MORPHOLOGICAL AWARENESS AND THE INFLUENCE OF EXPLICIT MORPHOLOGICAL INSTRUCTION ON READING COMPREHENSION AMONG MALAYSIAN PRIMARY SCHOOL LEARNERS

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2021

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by

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Thesis submitted in fulfilment of the requirements
for the degree of
Doctor of Philosophy

March 2021

ACKNOWLEDGEMENT

First of all, I would like to thank the Almighty because with Him everything is possible. I wish to express my earnest thanks of gratitude to the following people, without their help and support, I would not have been able to complete this study within the limited time frame. Towards implementation and accomplishment of this study, I would like to convey my earnest gratitude to my supervisors, ex-Associate Professor Dr Tan Kok Eng and Dr Rohaya Abdullah, for dedicating their precious erudition to guide me. They lent me considerable support and resourceful help for me. I would also like to thank the schools' principals and teachers for their kind approval for me to conduct this study. I am indebted to the students for their participation and patience in my study. I owe a debt of gratitude to Dr Leong Lai Mei and Dr Amelia Abdullah for their insightful comments on my study. Thank you to all of my friends and colleagues who had given me constructive advice and helped me to overcome the obstacles I faced in completing this study. Finally, I would like to dedicate my sincere appreciation to my beloved father, Jap Mook Kian, my beloved mother, Liew Nyat Jung, my sister, Yap Mui Ling, and my four younger brothers, Yap Soon Khin, Jap Soon Hung, Yap Soon Boon, and Jap Soon Yang for their help, support, understanding and love throughout the process of completing my thesis. Finally, I would like to express thanks to one, and all who, directly or indirectly, rally round me in completing this study.

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KESEDARAN MORFOLOGI BAHASA INGGERIS DAN PENGARUH PENGAJARAN EKSPLISIT MORFOLOGI KE ATAS PEMAHAMAN TEKS BAHASA INGGERIS DI ANTARA MURID-MURID SEKOLAH RENDAH DI MALAYSIA

ABSTRAK

Kajian ini bertujuan untuk mengkaji hubungan dan ramalan kesedaran morfologi (MA) terhadap prestasi pemahaman teks Bahasa Inggeris dalam konteks pembelajaran Bahasa Inggeris sebagai bahasa kedua (ESL). Ia juga mengkaji perbezaan dalam prestasi pemahaman setelah pengajaran eksplisit morfologi. Kajian separa eksperimental ini telah menggunakan pensampelan kemudahan yang melibatkan 125 orang murid dari dua sekolah rendah kebangsaan di daerah pinggir bandar. Kumpulan eksperimen diberi pengajaran eksplisit morfologi semasa kelas bacaan selama 12 minggu berturut-turut, dan kumpulan kawalan tidak diberikan intervensi tersebut. Ujian korelasi *Pearson Moment* menunjukkan bahawa terdapat hubungan yang kuat dan positif antara MA dan prestasi pemahaman. Selanjutnya, analisis regresi linear berganda telah membuktikan bahawa MA dapat meramalkan prestasi prestasi pemahaman secara signifikan dan tepat. Setelah mengawal skor pra-ujian, hasil statistik ANCOVA mengesahkan bahawa kumpulan eksperimen dapat menunjukkan prestasi yang lebih baik daripada kumpulan kawalan. Oleh sedemikian, pembangun kurikulum dan pendidik harus memberi pengiktirafan mengenai kepentingan morfologi, serta menerokai lebih lanjut pengajaran morfologi untuk meningkatkan kemahiran pemahaman Bahasa Inggeris murid-murid.

MORPHOLOGICAL AWARENESS AND THE INFLUENCE OF EXPLICIT MORPHOLOGICAL INSTRUCTION ON READING COMPREHENSION AMONG MALAYSIAN PRIMARY SCHOOL LEARNERS

ABSTRACT

This study intends to investigate the significant relationship and predictability of morphological awareness (MA) on English reading comprehension performance in the ESL context. It also examines the significant difference in comprehension performance after explicit instruction in MA. This quasi-experimental study has applied convenience sampling in recruiting 125 pupils from two government primary schools in a suburb area. The experimental group was given the explicit teaching of morphology intervention during their reading lessons for 12 consecutive weeks, and the control group had their lessons without this intervention. The Pearson Moment correlation test indicated that there was a strong and positive relationship between MA and reading comprehension performance. Furthermore, multiple linear regression analysis had proven that MA could significantly and accurately predict the performance of reading comprehension performance. After controlling for learners' pre-test scores, ANCOVA statistical result confirmed that the experimental group could perform better than the control group in terms of reading comprehension performance. Therefore, it is crucial for curriculum developers and educational practitioners to give recognition of the importance of morphology. Educational practitioners and academics should explore further the teaching of morphology in order to improve their learners' reading comprehension skill.

CHAPTER 1

INTRODUCTION

1.0 Overview of the Study

English is the official second language (L2) in Malaysia (Andaya & Andaya, 1982; Darus, 2009), primary pupils have six years of guided learning in English. However, Malaysia's sociocultural environment milieu does not provide a considerable immediate available setting for these young learners to speak and use this target language spontaneously (Cook, 2016; Gass, 2017; Meisel, 2010). Studies have demonstrated that Malaysian pupils show a distinct lack of reading comprehension (Ali, Hamid & Moni, 2011; Azman, 2016; Darmi & Albion, 2013; Darus, 2009; Mansur & Samad, 2015; Musa, Koo, & Azman, 2012; Pillai, 2015; Rajadurai, 2016; Yamat, Fisher & Rich, 2014). Explicit morphological instruction might enhance better reading proficiency. Therefore, this research aims to examine the association between English language morphological awareness and reading comprehension among primary ESL learners. A quasi-experimental pre-test-treatment-post-test design with one control group and one experimental group, among Malaysian primary five ESL learners had been conducted. This chapter has the following sections. Section 1.1 briefly discusses the background of the study. Section 1.2 looks at the statement of the problem. It is followed by a discussion of the research objectives, research questions, and research hypotheses in the subsequent sections. Section 1.6 shows the conceptual framework of the study. The significance of this research is explained in Section 1.7, limitations and delimitations in Section 1.8 and 1.9 respectively. Operational definitions of key terms related to the study are provided in Section 1.10, and the chapter ends with a summary.

1.1 Background of Study

Studies have revealed that Malaysian primary school pupils show a distinct lack of reading comprehension (Ali et al., 2011; Azman, 2016; Darmi & Albion, 2013; Darus, 2009; Mansur & Samad, 2015; Musa et al., 2012; Pillai, 2015; Rajadurai, 2016). An apparent lack of explicit morphological awareness instruction might have affected reading proficiency (Varatharajoo, Asmawi & Abedalaziz, 2015b). Morphological awareness of compounding, inflectional and derivational morphemes has been found to be significantly related to vocabulary acquisition which supports reading comprehension. Nonetheless, the question of which morphological awareness is more significant to improve reading comprehension is still debatable.

1.1.1 Malaysian ESL Young Learners

Table 1.1 shows the two different stages of formal English language education that the Malaysian primary pupils have undergone throughout six levels, the entrance and exit ages of each one of those levels, and the number of hours and minutes per week of the English class at school. Primary school pupils have 3 hours (a total of 180 minutes) of guided learning in English per week this current academic year.

Table 1.1

Information on Time Allocation for Primary Schools English Lessons Per Week

Primary	Hours per week of English class
Year 1	2.5 (150 minutes)
Year 2	2.5 (150 minutes)
Year 3	2.5 (150 minutes)
Year 4	3 (180 minutes)
Year 5	3 (180 minutes)
Year 6	3 (180 minutes)

Note. Level 1 refers to Year 1 to 3, and Level 2 refers to Year 4 to 6.

For Malaysian young learners, the English language primary school curriculum reading module focuses on the development of pupils' words, phrases and sentences level reading (Curriculum Development Division, 2013, 2014, 2015a, 2015b, 2016, 2017; Sulaiman, Ayub, & Sulaiman, 2015). It is expected by the end of six years of primary education pupils should be able to read multiple forms of texts efficiently and independently. Visual written texts do not convey exact meanings until the readers actively engage in reading activities such as reading for general information, for reference, for instructions or only for pleasure (Asher, 2017; Blachowicz & Ogle, 2017; Kintsch & Vipond, 2014; Rosenshine, 2017). Hence, effective classroom pedagogies for reading skill should engage active and reflective reading activities (Eng, Mohamed & Ismail, 2016; Jamaludin, Alias, Mohd Khir, DeWitt & Kenayathula, 2016; Koda, 2015; Landi & Ryherd, 2017; Ness, 2016; Proctor, Dalton, Uccelli, Biancarosa, Mo, Snow & Neugebauer, 2011; Spiro, Bruce & Brewer, 2017).

1.1.2 Morphological Awareness and Reading Comprehension

Previous studies have indicated that morphological awareness is a significant predictor of literacy constructs including vocabulary (e.g., Bae & Joshi, 2017; Hayashi & Murphy, 2013; Oz, 2014; Pasquarella et al., 2011; Ramirez et al., 2011; Varatharajoo et al., 2015a) and word reading (e.g., Haspelmath & Sims, 2013). Some research has highlighted that even low proficiency L2 learners do apply morphological awareness strategy when they encounter novel words (Varatharajoo et al., 2015b).

Morphological awareness has been suggested as a potential predictor for reading comprehension (e.g., Choi, 2015; Deacon et al., 2014; Goodwin et al., 2013; Hasan, 2016; Jiang, Kuo & Sonnenburg-Winkler, 2015; Kieffer et al., 2013; Kirby et al., 2012; Leider, Proctor, Silverman & Harring, 2013; Xue & Jiang, 2017; Zhang,

2016; Zhang & Koda, 2013) in alphabetic languages among monolingual and bilingual children. Therefore, the explicit instructional approach might enhance reading comprehension skill among Malaysian primary school learners. Learners' reading comprehension skill can be sharpened when they have been demonstrated how to apply specific strategies explicitly to decipher meanings of words and texts (Hedgcock & Ferris, 2018; Landi & Ryherd, 2017; Zhang, 2016; Spiro, Bruce & Brewer, 2017).

1.1.3 Explicit Instruction on Morphological Awareness

Explicit morphological instruction during English reading comprehension lesson can be applied as a type of metacognitive strategy (Choi, 2015; Goodwin et al., 2013; Kirby et al., 2012; Kirby & Bowers, 2017; Kraut, 2015; Oz, 2014; Xue & Jiang, 2017; Zhang, 2016). Learners do not have to memorise the analytical steps rigidly but take the series of steps practically in a meaningful language context.

It is crucial to guide learners to foster metacognitive awareness of practical reading strategies so that they can deploy the effective one accordingly (Asher, 2017; Eng et al., 2016; Kintsch & Vipond, 2014; Koda, 2015; Landi & Ryherd, 2017; Rosenshine, 2017). The current study evaluates the influence of three types of morphological awareness on English reading comprehension among Malaysian ESL learners. This experimental study aims specifically on the identification of morphological awareness on Malaysian primary school learners' reading comprehension in the ESL context.

There was an interrelation between morphological awareness and vocabulary knowledge (Cheng et al., 2011; Haspelmath & Sims, 2013; Hayashi & Murphy, 2013; Lockley, 2014; McCutchen & Logan, 2011; Oz, 2014; Pasquarella et al., 2011; Ramirez et al., 2011). Therefore, vocabulary knowledge was a controlled variable in

previous studies that focus on examining the significant contribution of morphological awareness to reading comprehension variable. The current English language instructional approach in Malaysian primary schools does not emphasise on teaching morphemes explicitly. Hence, Malaysian pupils do not have the opportunity to acquire morphological analysis as a strategy to attain higher reading comprehension performance.

1.2 Problem Statement

Numerous studies that were done on Malaysian ESL learners have attempted to explain learners' poor English reading comprehension (Ali et al., 2011; Azman, 2016; Darmi & Albion, 2013; Darus, 2009; Jamaludin, et al., 2016; Mansur & Samad, 2015; Musa et al., 2012; Pillai, 2015; Rahim, 2016; Rajadurai, 2016; Yamat et al., 2014). Recent extensive literature has been found related to poor English reading comprehension among Malaysian English as a Second Language (ESL) learners (Musa et al., 2012; Pillai, 2015; Rahim, 2016; Rajadurai, 2016; Yamat et al., 2014). They can perform proficiently on word reading tasks, but concerning reading comprehension, this population tends to perform below average (Azman, 2016; Jamaludin et al., 2016; Landi & Ryherd, 2017; Mansur & Samad, 2015; Pillai, 2015; Rahim, 2016; Rajadurai, 2016).

Several Malaysian related studies (e.g., Ali et al., 2011; Azman, 2016; Darmi & Albion, 2013; Darus, 2009; Jamaludin, et al., 2016; Mansur & Samad, 2015; Musa et al., 2012; Pillai, 2015; Rahim, 2016; Rajadurai, 2016; Yamat et al., 2014) have shown that our primary pupils still face a shortage of effective reading comprehension skills even though Malaysian Primary Standard-based English Language Curriculum (KSSR) enables pupils to focus on the improvement of practical language skills under

each module through meaningful activities in realistic contexts (Curriculum Development Division, 2013, 2014, 2015a, 2015b, 2016, 2017; Sulaiman et al., 2015).

Previous studies have attempted to explain that the lack of morphological awareness is the potential main contribution for learners' poor English reading comprehension (Bangs & Binder, 2016; Bataineh & Al-Kofeiri, 2018; Choi, 2015; Deacon et al., 2014; Goodwin et al., 2013; Kirby et al., 2012; Xue & Jiang, 2017; Zhang, 2016; Zhang & Koda, 2013). Morphology is one of the main aspects of linguistics that could be considered when teaching English receptive skills (Anderson, 2015; Haspelmath & Sims, 2013; Lieber, 2015; Lockley, 2014; Miller, 2016; Plag, 2018; White, 2017).

Although earlier studies have suggested that morphological awareness is closely and significantly associated with the substantial level of reading comprehension (Choi, 2015; Deacon et al., 2014; Goodwin et al., 2013; Kieffer et al., 2013; Kirby et al., 2012; Leider et al., 2013; Xue & Jiang, 2017; Zhang, 2016; Zhang & Koda, 2013), studies that explore the explicit morphological instruction on morphological awareness and reading comprehension still need further validation. Furthermore, despite the repeated assurance of the benefits of explicit morphology teaching (Hedgcock & Ferris, 2018; Kirby & Bowers, 2017; Kraut, 2015), Malaysian English language classroom context still encounters inadequacy of explicit morphological teaching (Varatharajoo et al., 2015a). Moreover, to the researcher's knowledge, there is still a lack of studies comparing morphological awareness and reading comprehension among Malaysian ESL young learners to date. Therefore, this study examines the prospect of using morphological awareness to improve English reading comprehension.

ESL learners have not mastered the skills to analyse and decode complex words yet (Cheng et al., 2011; Cook, 2016; Gass, 2017; Meisel, 2010; Zhang, 2016). Previous studies concluded that the explicit instructional approach could improve reading comprehension skill when learners have been explicitly guided how to employ specific strategies to decipher meanings of words and texts (Xue & Jiang, 2017; Zhang, 2016). Unfortunately, there has been lacking in-depth research for explicit morphological instruction.

Morphological related studies predominantly focused on non-Malaysian population (Bae & Joshi, 2017; Bangs & Binder, 2016; Bataineh & Al-Kofeiri, 2018; Carlisle & Kearnes, 2017; Choi, 2015; Hendrix & Griffin, 2017; Kim et al., 2015; Law, Wouters & Ghesquière, 2015; Tighe & Schatschneider, 2016; Xue & Jiang, 2017; Zhang, 2016). The subjects of previous studies were predominantly at the secondary or postsecondary level (Bangs & Binder, 2016; Bataineh & Al-Kofeiri, 2018; Choi, 2015; Guo, Roehrig, & Williams, 2011; Hendrix & Griffin, 2017; Kieffer et al., 2013; Law et al., 2015; Lieber, 2015; Tighe & Schatschneider, 2016; Varatharajoo et al., 2015; Xue & Jiang, 2017).

Hence, the results should be applied in other situations with care. Unwise generalisations might raise wide-ranging matters of concern, including questions of suitability and practicality. Strategies that effective for older learners do not imply that they will be able to work out with younger learners. Therefore, it is essential to conduct an experimental study about explicit morphological instruction, specifically Malaysian ESL young learners.

Previous related studies were mainly used single assessment, observations, surveys, one-time cross-sectional methods, and most studies have been limited to only

word-level achievements which are the vocabulary growth (Bae & Joshi, 2017; Bangs & Binder, 2016; Bataineh & Al-Kofeiri, 2018; Carlisle & Kearnes, 2017; Hendrix & Griffin, 2017; Kim et al., 2015; Oz, 2014; Tighe & Schatschneider, 2016; Xue & Jiang, 2017; Zhang, 2016). As a result of the conditions as mentioned above, most previous studies were theory motivated but did not demonstrate the practicality of morphological instruction convincingly.

Besides research-based findings, practical teaching ESL experience of the researcher has also further acknowledged the need for systematic experimental research on this particular field. The researcher who has been teaching English to young Malaysian speakers of other languages over the past ten years is of the view that young Malaysian ESL learners are definitely in pressing need to learn morphological knowledge explicitly.

Learners can infer and guess the meanings of complicated morphological words based on the root words and constituent morphemes. Thus, knowledge of multiple morphemic meanings and root words can significantly improve reading comprehension performance. Findings from previous related studies and the researcher's experience have driven this research to pursue an alternative and potential remedy for primary pupils' deficiency in reading comprehension performance.

1.3 Research Objectives

Previous studies were inconclusive regarding explicit morphological awareness teaching on English language reading comprehension among primary ESL learners. Thus, this current research aims to confirm further and substantiate the research on the effectiveness of morphology in reading comprehension improvement. This study would, therefore, define and investigate how explicit morphological

instruction of morphological awareness can be an effective alternative strategy to improve ESL learners' low reading comprehension proficiency. The following are the objectives of this study:

1. To examine if there is a significant relationship between morphological awareness and reading comprehension performance.
2. To examine the predictive ability of morphological awareness on reading comprehension performance.
3. To examine if there is a significant difference in reading comprehension performance after explicit instruction in morphology.

1.4 Research Questions

Based on the objective of this study, the research questions are framed as follows:

1. Does a significant relationship exist between morphological awareness and reading comprehension performance?
    a. Does a significant relationship exist between morphological awareness of compounding morphemes and reading comprehension performance?
    b. Does a significant relationship exist between morphological awareness of inflectional morphemes and reading comprehension performance?
    c. Does a significant relationship exist between morphological awareness of derivational morphemes and reading comprehension performance?

2. Does morphological awareness effectively predict reading comprehension performance?
    a. Does morphological awareness of compounding morphemes effectively predict reading comprehension performance?
    b. Does morphological awareness of inflectional morphemes effectively predict reading comprehension performance?
    c. Does morphological awareness of derivational morphemes effectively predict reading comprehension performance?
3. Is there a significant difference in reading comprehension performance between the experimental and control groups after explicit instruction in morphology?

1.5 Research Hypotheses

In line with the research questions above, the following hypotheses are proposed, where **H_0** stands for null hypothesis:

1. **H_01**: There is no significant relationship between morphological awareness and reading comprehension performance.
    a. **$H_01(a)$**: There is no significant relationship between morphological awareness of compounding morphemes and reading comprehension performance.
    b. **$H_01(b)$**: There is no significant relationship between morphological awareness of inflectional morphemes and reading comprehension performance.

c. **$H_0$1(c)**: There is no significant relationship between morphological awareness of derivational morphemes and reading comprehension performance.

2. **$H_0$2**: Morphological awareness cannot predict reading comprehension performance effectively.
    a. **$H_0$2(a)**: Morphological awareness of compounding morphemes cannot predict reading comprehension performance effectively.
    b. **$H_0$2(b)**: Morphological awareness of inflectional morphemes cannot predict reading comprehension performance effectively.
    c. **$H_0$2(c)**: Morphological awareness of derivational morphemes cannot predict reading comprehension performance effectively.
3. **$H_0$3**: There is no significant difference in reading comprehension performance between the experimental and control groups after explicit instruction in morphology.

1.6 Conceptual Framework

In this study, the researcher analysed morphological awareness as the independent variable for research questions one and two, the explicit morphological awareness instruction as the independent variable for the third research question. The dependent variable is reading comprehension performance.

The morphological analysis that focuses on the internal structure of words aims to enhance comprehension (Choi, 2015; Deacon et al., 2014; Goodwin et al., 2013; Kieffer et al., 2013; Kirby et al., 2012; Xue & Jiang, 2017; Zhang, 2016) by breaking parts of words, phrases or sentences into smaller meaningful parts, namely root words and morphemes (affixes or another root words for compounding). Morphological

awareness contributes uniquely to reading comprehension. Morphemes deduction knowledge enables inference about the meaning of sophisticated vocabulary during text reading leads to better comprehension. Affix (prefix and suffix) syntactic structures awareness allows separation of complex sentences into more comprehensible grammatical parts.

The competence in segmentation morphologically complex words develops a higher ability to understand text content. This sort of mental lexical representations enables the reader to access the meanings faster or more accurate, which in turn, foster better comprehension. Furthermore, learners with this specific proficiency can expand their vocabulary capacity further since the meanings of words are more transparent semantically through roots and affixes (Bae & Joshi, 2017; Carlisle & Kearnes, 2017; Lieber, 2015). The explicit instructional approach to decipher meanings of words and texts is a strategy that can enhance learners' reading comprehension skill (Bangs & Binder, 2016; Bataineh & Al-Kofeiri, 2018; Goodwin et al., 2013; Zhang, 2016).

By the end of the research intervention programme, the outputs of explicit morphological instruction intervention refer to the pupils' reading comprehension ability to identify main ideas, recognise supporting details, draw inferences and derive conclusions from written texts will be measured via multiple-choice questions and true-or-false statements for passages. The association between morphological awareness and reading comprehension can demonstrate the impact of the explicit instructional approach on morphology. Figure 1.1 shows the conceptual model and direction of this research.

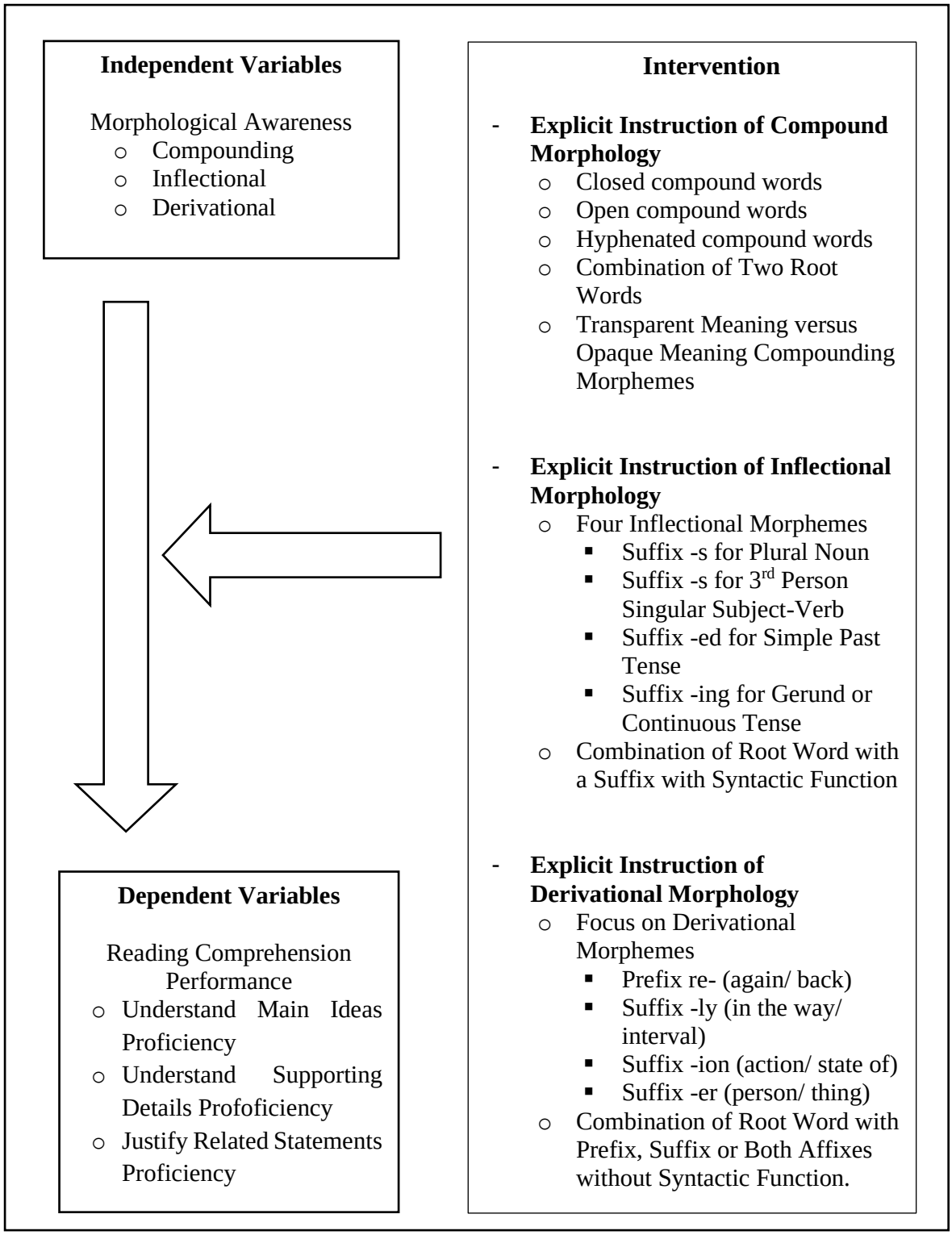

Figure 1.1 Conceptual framework of morphological awareness and the influence of explicit morphological instruction on reading comprehension.

1.7 Significance of the Study

To the researcher's knowledge, Varatharajoo et al. (2015a, 2015b) and Zhang (2016) had conducted a similar study on the population in the Southeast Asia region. However, Varatharajoo's studies only involved secondary school students in Malaysia, and Zhang's study took place in Singapore instead. Hence, there is a relative lack of studies exploring morphological awareness and its contribution to reading comprehension among Malaysian ESL young learners, especially the effect of explicit morphological awareness instruction.

It is essential to consider the influence of explicit morphological awareness on English morphological awareness and reading comprehension among this population. The results of this study will be able to provide an insight into the effect of morphological awareness in the teaching of English language reading comprehension in school. Moreover, this study also will help to create awareness among teachers to explore alternative teaching approaches to reading comprehension, such as explicit morphological awareness instruction in their classrooms. This would ensure that the quality of English language education in Malaysia could evolve and attain an international level. Furthermore, the outcome of this study will shed light on the kind of morphemic knowledge that may predict better reading comprehension outcome.

1.7.1 Pedagogical Knowledge and Practitioners

The findings from this current research were able to facilitate primary ESL teachers to consider explicit morphological instruction on morphological awareness as a potential strategy to improve pupils' reading comprehension performance. According to the Malaysian English language primary school curriculum (Curriculum Development Division, 2013, 2014, 2015a, 2015b, 2016, 2017), by the end of the 6-

year primary schooling, pupils would be able to use a range of strategies to construct meaning and able to read independently.

The results of this study may also assist teachers to formulate and identify effective explicit morphological awareness teaching strategy that can broaden young learners' morphological knowledge. Local L2 pupils' knowledge of English is dominantly due to formal instruction at school (Rajadurai, 2016; Yamat, Fisher & Rich, 2014). Nevertheless, some Malaysians also have the chance to acquire the English language informally. Malaysian English (ME) is a form of English language that derived primarily from British English especially in terms of spelling and grammatical rules (Darmi, & Albion, 2013; Mansur & Samad, 2015; Pillai, 2015; Rahim, 2016). Due to the popularity and domination of American English, this particular variety also influences the vocabulary and phonology of ME (Musa, Koo, & Azman, 2012; Pillai, 2015; Rajadurai, 2016). Therefore, English words spelling rules do not depend solely on the principle of modern English alphabets which originated from the Latin alphabets (Hall, 2017; McArthur, Lam-McArthur & Fontaine, 2018; Yule, 2016). Not all the letters-graphemes-phonemes of English map permanently onto one another. Hence, the situation portrayed in this current research would assist teachers to know more how to guide their learners to develop metacognitive awareness of functional reading strategies so that they could deploy them accordingly.

1.7.2 English Language Curricular Knowledge

English is the official second language (L2) next to *Bahasa Melayu* – Malay language (Andaya & Andaya, 1982; Darus, 2009). Nonetheless, Malaysia's sociocultural environment milieu does not provide a considerable immediate available setting for learners to speak and use ESL (English as a Second Language) throughout

the day-to-day activities (Cook, 2016; Gass, 2017; Meisel, 2010), but rather it is a language subject taught in school in order to pass the national examination (Ali, Hamid & Moni, 2011; Andaya & Andaya, 1982; Azman, 2016; Koo, 2008; Musa et al., 2012).

The outcomes of this research provided significant benefits to the primary ESL curriculum makers, syllabus creators and learning materials developers, particularly the local Malaysians. The information presented is enabled the curriculum and policymakers to develop a more solid national primary school English language curriculum. Furthermore, English morphology could be featured significantly on primary level English language syllabuses. Publishers could also be able to incorporate additional and beneficial materials that can be used to further morphological understanding which would lead to better reading comprehension. Overall, it may increase the efficiency of English teaching-learning process among Malaysian young ESL learners in order to produce capable teaching force to accord with Ministry of Education (KPM – *Kementerian Pendidikan Malaysia*) implementation of MBMMBI (*Memartabatkan Bahasa Malaysia dan Memperkukuh Bahasa Inggeris* - To Uphold Bahasa Malaysia and to Strengthen the English Language) policy.

1.7.3 Second Language Acquisition and English Language Morphology

Pupils' English language proficiency, competence and ability to manipulate morphemes have also been developed through the feedback from this current research. Therefore, the findings from this research will also be served as a guideline in creating a more conducive English reading comprehension learning environment for young ELS learners. Previous studies have claimed that morphological awareness is considered as an efficient metacognitive awareness strategy to improve reading

comprehension. The aptitude to separate morphologically associated words based on the common root or constituent morphemes might also expand reading comprehension holistically.

For young learners to acquire the fundamental construction of morphemes at a young age is important. Once the solid foundation for linguistic morphology has been built up, the higher-level conception of morphemes can be developed gradually and steadily afterwards. Learners can infer and guess the meanings of complicated morphological words based on the root words and constituent morphemes. Knowledge of multiple morphemic meanings and root words can significantly improve their reading comprehension performance.

1.8 Limitations

The current research indicates several important findings in the linguistic field of English language morphological awareness and reading comprehension. However, in the research process, several limitations have been acknowledged. Firstly, the data were collected from a sample of only 125 primary five ESL pupils from two government primary schools in Malaysia. Therefore, the results should be generalised with care. The findings cannot be generalised to all young ESL learners in Malaysia as well as other settings or contexts.

Secondly, this study is based on a quasi-experimental research design. Therefore, the strength and reliability of findings would not be as strong as a conventional randomised experimental study. Other confounding factors or extraneous variables might indirectly affect the study outcomes. Nonetheless, threats in this study have been reduced using the statistical control method Analysis of Covariance (ANCOVA). The researcher used two schools, one as the experimental

group and another one as the control group. Both groups were taught by different teachers but had similar teaching styles. Furthermore, the researcher also conducted pre-tests as the variable to be controlled in order to minimise the research threats.

Thirdly, this study was limited to public primary schools available in *Johor Bahru* district in the *Johor* state of Malaysia. Therefore, the findings should not be generalised to other states or districts which may not share similar demographic and educational features.

Last but not least, the length of the study covered a twelve-week intensive treatment. Moreover, due to time constraints, the study only managed to cover several selected target morphemes; namely, open compounding morphemes, hyphenated compounding morphemes, closed compounding morphemes, inflectional plural noun *-s*, inflectional singular verb *-s*, inflectional simple past tense *-ed*, inflectional gerund or continuous tense *-ing*, derivational prefix *re-*, as well as derivational suffixes *-ion*, *-er* and *-ly*. If there was a longer treatment period, and more contents were included, the results might have been more comprehensive and conclusive.

1.9 Delimitations

This particular study only involved Primary Five pupils of National Type School due to time and financial constraints. Hence, it is assumed that undertaking another study in an ESL environment with learners of various levels (Primary One to Six) and different school type might produce dissimilar results.

The present study was carried out over a twelve-week intervention programme that includes a pre-test as well as post-test design. Therefore, a delayed or longitudinal post-test study could yield a more comprehensive finding.

This study only involved selected compounding, inflectional and derivational morphemes due to young learners' proficiency level and the time constraint. Furthermore, the gap that exists in the word knowledge among target respondents in the morphological awareness and reading comprehension tasks may illustrate performance differences. Hence, conducting a study on other types of morphemes can either corroborate or contradict the findings of this present study.

The data collected is analysed by using the Pearson Correlation Coefficient (PCC), Multiple-Linear Regression (MLR) and Analysis of Covariance (ANCOVA). Therefore, analysing the data by using statistical tests such as Spearman, Discriminant Analysis, Logistic Regression, or McNemar test might yield different statistical results.

1.10 Operational Definitions of Key Terms

For this study, the following definition of terms are used and are defined conceptually followed by its operational definitions.

Morphological Awareness. Morphological awareness pertains to the knowledge about morphemes recognition, perception and manipulation (Carlisle & Kearnes, 2017; Hedgcock & Ferris, 2018; Kim et al., 2015; Lockley, 2014). The skill to apply word formation rules to construct and comprehend morphologically complex words (Cheng et al., 2011; Lieber, 2015; McCutchen & Logan, 2011; Zhang et al., 2014). Morphological awareness is measured by the Compounding Inflectional Derivational Morphological Awareness Test (CID-MAT) which is adapted from Carlisle & Kearnes (2017), Deacon et al. (2017), Gibson & Wolter (2015), Kirby et al. (2012), McCutchen & Logan (2011) and Varatharajoo (2015b) solely in terms of the format. CID-MAT,

namely analogy, sentence completion and definition. In the analogy task, subjects were asked to form a correct word using a similar morphological structure of the provided analogy. In the sentence completion task, subjects were asked to complete a sentence by adding suitable morpheme-based on the given the root word and context. In the definition task, subjects were asked to choose the best definition from four given explanations for the word given based on the attached morphemes. Higher scores indicate higher awareness of morphology.

C-MAT. It stands for Compounding Morphological Awareness Test. Morphological awareness of compounding morphemes is measured specifically by C-MAT, which is a sub-test of CID-MAT. It contains 33 items in total, divided into three different sections, nine items in Section A, 9 items in Section B and 15 items in Section C. Section A requires respondents to form another compound word using the similar structure of the provided meaning and concept. Section B requires respondents to form another compound word using the similar structure of the provided analogy. Section C requires them to choose the best definition from four given explanations for the given compound word based on the constituent morphemes.

I-MAT. It stands for Inflectional Morphological Awareness Test. Morphological awareness of inflectional morphemes is measured by I-MAT, which is a sub-test of CID-MAT. It contains 43 items in total, divided into two different sections – A and B, 26 items and 17 items respectively. Section A requires respondents to complete a sentence by producing a correct inflected word based on the word given. Section B

requires them to form a correct inflected word using a similar structure of the provided analogy.

D-MAT. It stands for Derivational Morphological Awareness Test. Morphological awareness of derivational morphemes is measured by I-MAT, which is a sub-test of CID-MAT. It contains 48 items in total, divided into three different sections, 16 items in Section A, 20 items in Section B and 12 items in Section C. Section A requires respondents to complete a sentence by producing a correct derivational word based on the given root word. Section B requires respondents to form another derivational word using a similar structure of the provided analogy. Section C requires respondents to choose the best definition from four given explanations for the given derivational word based on the attached derivative.

Reading Comprehension Performance. Reading comprehension is the core of reading skill. It is an ability to understand and grasp the meanings of words, sentences and texts (Eng et al., 2016; Jamaludin et al., 2016; Proctor et al., 2011). Reading comprehension is generally associated with the ability to identify main ideas, recognise supporting details, draw inferences and derive conclusions from written texts (Asher, 2017; Eng et al., 2016; Kintsch & Vipond, 2014; Koda, 2015; Landi & Ryherd, 2017; Rosenshine, 2017). For this current study, the comprehension refers to the demonstration of understanding of a variety of linear and non-linear Primary Five texts in the form of print materials among non-native ESL learners by using a range of strategies to construct meaning. It refers to their ability to read and demonstrate an understanding of texts by giving main ideas and supporting details, as well as giving a justification. This study used English Reading Comprehension Assessment (ERCA)

instrument to measure the reading comprehension performance. There are three passages in this instrument which were taken from the available texts in the school summative assessment question bank.

ERCA. It stands for English Reading Comprehension Assessment for young non-native English speakers. It has three passages in total. There are five multiple-choice questions and five true-or-false statements for each passage. In the multiple-choice task, after the respondents read the given passage, they could only choose one best answer out of the four choices from a list. In the true-or-false task, respondents are required to determine whether the given statement is true or false by basing on the passage. Higher scores indicate a higher level of ability to understand the given passage.

Explicit Morphological Instruction. It refers to the clear and exact demonstration of ways how to apply morphological analysis on morphemes. This instruction aims to increase morphological awareness of morphemes recognition, perception and manipulation (Carlisle & Kearnes, 2017). It enhances young learners' skill to apply word formation rules to construct and comprehend morphologically complex words (Lieber, 2015; Zhang, Koda & Sun, 2014) since English words are primarily and typically morphophonemic (Miller, 2016; Plag, 2018). In this research, explicit morphological instruction is considered as an intervention during targeted respondents' reading lessons. There are seven essential instructional steps during the intervention. Firstly, identify the target novel unknown words and categorise them according to their constituent morphemes. Then, demonstrate how to segment the root

words and the attached affixes. After explaining the root words and the morphemic meanings of the constituent morphemes, guide pupils to decipher the meanings of words based on the context of given texts. Next, provide more examples of words with similar root attached to different morphemes or similar morpheme with different roots. Then, shift the focus to pupils-centred strategy by gradually guiding them to practise the morphology segmentation strategy individually, in pairs or in groups by using the scaffolding method. The explicitness of the morphological instruction can be observed directly through the above-mentioned steps during the 12-week intervention.

Compounding Morphemes. Compounding morphemes are words that can carry their own specific meanings, and they can form meaningful words independently (Carlisle & Kearnes, 2017; Haspelmath & Sims, 2013; Miller, 2016). They can even be considered as two root words that being joined together to make a new word. The explicit morphological instruction of compounding morphemes in this current research focused on open (e.g., best friend, school bus, roast duck), hyphenated (e.g., coal-black, king-size, man-made) and closed (e.g., armchair, basketball, postman) forms. C-MAT is the instrument that has been developed by the researcher to assess respondents' structural awareness and analysis of compounding morphemes. Compounding words that have been tested in this instrument and been used in the passages during the intervention were chosen carefully based on the morphemes corpus of KSSR standard school textbooks on the English language subject.

Inflectional Morphemes. These morphemes are word endings that denote case, verb tense, gender or syntax (Bae & Joshi, 2017; Carlisle & Kearnes, 2017; Hall, 2017; Kim et al., 2015; McArthur et al., 2018; McCarthy, 2017; Miller, 2016; Plag, 2018; White, 2017; Yule, 2016; Zhang et al., 2014). They indicate grammatical, syntactic or semantic relations between different words without changing the meaning or the part of speech of the root word. The explicit morphological instruction of inflectional morphemes during the intervention in this current research focused on four types. First, the suffix -s and its associated suffixes (e.g., -es, -ses, -zes, -ves, -ies) which denote the plural form of a noun. Second, the suffix -s and its associated suffixes which denote third-person singular simple present tense of a verb. The suffix -ed and its associated suffixes (e.g., -d, -ied, -led) which denote simple past tense of a regular verb. The last type is the suffix -ing and its associated spelling rules to denote gerund or participle for continuous tense of a verb. I-MAT is the instrument that has been developed by the researcher to assess respondents' structural awareness and analysis of inflectional morphemes.

Derivational Morphemes. Derivational morpheme, also known as derivational affix (prefix or suffix) or derivative (Anderson, 2015; Clark, 2017; Levin & Hovav, 2017; Miller, 2016; Plag, 2018; White, 2017). This type of morpheme modifies either the part of speech or the meaning or both, of a root word by the addition of an affix. The explicit morphological instruction of derivational morphemes during the intervention in this current research focused on one prefix and three suffixes. The derivatives are the prefix re- which assigns the meanings of again or back to a root word; the suffix -ly that attributes the meanings of having the qualities, in the way mentioned or at

intervals of a root word; the suffix -ion and its associated suffixes (e.g., -ation, -ition, -sion, -tion, -xion) to convey the action or state of the attached root word; and the suffix -er to bear the meaning a person or a thing that has the quality of the root word. D-MAT is the instrument that has been developed by the researcher to assess respondents' structural awareness and analysis of derivational morphemes.

1.11 Summary

The primary purpose of this study is to examine the impacts of morphological awareness and explicit morphological instruction on reading comprehension performance among Malaysian young ESL learners. This chapter has shed light on the research background, problem statement, research questions, research objectives, hypotheses, the conceptual framework, the significance of this current study and key definitions of the research.

By exploring this particular theme and concept, it is hoped that ESL language curriculum developers, syllabus creators and learning materials developers, particularly the local Malaysians would be able to develop a more substantial national primary school English language curriculum. This research can also make our primary ESL teachers consider explicit morphological instruction on morphological awareness as a potential strategy to improve pupils' reading comprehension performance. By devoting to the English morphology would also influence the field of English linguistic research as the findings could offer valuable evidence for researchers to explore the phenomenon of teaching further and learning English language morphemes in ESL classrooms.