3 ~~4~~ 5

14. The teacher's questioning strategies were likely to enhance the development of students conceptual understanding of analytical skills.

1 2 3 ~~4~~ 5

26
—
30

P-III. Content : English language and Analytical Skills (Items 15 - 20)

15. The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.

1 2 3 4 ~~5~~

16. The language skills and analytical skills were appropriate for the developmental levels of the students in this class.

1 2 3 4 ~~5~~

17. Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

18. Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

19. The teacher displayed good understanding of the language and analytical skills concepts in his/her dialogue with students.

1 2 3 ~~4~~ 5

20. Students' English Language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson..

1 2 3 ~~4~~ 5 $\frac{27}{30}$

P-IV. Classroom Culture (Items 21 – 25)

21. Active participation of all students was encouraged and valued by teacher.

1 2 3 4 ~~5~~

22. There was a climate of respect for students' ideas, questions, and contributions during the lesson.

1 2 3 4 ~~5~~

Appendix K1. Evaluation of
Ms. Mastura's Lesson 1

23. Interactions reflected collaborative working relationships among students (e.g. students worked together, talked with each other about the lesson).

1 2 3 ~~4~~ 5

24. Interactions reflected collaborative working relationships between teacher and students.

1 2 3 ~~4~~ 5

25. Intellectual rigor, constructive criticism, and the challenging of ideas were evident.

1 2 3 ~~4~~ 5 $\frac{22}{25}$

P-V. Learning Outcome (Items 26 - 30)

1 2 3 4 5
Very poor Poor Satisfactory Good Excellent

26. Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

27. Students' acquired sound understanding of analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ ~~5~~

28. Students' improved their performance in the reading comprehension lesson using the analytical skills.

1 2 3 4 ~~5~~

29. Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.

1 2 3 ~~4~~ 5

30. Students' gained self-confidence in using the analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ 5 $\frac{21}{25}$

Appendix K2. Evaluation of
Ms. Mastura's Lesson 2.

English Language Teachers' Classroom Observation Form (ELT-COP)

School: —

District/State: K/Muda

Teacher: Ms. Mastura

Gender: Male Female

Age: 55

Years of Teaching English: 25

Observation Date/Time: 1/12/21 (9.00 am - 10.30 am)

PART ONE: Basic Descriptive Information

1. Subject Observed: English

2. Grade Level(s): Form I

3. Class Enrolment: 29 Males: 13 Females: 16

4. Topic: Free-time Activities (People & Culture)

5. Focussed Language Skill: Reading

6. Focussed Thinking Skill: Analytical Thinking

7. Have you prepared a lesson plan for this lesson? ☒ Yes ☐ No

Explain:

Eng. Language Panel provides standardised
Lesson plan format.

8. What is the purpose of this lesson?

Explain:

To teach analytical thinking skills
in the reading comprehension lesson.

Appendix K2. Evaluation of Ms. Mastura's Lesson 2. / Appendix 3

Part TWO: Lesson Ratings by Researcher/Observer

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1	2	3	4	5
Not at all	A little	Fairly	to a great extent	Totally

P-1. Lesson Design (Items 1 -8)

1. The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson..

1	2	3	4	5
---	---	---	---	--------------

2. The design of this lesson reflected careful planning and organization.

1	2	3	4	5
---	---	---	---	--------------

3. The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.

1	2	3	4	5
---	---	---	---	--------------

4. The resources available in this lesson contributed to accomplishing the purposes of the instruction.

1	2	3	4	5
---	---	---	---	--------------

5. The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies/materials).

1	2	3	4	5
---	---	---	--------------	---

6. The design of the lesson encouraged a collaborative approach to learning among the students.

1	2	3	4	5
---	---	---	---	--------------

7. Adequate time and structure were provided for "sense-making"

1	2	3	4	5
---	---	---	---	--------------

8. Adequate time and structure were provided for wrap-up.

1	2	3	4	5
---	---	---	---	--------------

*Appendix K 2. Evaluation of
Ms. Mastura's Lesson 2.*

P-II. Implementation of Lesson (Items 9 – 14)

9. The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

10. The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

11. The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.

12. The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.

1 2 3 ~~4~~ ~~5~~

13. The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.

1 2 3 ~~4~~ 5

14. The teacher's questioning strategies were likely to enhance the development of students conceptual understanding of analytical skills.

1 2 3 ~~4~~ 5

$\frac{27}{30}$

*Appendix K2. Evaluation of
Ms. Mastura's Lesson 2,*

P-III. Content : English language and Analytical Skills (Items 15 - 20)

15. The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.

1 2 3 4 ~~5~~

16. The language skills and analytical skills were appropriate for the developmental levels of the students in this class.

1 2 3 4 ~~5~~

17. Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

18. Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

19. The teacher displayed good understanding of the language and analytical skills concepts in his/her dialogue with students.

1 2 3 4 ~~5~~

20. Students' English Language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson..

1 2 3 ~~4~~ 5 $\frac{27}{20}$

P-IV. Classroom Culture (Items 21 - 25)

21. Active participation of all students was encouraged and valued by teacher.

1 2 3 4 ~~5~~

22. There was a climate of respect for students' ideas, questions, and contributions during the lesson.

1 2 3 4 ~~5~~

Appendix K2. Evaluation of
Ms. Mastura's Lesson 2.

23. Interactions reflected collaborative working relationships among students (e.g. students worked together, talked with each other about the lesson).

1 2 3 4 ~~5~~

24. Interactions reflected collaborative working relationships between teacher and students.

1 2 3 ~~4~~ 5

25. Intellectual rigor, constructive criticism, and the challenging of ideas were evident.

1 2 3 ~~4~~ 5 $\frac{23}{25}$

P-V. Learning Outcome (Items 26 - 30)

1 2 3 4 5
Very poor Poor Satisfactory Good Excellent

26. Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

27. Students' acquired sound understanding of analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ 5

28. Students' improved their performance in the reading comprehension lesson using the analytical skills.

1 2 3 4 ~~5~~

29. Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.

1 2 3 ~~4~~ 5

30. Students' gained self-confidence in using the analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ 5 $\frac{22}{25}$

Appendix L1
Evaluation of Ms. Norma's Lesson 1 Appendix 3

English Language Teachers' Classroom Observation Form (ELT-COP)

School: —

District/State: Kuala Lumpur

Teacher: Ms. Norma

Gender: Male Female

Age:

Years of Teaching English:

Observation Date/Time: 29/11/21 (9.00 – 10.30am)

PART ONE: Basic Descriptive Information

1. Subject Observed: English

2. Grade Level(s): Form I

3. Class Enrolment: 31 Males: 11 Females: 20

4. Topic: Cultural Awareness (People & Culture, Science & Technology)

5. Focussed Language Skill: Reading

6. Focussed Thinking Skill: Analytical skill

7. Have you prepared a lesson plan for this lesson? ☒ Yes ☐ No

Explain:

We have standard Lesson plan format
in our school.

8. What is the purpose of this lesson?

Explain:

To teach analytical skills (compare & contrast)
when doing English reading comprehension
lesson.

Appendix L1 Evaluation of Ms. Norma's Lesson 1

Part TWO: Lesson Ratings by Researcher/Observer

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1	2	3	4	5
Not at all	A little	Fairly	to a great extent	Totally

P-1. Lesson Design (Items 1 -8)

1. The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson..

1	2	3	4	5
---	---	---	---	---

2. The design of this lesson reflected careful planning and organization.

1	2	3	4	5
---	---	---	---	---

3. The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.

1	2	3	4	5
---	---	---	---	---

4. The resources available in this lesson contributed to accomplishing the purposes of the instruction.

1	2	3	4	5
---	---	---	---	---

5. The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies/materials).

1	2	3	4	5
---	---	---	---	---

6. The design of the lesson encouraged a collaborative approach to learning among the students.

1	2	3	4	5
---	---	---	---	---

7. Adequate time and structure were provided for "sense-making"

1	2	3	4	5
---	---	---	---	---

8. Adequate time and structure were provided for wrap-up.

1	2	3	4	5
---	---	---	---	---

Appendix L1 Evaluation of Ms. Norma's Lesson 1

P-II. Implementation of Lesson (Items 9 – 14)

9. The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

10. The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

11. The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

12. The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.

1 2 3 ~~4~~ 5

13. The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.

1 2 3 ~~4~~ 5

14. The teacher's questioning strategies were likely to enhance the development of students conceptual understanding of analytical skills.

1 2 3 ~~4~~ 5

24
30

P-III. Content : English language and Analytical Skills (Items 15 - 20)

15. The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.

1 2 3 ~~4~~ 5

16. The language skills and analytical skills were appropriate for the developmental levels of the students in this class.

1 2 3 ~~4~~ 5

17. Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

18. Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

19. The teacher displayed good understanding of the language and analytical skills concepts in his/her dialogue with students.

1 2 3 ~~4~~ 5

20. Students' English Language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson..

1 2 3 ~~4~~ 5

$\frac{24}{30}$

P-IV. Classroom Culture (Items 21 – 25)

21. Active participation of all students was encouraged and valued by teacher.

1 2 3 ~~4~~ 5

22. There was a climate of respect for students' ideas, questions, and contributions during the lesson.

1 2 3 ~~4~~ 5

23. Interactions reflected collaborative working relationships among students (e.g. students worked together, talked with each other about the lesson).

1 2 3 ~~4~~ 5

24. Interactions reflected collaborative working relationships between teacher and students.

1 2 3 ~~4~~ 5

25. Intellectual rigor, constructive criticism, and the challenging of ideas were evident.

1 2 3 ~~4~~ 5

$\frac{20}{25}$

P-V. Learning Outcome (Items 26 - 30)

1 2 3 4 5
Very poor Poor Satisfactory Good Excellent

26. Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

27. Students' acquired sound understanding of analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ 5

28. Students' improved their performance in the reading comprehension lesson using the analytical skills.

1 2 3 ~~4~~ 5

29. Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.

1 2 3 ~~4~~ 5

30. Students' gained self-confidence in using the analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ 5

$\frac{20}{25}$

Appendix L 2
Evaluation of Ms. Norma's Lesson 2

English Language Teachers' Classroom Observation Form (ELT-COP)

School: ✓

District/State: Kuala Muda

Teacher: Ms. Norma

Gender: Male Female

Age:

Years of Teaching English:

Observation Date/Time: 7/12/21 (9.00am - 10.30am)

PART ONE: Basic Descriptive Information

1. Subject Observed: English

2. Grade Level(s): Form 1

3. Class Enrolment: 31 Males: 11 Females: 20

4. Topic: Fact or Fiction (People & Culture)

5. Focussed Language Skill: Reading

6. Focussed Thinking Skill: Analytical Thinking Skills

7. Have you prepared a lesson plan for this lesson? ☒ Yes ☐ No.

Explain:

Use school's standardised Lesson Plan.

8. What is the purpose of this lesson?

Explain:

To incorporate analytical thinking skill
critically
to read & answer comprehension questions.

cat

Appendix L 2

Evaluation of Ms. Norma's Lesson 2 Appendix B

Part TWO: Lesson Ratings by Researcher/Observer

In this part of the form, the lesson is rated using the following key indicators in five different categories, from 1 (not at all) to 5 (totally).

1	2	3	4	5
Not at all	A little	Fairly	to a great extent	Totally

P-1. Lesson Design (Items 1 -8)

1. The design of this lesson incorporated tasks, roles, and interactions consistent with the reading comprehension lesson..

1	2	3	4	5
---	---	---	---	--------------

2. The design of this lesson reflected careful planning and organization.

1	2	3	4	5
---	---	---	---	--------------

3. The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.

1	2	3	4	5
---	---	---	---	--------------

4. The resources available in this lesson contributed to accomplishing the purposes of the instruction.

1	2	3	4	5
---	---	---	---	--------------

5. The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, appropriate strategies/materials).

1	2	3	4	5
---	---	---	--------------	---

6. The design of the lesson encouraged a collaborative approach to learning among the students.

1	2	3	4	5
---	---	---	---	--------------

7. Adequate time and structure were provided for "sense-making"

1	2	3	4	5
---	---	---	---	--------------

8. Adequate time and structure were provided for wrap-up.

1	2	3	4	5	38 40
---	---	---	--------------	---	---------------------

Appendix L2
Evaluation of Ms. Norma's Lesson 2 / Appendix B

P-II. Implementation of Lesson (Items 9 – 14)

9. The instructional strategies were consistent with enhancing analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

10. The teacher appeared confident in his/her ability to incorporate analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

11. The teacher's classroom management, teaching strategies enhanced the teaching of analytical skills in the reading comprehension lesson.

12. The pace of the lesson was appropriate for the developmental levels and needs of the students and the purposes of the lesson.

1 2 3 4 ~~5~~

13. The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.

1 2 3 4 ~~5~~

14. The teacher's questioning strategies were likely to enhance the development of students conceptual understanding of analytical skills.

1 2 3 4 ~~5~~

30
30

Appendix L 2
Evaluation of Ms. Norma's Lesson 2 Appendix L

P-III. Content : English language and Analytical Skills (Items 15 - 20)

15. The language skills and analytical skills taught were significant and worthwhile in the reading comprehension lesson.

1 2 3 4 ~~5~~

16. The language skills and analytical skills were appropriate for the developmental levels of the students in this class.

1 2 3 4 ~~5~~

17. Teacher-provided content information was accurate and relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

18. Students were intellectually engaged with important ideas relevant to the focus of analytical skills in the reading comprehension lesson.

1 2 3 4 ~~5~~

19. The teacher displayed good understanding of the language and analytical skills concepts in his/her dialogue with students.

1 2 3 4 ~~5~~

20. Students' English Language proficiency was continually enriched by the use of analytical skills in the reading comprehension lesson..

1 2 3 4 ~~5~~

30
30

P-IV. Classroom Culture (Items 21 – 25)

21. Active participation of all students was encouraged and valued by teacher.

1 2 3 4 ~~5~~

22. There was a climate of respect for students' ideas, questions, and contributions during the lesson.

1 2 3 4 ~~5~~

Appendix L 2

Evaluation of Ms. Norma's Lesson 2 Appendix B

23. Interactions reflected collaborative working relationships among students (e.g. students worked together, talked with each other about the lesson).

1 2 3 ~~4~~ 5

24. Interactions reflected collaborative working relationships between teacher and students.

1 2 3 ~~4~~ 5

25. Intellectual rigor, constructive criticism, and the challenging of ideas were evident.

1 2 3 ~~4~~ 5

22
25

P-V. Learning Outcome (Items 26 - 30)

1 2 3 4 5
Very poor Poor Satisfactory Good Excellent

26. Students' proficiency in the English language was enhanced by the use of analytical skills in the reading comprehension lesson.

1 2 3 ~~4~~ 5

27. Students' acquired sound understanding of analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ 5

28. Students' improved their performance in the reading comprehension lesson using the analytical skills.

1 2 3 ~~4~~ 5

29. Students' ability to analyse in other disciplines, and/or in real-life situations was enhanced through the reading comprehension lesson.

1 2 3 ~~4~~ 5

30. Students' gained self-confidence in using the analytical skills through the reading comprehension lesson.

1 2 3 ~~4~~ 5

20
30

APPENDIX M1

DAILY LESSON PLAN ENGLISH FORM 1			
WEEK	1 (November Session)	TIME	9.00 am -10.30 am
DAY	Wednesday	CLASS :Form 1	
DATE	24/11/2021	UNIT	2
MAIN FOCUSED SKILL	Reading	COM. FOCUSED SKILL	Speaking/Writing
INTEGRATED SKILL	Analitical Skills (Gathering data/logical reasoning/inferencing/critical and creative thinking skills)		
TOPIC	Literature		
THEME	People and Culture		
MAIN CONTENT STANDARD	3.1 Understand a variety of texts by using a range of appropriate reading strategies to construct meaning		
MAIN LEARNING STANDARD	3.1.2 Understand specific details and information in simple longer texts		
COM. CONTENT STANDARD	4.1 Communicate intelligibly with classmates expressing opions and suggestions.		
COM. LEARNING STANDARD	4.1.1 Give detailed information about themselves and others		
LEARNING OBJECTIVE	By the end of the lesson, pupils should be able to: 1. Understand specific details and information in simple longer texts by answering at least 3/5 open-ened questions correctly. 2. Suggest other innovative features for a mobile phone. 3. Design in groups a picture of an ultra modern mobile phone.		
ACTIVITIES	Set-Induction	1. Teacher writes the word mobile phone on the board. Teacher asks students to work in pairs and make a list of things they can do with a mobile phone. Teacher listens to their ideas as a class and writes the activities on the board, eg send a text message, call friends, take pictures	
LESSON DELIVERY	Step 1	Activity 1(SB page 21) Students read the two questions. They scrutinize the details in the picture and answer the questions. Qtn 1. What is the girl doing and why is she doing this?(tests students' observation skill) Students compare answers in pairs. Teacher check answers and gets feedback from the whole class and writes it on the board. 2. How much time do you spend doing this activity per day and how does it benefit you? (tests students' critical thinking)	
	Step 2	Activity 2 (SB page 21) 1. Students read the questions carefully first. Teacher plays the CD. Students listen and follow the article in their books. 2. Students complete the open-ended questions and then compare answers in pairs. Teacher checks answers as a class. All answers must have justification and students may express themselves freely. (tests students' analyzing and inferencing skills) 3. Students read the article again and complete the open-ended questions in pairs. Students' answers may differ but they need to state a justification and state the logic for their answers. Answers are then discussed as a class. (tests students' logical reasoning (tests students' creative skill)	
	POST LESSON	Activity 3 (SB page 21) 1. In groups of 3-4, students discuss the topic : Would you like to read a mobile phone novel? Why (not)? 2. Suggest other features that you would add to the mobile phone. 3. At the end of the lesson, students are asked to work in groups of 4 and design an ultra modern mobile phone.	
TEACHING AIDS	Textbook, Whiteboard, Marker Pen, Audio CD		
ASSESSMENT	Question (Writing/ Speaking)		
REFLECTION	Students actively participated throughout the lesson. Their ultra modern mobile phone using only a chip in the palm was very creative.		

DAILY LESSON PLAN			
ENGLISH FORM 1			
APPENDIX M2			
WEEK	2 (November session)	TIME	9.00 – 10.30am
DAY	Wednesday	CLASS	Form 1
DATE	01/12/21	LESSON	8
MAIN FOCUSED SKILL	Reading	COM. FOCUSED SKILL	Writing
INTEGRATED SKILL	Analytical Skills		
TOPIC	Free Time Activities		
THEME	People and Culture		
LANGUAGE/GRAMMAR FOCUS	Free Time Activities		
MAIN CONTENT STANDARD	3.1 Understand a variety of texts by using a range of appropriate reading strategies to construct meaning		
MAIN LEARNING STANDARD	3.1.2 Understand specific details and information in simple longer texts		
COM. CONTENT STANDARD	1.1 Communicate information, ideas, opinions and feelings intelligibly on familiar topics 2.3 Use appropriate communication strategies		
COM. LEARNING STANDARD	2.1.1 Ask about and give detailed information about themselves and others 2.3.2 Agree on a set of basic steps needed to complete extended classroom tasks		
LEARNING OBJECTIVE	By the end of the lesson, pupils should be able to: 1. Understand specific details and information in simple longer texts by answering at least 4/6 open-ended questions orally with good reasoning. 2. Answer at least 4/5 comprehension questions correctly to show understanding of the interview. 3. Agree on a set of basic steps needed to complete extended classroom tasks		
ACTIVITIES	PRE-LESSON	1. Teacher writes the word sport on the board. Teacher put students into teams of four. Teacher writes an alphabet on the board and students are asked to name any sport/game that comes to their mind that begins with the alphabet. e.g. The first team to give a correct word, e.g. basketball for the alphabet B gets a point. Teacher continues with other letters of the alphabet.	
	LESSON DELIVERY	Activity 1 (SB page 11) 1. Students look at the pictures in the text book and jot down the type of sports they can see and writes down any information they know about that game. 2. Students compare answers in pairs. 3. Open-ended questions: What sports do the teenagers prefer these days and why? Activity 2 (SB page 11) 1. Teacher plays the CD. 2. Students listen and follow the text in their books. They discuss the statements given if they true or false and justify why they say so. 3. Students compare their answers in pairs	

APPENDIX M2

		and try convince their partner with their choice of answers (negotiating skills). 4. Teacher emphasizes the importance of valuing others' opinions.		
	POST LESSON	Activity 3 (SB page 11) 1. In groups of 4, pupils discuss the topic : Do you like competitive or non-competitive sports and why? 2. The groups are asked to suggest changes to existing sports or games of their groups' choice. 3. Students discuss answers in groups and then present to the class.		
TEACHING AIDS	Textbook, Whiteboard, Audio CD,			
21st CENTURY T&L STRATEGY	Think, Pair, Share	iThink Map	Innovation	
ASSESSMENT	Question (Writing/ Speaking)			
REFLECTION	Students enjoyed participating in groups and take pride in presenting their innovative ideas to the class.			



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ENGLISH LESSON PLAN FORM 1 2021					
DATE	:	29/11/2021	DAY	:	MONDAY
LEVEL	:	MIXED ABILITY	TIME	:	9.00-10.30
FOCUS SKILLS	:	Reading	CLASS	:	1AI
TOPIC	:	Cultural Awareness	THEME	:	PEOPLE AND CULTURE
CONTENT STANDARD	:	Main Skill: 3.0 Reading 3.1 Understand a variety of texts by using a range of appropriate reading strategies to construct meaning	Complementary/Analytical Skill: 3.0 Reading 5.1 Engage with, respond to and interpret a variety of literary text types		
LEARNING STANDARD	:	Main Skill: 3.0 Reading 3.1.1 Understand the main points in simple longer texts	Complimentary/Analytical Skill: 3.0 Reading 3.1.2 Understand specific details and information in simple longer texts		
LEARNING OBJECTIVES	:	<i>At the end of the lesson, pupils should be able to</i> 1. Read the text critically. . 2. Answer comprehension questions with sound reasoning. 3. Able to identify the similarities and differences between the festivals celebrated in Scotland and Malaysia.			
SUCCESS CRITERIA (WILF)	:	<i>Pupils will be successful if they can:</i> 1. Read the text giving importance to details.. 2. Answer the questions logically. 3. List 2 similarities and 2 differences of the festivals celebrated.		CROSS CURRICULAR ELEMENT VALUES	
PBD					
MATERIAL: PULSE					
2 pg 24					
ACTIVITIES					
PRE LESSON		LESSON DEVELOPMENT		POST LESSON	
1. Pupils watched a video on Fringe Festival https://youtu.be/RNY1bSAh72o 2. Pupils describe the details of the video show.		1. Randomly selected pupils read the text aloud with correct pronunciation. 2. Pupils answer the questions. 3. Pupils name festivals celebrated in Malaysia. 4. Pupils watch another video on Thaipusam celebration https://youtu.be/fnhtxe2zcjo 5. Pupils compare both Fringe Festival and Thaipusam. 6. Pupils need to come up with 2 similarities and 2 differences.		1. Pupils were asked to discuss in groups on any other festival that promote tourism in Malaysia.	
21st CENTURY LEARNING TOOLS Thinking Skill		21st CENTURY LEARNING SKILLS Analytical thinking skills		21st CENTURY LEARNING STRATEGIES Compare and contrast	
REMARK ☐ School Activities ☐ Meeting ☐ Medical Leave ☐ Others Lesson postponed due to		STUDENTS' REFLECTION <i>Students had a clearer picture about the Fringe festival after watching the video. They were also able to compare with Thaipusam festival in Malaysia. . Selected students were able to list 2 similarities and 2 differences between them.</i>			
		TEACHER'S REFLECTION <i>Only 16 /29 students attended school today.</i>			

ENGLISH LESSON PLAN FORM 1 2021					
DATE	:	07/12/2021	DAY	:	MONDAY
LEVEL	:	MIXED ABILITY	TIME	:	9.00-10.30AM
FOCUS SKILLS	:	Reading	CLASS	:	1AI
TOPIC	:	Fact or Fiction	THEME	:	PEOPLE AND CULTURE
CONTENT STANDARD	:	Main Skill: 3.0 Reading 3.1 Understand a variety of texts by using a range of appropriate reading strategies to construct meaning	Complementary/Analytical Skill: 3.0 Reading 5.1 Engage with, respond to and interpret a variety of literary text types		
LEARNING STANDARD	:	Main Skill: 3.0 Reading 3.1.2 Understand specific details and information in simple longer texts	Complimentary/Analytical Skill/: 2.0 Speaking 4.1.3 Narrate factual and imagined events and experiences		
LEARNING OBJECTIVES	:	<i>At the end of the lesson, pupils should be able to</i> 1. Read the text critically. 2. Answer comprehension questions supported by details and sound reasoning.. 3. Complete a given dialogue.			
SUCCESS CRITERIA (WILF)	:	<i>Pupils will be successful if they can:</i> 1. Read the text analytically examining the contents' details... 2. Answer the comprehension questions logically. 3. Complete the dialogue based on the second audio.	CROSS CURRICULAR ELEMENT LANGUAGE		
PBD					
MATERIAL: PULSE pg 26 & 27					
ACTIVITIES					
PRE LESSON		LESSON DEVELOPMENT		POST LESSON	
1. Pupils discuss Malaysian legendary warriors. i. Who is more popular hang Tuah or Hang Jebat and why? ii. Which is more important Patriotism or Truth and why?		1. Pupils read the text about King arthur's Labrynth aloud. 2. Pupils watch video on a short tour at King Arthur's Labyrinth http://you.tube/HSmeSKf3_ts 3. Pupils listen to an audio and answer the questions orally. i. Do you believe dragons existed in the olden days, why? ii. Which do you prefer the olden days or the modern days and why? 4. Pupils listen to a second audio and complete the dialogue with their own narrative (step 3:page 27)		1. Pupils divided in groups of 4, think of another museum similar to King Arthur's Labyrinth and state 2 differences and 2 similarities between the 2 museums. 2. Pupils watch a movie clip of King Arthur http://youtu.be/5UWiKApBH_M	
21st CENTURY LEARNING TOOLS Thinking Skill		21st CENTURY LEARNING SKILLS Analytical thinking skills		21st CENTURY LEARNING STRATEGIES Brainstorming	
REMARK ☐ School Activities ☐ Meeting ☐ Medical Leave ☐ Others Lesson postponed due to		STUDENTS' REFLECTION <i>Students were able to answer both the oral and written activities very well. Their suggestion of Penang War Museum and Kell's Castle in Ipoh for discussion shows their effective use of the Communication and Information media to acquire knowledge. Students, detiled discussion of the similarities and differences prove their analytical thinking skill.</i> TEACHER'S REFLECTION <i>Attendance improved. 27 /29 students attended school today.</i>			

