

English Orthographic Depth among Malay Learners at a Primary School

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ABSTRACT

This study concerns the spelling difficulties in English as a second language among young Malay learners. The objectives of this study are to identify and categorise the spelling errors produced by these learners and to investigate the linguistic factors for the error productions. This study employs Wardhaugh's Contrastive Analysis as the main approach and Orthographic Depth Hypothesis as the foundation of the research. The Contrastive Analysis approach indicates that the linguistic differences between L1 and L2 may cause difficulties in L2 learning. The theoretical basis of this study claims that the degree to which an orthography deviates from easy one-to-one letter-sound plays a major role in L2 learner's spelling performance. This study adapts a spelling assessment from El-Dakhs and Mitchell that tests students' phonological, orthographic and morphological awareness and knowledge. The sample of this study consists of 46 eleven-year-old Malay students from a selected school in Selangor. The data for the study was gathered from the subjects' responses in the assessment and interviews with selected students based on their test scores. The findings showed that the learners' spelling performance was poorer in the orthographic tasks and better in the morphological and phonological tasks, suggesting the salience of orthography in the early stage of L2 learning. Based on the results of this study, it is recommended that educators employ orthographic, phonic-based and form-meaning approaches in their teaching to enhance their students' spelling proficiency so as to assist their students in their literacy development.

Keywords: English language; Malay language; morphology; orthography; phonology; spelling; young Malay learners

INTRODUCTION

The account of literacy is not only highly concerned in language learning. Past researchers confirmed that it is a matter of great significance in the overall academic performance amongst students (Annamalai & Muniandy 2013, Clark 2012, Lindsay & Muijs 2006, Snow & Biancarosa 2003). Malaysia has been cognisant of the essentiality of literacy proficiency (Chew 2012), hence, according to the 1956 Razak Report, literacy initiatives in schools, especially among young learners have been promoted dynamically. The Literacy and Numeracy Screening (LINUS) programme is the most recent literacy initiative that was introduced in 2010 under the Malaysian GTP 1.0 (Kementerian Pelajaran Malaysia 2012, Sani & Idris 2013). LINUS assesses the performance of Year 1 to 3 students on the two aspects mentioned in its name: literacy and numeracy. Following the assessment, further arrangements were provided for those who demonstrate poor literacy skills in the assessments (Azman 2016).

The discussion of literacy is often wide-ranging; the sole focus is placed on reading and writing. The fact that spelling is a vital component is somehow left unattended (Al Otaiba & Hosp 2010). This circumstance is unfortunate as the window to early literacy among young learners is actually through developing their spelling skills (Ouellette & Sénéchal 2008). As a

matter of fact, according to Templeton and Bear (1992), spelling knowledge is strapped together with the development of reading and writing. This argument is consistently confirmed by many researches including the recent ones, impeaching that literacy is deliberated not only by reading and writing accurately, but also spelling words correctly as they all tie together in the shell of literacy (Alsaawi 2015). To firmly concretise the prominence of spelling in developing reading and writing skills, it is only fair to present reliable researches that support the assertion.

Longitudinal studies have verified the close relationship between spelling and reading (Caravolas, Hulme & Snowling 2001, Cataldo & Ellis 1990); their findings revealed that spelling plays a greater role in developing reading than reading does in improving spelling during the first and second grade of school. Recent longitudinal empirical data by Abbott, Berninger, and Fayol (2010) provided a consistent argument when the results confirmed substantial contribution of spelling to reading development across and within time. Martin and Ranson (1990) implied the importance of spelling in writing, arguing that if writers are worried with not knowing or feeling unsure of the spelling of the words, they would be drained and out of mental energy to construct meanings. Ocal and Ehri (2017) supported the argument suggesting ‘writing fluency requires that writers produce correct spellings of words automatically’ (p. 59). Proficient spellers would represent their ideas better and more fluently in writing by diminishing abrupt interruption caused by uncertainties of spellings (Graham, Harris and Chorzempa 2002). The same idea was maintained by Moats (2005) and Singer and Bashir (2004), that writers must depend on automatic deployment of basic skills that also concerns spelling to keep the ideas flowing in the writing process. Going through the evidence presented in these studies, it would be completely irrational to still argue that this area of knowledge is inconsequential.

The abundant literature discussed may make it look like spelling is an issue that has been getting great attention all along but the truth is, it is not nearly as much compared to what has been given to reading (Joshi et al. 2008, Rapp & Beeson 2003, Caravolas, Hulme & Snowling 2001). The incongruity lies in the fact that spelling grounds reading (Carreker 2005). In Malaysia, the lack of attention given to spelling is evident looking at the scarce amount of published literature on it. There have only been past studies which explored difficulties in writing, of which they looked into the errors committed by students in written essays, Azizi Yahya et al. (2012); Darus and Ching (2009); Darus and Subramaniam (2009); Mohamed, Goh and Eliza (2004). A study on spelling that was published in Malaysia was conducted by Botley and Dillah (2007). It examines spelling errors in university students’ argumentative essays using a corpus known as CALES (Corpus Archive of Learner English in Sabah/Sarawak). Clearly, spelling difficulties and errors in the English language learning have yet to be the focus of studies done in the Malaysian context.

The state may be directed to the widespread assumption that spelling is a skill that could be picked up incidentally and that it needs not have to be formally taught (Peters 1985). The assumption is very weak and has been proven in the wrong providing the plentiful studies which assert that the mastery of spelling skills helps so much in literacy development. It involves the expansion of vocabulary, and the knowledge in reading and writing such as Bourassa and Treiman (2014); Devonshire, Morris and Fluck (2013); Vaessen and Blomert (2013); Zaretsky et al. (2009) among others. A need for a local study that analyses spelling difficulties among young learners ascends to looking at the research gap where most spelling studies have only focused on the secondary school and university students and little on the pre-school and primary school students. Based on the reasons presented, this study identifies the categories of spelling errors produced by the learners and based on the results that are then supported with interviews, it investigates the linguistic factors which have contributed to the production of spelling errors.

METHODOLOGY

PARTICIPANTS

The participants of this study were 46 primary school students from two Year 5 classes of a school in Sekinchan, Selangor. The school selection was influenced by the focus of the study which concentrates on investigating the problem among Malay learners. Eleven-year-old participants were chosen to be the sample of the study after measuring a number of factors. Firstly, the idea of using seven, eight, nine and ten-year-old students was discarded in spite of them being categorised as young learners due to their insufficient knowledge and exposure in the target language, especially in the morphology of English. They will not be able to perform the tasks which highly focused on the awareness of morphology as one of the areas evaluated. Secondly, eleven-year-old students should already have adequate knowledge and exposure of the English language in terms of phonology, orthography and morphology. They would have undergone four years of learning the English language in the Malaysian national schooling system, which formally starts at the age of seven as they enrol in their first year of the primary school. Thus, it was agreed that they were able to perform the designed tasks, which emphasise phonological, orthographic and morphological skills, and they would later be interviewed for the results in the assessments.

RESEARCH INSTRUMENT

The research instrument in this study was an assessment that tests on the English phonological, orthographic and morphological awareness and knowledge. The sections were adopted from El-Dakhs and Mitchell (2011). The design and words used in the assessment of this study were reformed in accordance with the cultural and learning context of primary school students in the Malaysian setting. The words included in the assessment were carefully chosen based on the textbooks of English language for Standard 4 and 5, as well as the vocabulary list that was obtained from the primary school teachers.

There were seven sections in the assessment that focused on the three skills mentioned earlier: orthographic, phonological and morphological. Four sections were designed to target the students' orthographic skills which are homophones, misrepresentation of vowels, misrepresentation of consonants, and double consonant. The format of each section varied from fill in the blank based on listening and context, merely listening, to multiple choice questions. Two sections aimed the students' phonological skills which are silent letter and mispronunciation. The former required the students to use their listening skills and spell the items, whereas the latter provided two options (correctly spelled items and pseudo-word of commonly mispronounced items) for the students to choose from. Another section targeted the students' morphological skills which is called misapplication of spelling rules. The format of this section is fill in the blank with root words provided.

The assessment was conducted in two sittings, with four sections in each session. The sections were divided based on the design of the task; the first session included tasks that highly rest on students' listening and the instructor's explanation and pronunciation, whereas the second session comprised tasks with less dependency on listening as pictures and contexts were supplemented with the questions.

DATA COLLECTION AND ANALYSIS

The data in the study came from two methods of collection: scores of the spelling assessments and interviews with a number of students. Firstly, the test scores were calculated manually. The total marks from the Spelling Assessment (1) and (2) are 60% and 40%,

respectively which totals up to 100%. The students were ranked according to their scores in the assessment tests (Poor spellers, C, 0- 40%, Intermediate spellers, B, 41- 70%, Proficient spellers, A, 71- 100%). Then, the scores for each task were calculated for the average score and percentage score for the comparison purpose. Each of the errors from the task where the participants struggled most, was determined based on their answers in the assessments and were analysed to further understand the linguistic features that were violated. For example, vowel or consonant errors, whereby the students either omit, illegally substitute or add unnecessary items to the answers. The specific linguistic features of the errors were determined to classify them as either orthographic, phonological or morphological errors. The frequencies of the errors were then calculated and presented in tables. (Refer to Tables 1 to 4).

Following the Spelling Assessment, two students from each level of spelling performance were interviewed to reason their choices in the test. Upon identifying and reasoning the choices, appropriate pedagogical measures were outlined to help reduce the problem.

RESULTS

The results are discussed in the following order: a) categories of spelling errors produced by the Malay learners in the selected primary school, which are orthographic, phonological and morphological spelling errors; and b) interviews with six students of different ranks in the assessments, to help us understand the reasons of their spelling difficulties.

CATEGORIES OF SPELLING ERRORS PRODUCED

To see the learners' overall performance in the spelling assessment, the results of the learners' test scores were calculated in terms of the percentage score and divided into three grades as mentioned in the methodology. The average score of the assessment was 51.43%. The majority of the students were ranked in the B grade (41-70%), followed by C and A respectively.

For comparison purposes, across the three linguistic categories, the average scores were calculated and presented in percentage. The results demonstrated orthography as the most challenging area in spelling, with 10.2%, followed by phonology and morphology with 29.1% and 42.2% correspondingly. To globally explain the spelling difficulties, each error in the tasks was analysed to make certain of the specific linguistic features in the misspellings. The frequencies were calculated accordingly.

TABLE 1. Analysis of spelling error types in the orthographic tasks by the linguistic feature that occurred across all students

Linguistic feature	Frequency	Examples
Confusables (i.e., substitution of somewhat similarly sounding grapheme)	208	whish/ which; by/ buy; son/ sun; soeu/ sew; aloud/ allow; neiw/ new; reed/ read; bleuu/ blue; pased/ past
Marking of L1 production pattern	227	hol/ whole; sam/ some, sum; blu/ blue; jaigentik/ gigantic; anfocenet/ unfortunate; disgais/ disguise; opezit/ opposite; ofes/ offers; donesyen/ donation
Consonant errors (i.e., omission, doubling, insertion, grapheme substitution)	741	villec/ village; brilliand/ brilliant; aford, affort/ afford; operzed/ opposite; peper/ pepper
Vowel errors (i.e., omission, doubling, insertion, grapheme substitution)	787	accident/ accident; brelien/ brilliant; rime/ rhyme; delicies/ delicious

Overgeneralisation of L2 spelling pattern	44	luyying, luying/ lying; thisguys, disguys/ disguise; alouwens/ allowance; feachers, fictures, fearches/ features; opencinety/ opportunity; jaigenthick/ gigantic
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Vowel errors were the most frequently noted across all four of the orthographic tasks which are homophones, double consonant, misrepresentation of consonants and misrepresentation of vowels with 787 in terms of rate of recurrence. This was closely followed by consonant errors with a difference of 46 times. Errors that are classified under vowel and consonant errors are those that either illegally omit, double, insert or substitute letters or graphemes to the word (Cook 2004). The influence of the first language was also noted as one of the linguistic features occurring in the participants' responses. It was the third most frequent error which recorded 227 times in terms of frequency. The errors were those that mirror the L1 orthographic knowledge and completely discount the L2's. For example, some of them spelled 'whole' as 'hol', and 'gigantic' as 'jaigantik' due to their dependence on Malay orthographic knowledge. They overlooked the English orthographic knowledge whereby the sound /h/ can be represented by 'h' or 'wh', and /dʒ/ can be represented by 'g' or 'gg'. In consequences, they used their Malay orthographic knowledge to spell the sounds /h/ as 'h' and /dʒ/ as 'j'. A lot of the errors were unanalysable because they neither reflected the phonological nor the orthographic feature of the target words. These words are the assortment of highly idiosyncratic spellings (Alsaawi 2015) which means the spellings are very particular and do not offer any tendency towards any linguistic feature. Examples include 'couthes' for 'cultures', 'ordines' for 'audience' and 'futier' for 'features'. They occurred 127 times in the learners' responses. The least frequently identified errors were those that overgeneralised the L2 spelling pattern, with only 44 times in terms of frequency.

Errors in the phonological tasks which included silent letter and mispronunciation were also examined and calculated for frequency. The results are shown in Table 2 below.

TABLE 2. Analysis of spelling error types in the phonological tasks by the linguistic feature that occurred across all students

Linguistic feature	Frequency	Examples
Mis-ordering of letter (i.e., reversals)	33	fasant/ fasten; ilands/ island; catsel, castle/ castle; tiution/ tuition; anwser/ answer
Consonant errors (i.e., omission, doubling, insertion, grapheme substitution)	130	nock/ knock; fasinating, fassinating/ fascinating; raph/ rough fassen, fasen/ fasten
Vowel errors (i.e., omission, doubling, insertion, grapheme substitution)	111	unswer, aunswer/ answer; cought/ caught; fasinaything/ fascinating
Influence of mispronunciation	76	Febuary/ February; library/ library; chewdren/ children; seben/ seven
L1 influence	89	fasen/ fasten; sup/ soup; raf/ rough; kolemm/ column

The analysis reflects a somewhat similar phenomenon as the orthographic tasks', which ranked consonant (130 times) and vowel errors (111 times) as the highest in terms of frequency. Errors that approximated the L1 sound and orthographic knowledge substantially recurred too, which was about 89 times across all students. Commonly mispronounced words usually resulted in learners choosing the wrong grapheme to represent the sound (Botley, Hakim & Dillah 2007). Influence of mispronunciation was recorded to have occurred 76 times across all students, placing it as the fourth most frequent errors. Based on the analysis, it is reasonable to conclude that learners were able to distinguish the phoneme as a unit, but struggled to represent it in the grapheme form. Evidently, there was an emergence of the mis-ordering of letters for 33 times and a relatively low frequency in the unclassifiable errors.

TABLE 3. Analysis of errors due to violation of spelling rules in the morphological task

Responses	Number	Percentage (%)	Examples	
Linguistic feature of the spelling rules	Irregular plurals ending	122	45.86	wolfs, wolfes/ wolves; cherrys, cherryes/ cherries; knives/ knives; echos, echose/ echoes
	Doubling of consonant before adding suffix –er or –ing	60	22.56	kidnaper/ kidnapper; hoping/ hopping; robing/ robbing
	Comparative and superlative adjectives	75	28.20	funnyer, funnyier/ funnier; wiseds, wizes, wisess/ wisest

In the morphological task (i.e., misapplication of spelling rules), learners were tested on their knowledge in derivational and inflectional morphemes. There were four items which assessed the learner’s knowledge of this rule, one of them is a derivational morpheme (kidnapper) and three of them are inflectional morphemes (robbing, hopping and shopping). The errors were analysed to identify the recurring errors and later to categorise them based on the spelling rules violated. The results are presented in Table 3.

57.83% of the responses were incorrect. 122 errors were errors caused by lack of knowledge of the rules of inflecting words with irregular plurals ending. 60 of the incorrect responses were those errors that violated the rule of doubling the consonant before adding the suffix – er or –ing, such as ‘kidnapper’ and ‘hopping’. Out of the 60 errors, 34 were due to the misspellings of ‘kidnapper’. Errors in inflecting the words to be in the comparative and superlative form are surprisingly high too, which was 75 errors. 9 others were also considered errors and they were words that were either left blank or not derived or inflected.

Having analysed the errors occurred in each linguistic task, it is only right and reliable to categorise the error types according to the linguistic features: whether they were orthographic, phonological or morphological errors and compare the results to find out the area that the students struggled most in. Even though the tasks designed in the assessments have had probable patterns of misspellings predicted out of them, some of the responses were unreflecting of the evaluated knowledge alone. They could also be caused by the students’ lack of knowledge and awareness in other linguistic area. Table 4 compares the spelling error types based on the linguistic features irrespective of the task categories and the results presented earlier.

TABLE 4. Comparison of error types by linguistic category and feature for errors that occurred across the responses in all tasks

Morphological	Orthographic	Phonological
Inflectional morpheme <i>knife/ knives</i> (n = 287)	Confusables <i>whish/ which</i> (n = 208)	Unanalysable <i>notch/ knock</i> (n = 153)
Derivational morpheme <i>kidnap/ kidnapper</i> (n = 195)	Overgeneralisation of L2 spelling pattern <i>feachers/ features</i> (n = 45)	Influence of mispronunciation <i>seben/ seven</i> (n = 76)
Homonyms <i>this guys/ disguise</i> (n = 5)	Marking of L1 production <i>ofes/ offers</i> (n = 316)	
	Mis-ordering of letter <i>catsel/ castle</i> (n = 33)	
	Consonant errors <i>peper/ pepper</i> (n = 870)	
	Vowel errors <i>delicies/ delicious</i> (n = 898)	
N = 487	N = 2370	N = 229

Table 4 clearly shows that orthographic errors are ranked as the highest in terms of rate of recurrence, followed by morphological and phonological errors. The difference between the former and the latter is exceedingly massive. It can be seen that the learners struggled to understand the inconsistent mapping of phoneme to grapheme in the English language, hence the large number of orthographic errors produced in the spellings. Morphological and phonological errors, on the other hand, have shown relative occurrence in the assessment.

LINGUISTIC FACTORS CONTRIBUTING TO THE PRODUCTION OF SPELLING ERRORS

Based on the responses in the assessment, it is resounding that the factor of spelling difficulties is the English complex orthography. However, to be of full certainty pertaining to the underlying reasons, interviews were conducted with six participants, two from each grade (A, B and C). The findings will be discussed according to the emerging themes: a) lack of orthographic knowledge, and b) awareness and reliance on L1 orthographic knowledge when spelling in English. Pseudo-names will be used to represent the interviewees.

a) Lack of orthographic knowledge

The students' unawareness of the one-to-many correspondence in English in terms of phoneme to grapheme mapping is apparent looking at their responses when they were asked of their stance on how spellings in the Malay and English languages differ from each other. They were unable to give a certain reason of why spelling in their mother tongue is easier and spelling in the English language is more difficult. However, they were sure of the fact that spelling in English is more challenging.

- Researcher : *Awak tahu tak apa perbezaan mengeja dalam Bahasa Inggeris dan Bahasa Melayu?*
[Do you know the difference in spelling in the English language and the Malay language?]
Hanif : *Bahasa Melayu senang, Bahasa Inggeris susah sikit.*
[In the Malay language, spelling is easy. But, in the English language, it is a bit difficult.]
Researcher : *Okay. Apa yang menyebabkan Bahasa Melayu senang, dan Bahasa Inggeris susah?*
[Okay. What causes that to happen?]
Hanif : *Emm... Saya pun tak tahu.*
[Emm... I am not sure.]

(Hanif, B)

- Researcher : *Baiklah, Zaitun. Sekarang saya nak terangkan pada awak, salah satu sebab yang mendorong kepada masalah ejaan, terutamanya dalam kalangan pelajar Melayu. Dalam Bahasa Melayu, ejaannya lebih senang. Awak setuju tak?*
[All right, Zaitun. Now, I would like to explain to you one of the reasons which causes problems in spelling, especially among the Malay learners. In the Malay language, spelling comes off easy. Do you agree with the statement?]
Zaitun : *Ya.*
[Yes.]
Researcher : *Awak rasa kenapa?*
[Why do you think so?]
Zaitun : *Tak pasti.*
[Not sure.]

(Zaitun, A)

Two of the interviewees showed overgeneralisation in determining the spelling of a sound, which is completely understandable considering their poor orthographic awareness getting in the way. They thought the /k/ sound is always represented by 'c' in English, while in reality, the /k/ sound can be spelled in more than one grapheme including 'cc', 'ck', 'ch', 'cq', 'k' and 'qu'. The correct spelling depends on a number of factors, like the position of the phoneme in the word and the etymology of the word itself. Other than overgeneralising the mapping of sound to letter, they also shared a technique that they used when attempting to

spell, which is copying the L2 spelling patterns of more familiar syllables or whole words. For example, they spelled the sound /ʃ/ as ‘ti’ for ‘suspicious’. The reason behind this occurrence could be directed to a familiar syllable or word with similar sound, such as ‘information’ and ‘regulation’. Such case is the result of lack of orthographic knowledge. They were unaware of the fact that in English, a sound can be represented by different graphemes. 3 out of 6 interviewees displayed this in the interviews. For instance, while Amir was able to distinguish the sound, he failed to map the sound to the correct grapheme, due to the overgeneralisation of the English orthography.

Researcher : *Baiklah. Seterusnya, ‘suspicious’. Awak eja sebagai ‘saspition’. Kenapa?*
[All right, next is ‘suspicious’. You spelled as ‘saspition’. Why did you spell like that?]
Amir : *Bunyinya hampir sama.*
[It sounds almost the same.]

(Amir, C)

Other examples include Syafiqah’s attempt of spelling ‘lying’ as ‘luyying’. When asked if she was influenced by other words with similar sound like ‘buy’ in order to understand the insertion of unnecessary vowel ‘u’, she denied the assumption. She clarified that she knows the word starts with an ‘l’ for the /l/ sound and ends with ‘ing’ for the /ɪŋ/ sound, her uncertainty lies in determining the /aɪ/ sound. This indicates her adequate phonological knowledge and poor orthographic knowledge. Another instance is the word ‘disguise’ being spelled as ‘disguy’ by 2 out of 6 interviewees.

Unfamiliarity of the words should not be considered as the sole contributing factor of the misspellings as they affirmed that most of the items are not newly encountered or unfamiliar words. They claimed that they have come across the words, used them and even know their meanings. All interviewees disclosed that the uncertainty of the spellings still takes place even with words that they were familiar with. It asserts that knowing the words by sound and meaning is not a guarantee for correct spellings. Since they are able to distinguish the sound in the words and even pronounce them correctly, it gives a clear indication that the problematic area in spelling is not the phonology.

b) Reliance on L1 orthographic knowledge

This factor is the subsequent result of the previous theme. When the interviewees were asked about the strategies they would use if they were to be in a situation where they need to spell words that are non-conforming and unfamiliar, the majority of them said they would depend on the sounds. Poor orthographic knowledge and awareness in the L2 impel the learners to spell with everything that they have to offer. Since they are lacking in the orthography of English, they would reflexively rely on their L1 orthographic knowledge when spelling. Their responses in the assessments which looked like the outcomes of L1 orthographic knowledge reliance were also questioned to check whether L1 is really the influencing factor of their spelling errors.

Researcher : *Baiklah. Yang terakhir, awak eja ‘geography’ sebagai ‘jografi’. Kenapa ‘j’?*
[All right. Lastly, you spelled ‘geography’ as ‘jografi’. Why you inserted ‘j’ in there?]
Amir : *Bunyinya seperti ‘j’.*
[It sounds like ‘j’.]
Researcher : *Dan bunyi /fi/ seperti ‘-fi’?*
[And the /fi/ sounds like ‘-fi’?]
Amir : *Ya.*
[Yes.]
Researcher : *Jadi, bolehkah saya simpulkan, untuk perkataan yang awak tak pasti ejaannya, awak bergantung kepada bunyi perkataan tersebut dan mengeja berdasarkan itu?*
[So, can I conclude, for words that you are not sure of the spellings, you depend on the sounds of the words and spell based on that?]

- Amir : *Ya, boleh.*
[Yes, you can say that.] (Amir, C)
- Researcher : *Baik, tak apa. Suku kata seterusnya /tʃ(ə)/ dan awak ejanya sebagai '-ce'. Boleh awak share tak kenapa awak eja macamtu?*
[All right, it is okay. The next syllable is /tʃ(ə)/ and you spelled is as '-ce'. Can you share with me the reason of your spelling?]
- Khairul : *Bunyinya macam '-ce'.*
[Because it sounds like '-ce'.]
- Researcher : *Betul ke kalau saya cakap, awak berfikir dalam Bahasa Melayu semasa mengeja perkataan ni?*
[Correct me if I am wrong, but do you think in the Malay language when spelling this word?]
- Khairul : *Betul. Sebab saya tak tahu perkataan tu.*
[Yes, that is true. Because I do not know that word.] (Khairul, C)
- Researcher : *Jadi, soalan saya, kenapa awak eja sebagai 'jogruphi'?*
[So, my question is, why do spell it as 'jogruphi'?]
- Syafiqah : *Sebab start dengan bunyi /dʒ/ masa saya dengar.*
[Because the word starts with the /dʒ/ sound when I heard it.]
- Researcher : *Tak apa. Kita belajar satu- satu ya. Nanti saya terangkan pasal tu. Last word dalam Bahagian B, ialah 'opportunity'. Jawapan awak ialah 'opecenety'. Kenapa?*
[It is all right. We learn it one by one, okay? Later, I will explain to you about it. The last word in the B section is 'opportunity'. You spelled it as 'opecenety'. Why?]
- Syafiqah : *Saya tak tahu ejaan. Saya ikut bunyi je.*
[I do not know the correct spelling. I just spelled it based on the sound.] (Syafiqah, B)

Based on the thematic analysis, it is clear that the biggest concern in L2 spelling among Malay learners in the selected primary school is the opaque orthography of the English language which vastly differs from their L1.

DISCUSSION

The discussion is divided based on the significant issues involved: a) orthographic depth, b) influence of L1 knowledge in L2 spellings, c) adequate phonological knowledge and awareness, and d) problems in understanding and practising the spelling rules in the area of morphology into spelling.

a) Orthographic depth

Orthographic errors predominate across all tasks especially the vowel and consonant errors (e.g., calches for culture, plasents for pleasant, suspecious for suspicious, dounetion for donation, allowens for allowance, cotich for cottage, raime for rhyme). The errors point out an index of the maturity and specificity of the orthographic lexicon development. The findings that are strongly supported by the interview data reflect the results of many past studies in which deeper orthographies cause difficulties in spelling including Alsaawi (2015); Bahr et al. (2015); Dixon, Zhao and Joshi (2010); Park (2011); Sun-Alperin, and Wang (2008). This is in consonance with orthographic depth hypothesis (ODH) (Katz & Frost 1992) that agrees the process of mapping the sound to letter is easier in shallow orthographies like Malay language, and more difficult in deeper orthographies like the English language.

Spelling involves pre-lexical process that is searching for a corresponding spelling of the whole word or morpheme to the sound which is stored in the lexical phonology (Frost 1994). In transparent orthographies, the process is rather active compared to the deeper ones. This notion clearly explains the errors produced by the learners. For instance, when the learner spelled cultures as 'calches', he or she managed to get the first consonant letter correct, which implies his or her understanding of the sound. However, he or she failed to

represent the vowel sound correctly in both syllables. Similar explanation can be used to discuss ‘allowens’ and ‘suspecious’. The learner managed to recall and represent the first part of the word, but was unsure to decide on the second part of the word. This is due to the inconsistent sound to letter correspondences that later results in incomplete word registration.

b) Influence of L1 knowledge in L2 spellings

For linguistic aspects that are common in the two languages, transfer of the L1 knowledge may be regarded as a jumping-off point in enhancing the target language skills (Durgunoğlu 2002); however, in a lot of cases, the transfer is not as helpful (Oller & Ziahosseiny 1970). Negative transfer took place in the learners’ process of attempting to spell in this study and the responses collected are valid to be presented as evidence (e.g., laying for lying, disgais for disguise, odiens for audience, raim for rhyme, ofes for offers, sam for some). The results are in concurrence with the argument, placing L1 influence as the third most frequent errors in the spelling assessment.

The inconsistent reliance on the L2’s orthographic knowledge in spelling makes the learners transfer their L1 orthographic knowledge as a strategy (Fender 2008; Figueredo 2006; Wang, Park & Lee 2006). The present study holds true of the argument. Transfer was indeed considered a spelling strategy, although inappropriate, by most of the learners. This has been verified in the interviews. They were asked about their spelling approaches when having to spell an unfamiliar word, four of them said their strategy is spelling based on the sound and L1 orthographic knowledge.

c) Adequate phonological knowledge and awareness

The responses in the assessment indicate the learners’ adequate phonological knowledge as they are able to represent the phoneme into alternative graphemes that are phonologically acceptable. The interviews also maintained similar arguments, especially in the interviewees’ attempts of spelling a number of words instinctively like ‘key’, ‘meat’ and ‘young’. All of them were able to spell at least the consonant letters accurately; their responses altogether are phonologically acceptable, but orthographically inappropriate. The results were reasoned by Katz and Frost (1992) saying that English language learners with shallow orthographies (e.g., Malay, Spanish and Finnish) in their first language may have strong phonological processing skills as compared to those with opaque orthographies (e.g., Chinese and English) in their first language.

d) Problems in understanding and practising the spelling rules in the area of morphology into spelling

In most responses, the learners’ problems are in the irregular plural endings and the inflection of comparative and superlative. For instance, the need to double the ‘p’ in ‘kidnapper’ to derive it as a noun from a verb is always ignored. A lot of them managed to add the suffix ‘-er’ but failed to double the last letter of the root word. Other examples are ‘wises’ for ‘wisest’ and ‘funnyer’ for ‘funnier’. Basically, what stands in the way is their phonological ability. This matter was discussed with one of the interviewees. He reasoned his incorrect response by arguing that he only spelled what he heard. This notion is strongly supported by Nunes and Olsson (2003). They believed pronunciation and recognising the morpheme boundaries are closely related to each other. They either help improve the spelling or interfere in the process. In this case, the pronunciation, together with the lack of morphological knowledge, are the contributing factors of the students’ spelling difficulties, but with the latter being the primary one.

CONCLUSION

The objectives of the study were to examine and analyse the categories of spelling errors made by the Malay learners, and to identify the key reasons for the production of spelling errors in the primary school level. Based on the learners' overall spelling performance, it can be concluded that their spelling abilities are average, with most of them ranked in the B grade. The results reveal that the Malay learners demonstrated more orthographic errors in the spellings, as compared to the morphological and phonological ones. The difference between the findings for each category is tremendously vast. The most significant error types are consonant and vowel errors which reflect their poor orthographic awareness and knowledge in the English language. They are able to represent the words to be phonologically acceptable, but orthographically inappropriate. A number of factors which attribute to this phenomenon were identified in the interviews, which are primarily, the complex orthography of the English language and the influence of L1 and, secondarily the inadequate exposure to print.

The results implant urgency for the relative depth of the orthographies of the learners' first and second language to be given extra emphasis in the L2 teaching of spelling. In doing so, the learners' strengths and weaknesses could be predicted, which in this case, the latter refers to vowel and diphthong sounds, as well as sounds that are commonly substituted with slightly similar sounds in the English language. Awareness of the one-to-many correspondences in English spelling should be raised as well to help learners understand the difference in the L1 and L2 phonology and orthography, so spelling errors caused by L1 could be avoided. Lastly, trainings consisting of the coaching of correct pronunciation and sufficient knowledge of the phonetic transcription as well as the orthography and morphology of the English language should be provided to enhance teachers' competencies in L2 teaching.

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