

INVESTIGATING SPELLING ERRORS AMONG INDONESIAN EFL SECONDARY SCHOOL STUDENTS

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Abstract. *In the Indonesian context, students who learn English face some problems in spelling words. They often make spelling errors in essay writing. This study aims to explore and categorize spelling errors made by Indonesian secondary school students and the primary sources contributing the errors based on Error Analysis (EA) framework. The participants consisted of 38 students chosen from a secondary school in Lampung, Indonesia. The data were obtained from documentation of student's written essays, and responses in the questionnaire analyzed based on Carney's (1997) categories of spelling error and Richards's (1980) types of error sources. The findings showed that errors under categories of variant, slip, and the split was the most frequently found as the students were mistaken in choosing among the competing letters and sounds and also careless with the correct spelling. Besides, the major error sources were associated with the Indonesian (L1) interference when students transferred their mother tongue to the English (L2) spelling and the inconsistency between English spelling and sounds. The study implies that the learners' better understanding of L1 and L2's different systems of spelling as well as pronunciation rules will help them enhance their spelling performance. It is, therefore, suggested that the teachers give students more practice to drill and to pronounce the frequently misspelled words simultaneously to develop their spelling accuracy.*

Keywords: *error analysis; Indonesian EFL learners; sources of spelling error; spelling errors; writing*

A. INTRODUCTION

Dissimilar to some neighboring states, e.g., Singapore, Hong Kong, and Malaysia, wherein English is generally communicated as a second language, English language in Indonesia seemingly tends to be instructed and learned as a foreign language, the so-called English as a Foreign Language (EFL) (Sulistyo, 2016; Muhassin, 2016). The process of teaching and learning English mostly takes place at school, rather than during everyday conversation. Thus, such a condition gives few possibilities for Indonesian students to use English beyond the classroom in a foreign language learning setting since it is not utilized as the primary means

of communication (Alwasilah, 2013). Indonesian EFL learners do not possess a broader entrance to English as a communication medium throughout everyday situations outside the school. As a consequence, teaching English in Indonesia raise specific challenges that are not faced in English as Second Language (ESL) countries where English is more widely utilized regularly (Setiyadi, 2016).

One of the challenges in teaching and learning EFL writing, including spelling (Budiharto, 2018). The novice learners frequently produce errors in writing English texts (Hikmah, 2017). As L2 learners, they quite often spell words loosely as they heard. For instance, students write freely 'Spel it rait' for 'spell it right', 'shi is my ticher' for 'she is my teacher', 'baisikel' for 'bicycle', and 'diferent' for 'different' (Sari, 2015), 'metbol' for 'meatball', 'turis' for 'tourist' and 'cair' for 'chair' (Nurchalimah, 2019). Those misspelling cases indicate that the students are likely to use their knowledge of the L1 system consistent between letter and sound, to write L2 constructions (Andi-Pallawa & Alam, 2013; Samuddin & Krish, 2018). The L1 and L2's linguistic disparity also presents challenges in the second language acquisition (Henceforth SLA) as the linguistic structures of both languages are profoundly distinct (Chaira, 2015; Kocatepe, 2017; Yasin & Ahamad Shah, 2019). The students' spelling errors are due to L1 interference on FL when the learners employ their mother tongue knowledge as a tool to organize the second language information (Littlewood, 2008; Senowarsito & Andini, 2019).

Problems concerning students' mistakes or errors during learning a second or foreign language have gained considerable attention from educators and researchers (Dweikat & Aqel, 2017; Muhassin *et al.*, 2019). Learners who intend to write correctly should, therefore, try to understand and prevent spelling errors or mistakes, particularly in SLA (Dada, 2015). As an important aspect of the writing system, potential spelling errors tend to alter the meaning and comprehension of written materials and could even make them blurred (Altamimi & Rashid, 2019). Spelling also affects the students' writing performance, and less confident and skillful students are likely to jot down fewer words and relatively only than competent spellers do (Warda, 2005). Applying accurate spelling is hence vital with a view to expressing the exactly expected meaning of the text (Alhaisoni *et al.*, 2015).

Similarly, Peters (2013) argues that spelling plays a crucial role as a main and necessary ability needed by learners. Correct spelling allows writers to communicate their thoughts and opinions in a structured format easily understood by readers (Banfi et al., 2017). Thus it can be said that effective writing is essentially determined by the results of accurate spelling.

Spelling errors made by Indonesian EFL students have received a large portion of the discussion from the researchers. This was as illustrated by several previous studies that highlighted spelling errors generally made and the possible causes contributing to the errors. The studies have covered a variety of settings from school to college levels. For instance, Wahyuni et al. (2013) analyzed the students' spelling errors at Bung Hatta University Indonesia. Provided with the samples of 30 students who took writing 2 and writing 3, the findings showed that students had done spelling errors and fossilization of spelling errors for all categories. From eight sorts of spelling errors- omission, addition, substitution, changes in letter position, use of an apostrophe, writing following the sound, leveling of word patterns, and word segmentation – substituting letters was a spelling error category with the most frequent errors found in students' writing, meanwhile omitting letters was an error category of spelling writing with the highest number of participants. Also, the major factor causing the fossilization of spelling errors was lacking sensitivity to input.

Sasmiasih (2014) examined spelling errors found in written essays of the eighth-grade students of SMP PGRI 2 Ciputat Jakarta, Indonesia. In this research, she used a qualitative approach analyzing errors such as verbs, punctuation, articles, preposition, spelling, pronouns, grammar, and part of speech choices. The result placed misinformation error (53.33%) at the first rank and misordering error (6.67%) at the last one. In addition, most errors were caused by first language interference (52.54%), and few were caused by translation (6.78%).

Another study was carried out by Risnati (2016) investigating spelling errors committed by senior high school students of SMA Muhammadiyah 3 Yogyakarta, Indonesia. It looked at the categories of spelling errors and the error type which occurred the most in students' written essay. Given 30 students as the research subject, the results found types of spelling errors including omission, addition, doubling letters, substitution, exchange

of two adjacent letters, apostrophe misuse, word segmentation, miscellaneous error, and sound-based error. Moreover, the omission of double letters was the most frequently made error found.

Likewise, Hikmah (2017) explored several causes that contributed to spelling errors among senior high school students of Madrasah Aliyah Negeri 1 Boyolali, Indonesia. L1 interference is the major cause of spelling error. For example, students misspelled 'jins' for 'jeans' and 'cuss' for 'choose', 'craud' for 'crowd'. The inconsistency between English spelling and the sound was marked by the writing 'klasic' for 'classic', 'baisikle' for 'bicycle'. Meanwhile, the lack of knowledge or rules contributed to misspellings of 'afther' for 'after', 'water fall' for 'waterfall', 'brother home' for 'brother's home', and 'my friend's' for 'my friends'. In addition, the students' carelessness was represented by spelling 'poeple' for 'people', 'clhot' for 'cloth', and 'beatiful' for 'beautiful'.

Later, Nurchalimah (2019) scrutinized and categorized students' spelling errors of Madrasah Aliyah Al-Muayyad Surakarta, Indonesia into omissions, additions, substitutions, multiple errors, doubling, two adjacent letters interchange, word segmentation and apostrophe involvement in which omission of letters was the most frequent errors found. Those errors were then mainly classified into interlingual errors caused by L1 phonological, morphological, grammatical, semantic interferences, and intralingual errors due to simplification, overgeneralization, hypercorrection, ineffective teaching, and fossilization.

A study by Senowarsito & Andini (2019) was still in Indonesian setting but was somewhat different from the previously cited studies. They investigated the L1 Javanese interference as the main cause of phonological fossilization of EFL Learners using contrastive analysis. Given the data of 25 university students' pronunciation and reading aloud outcomes of pre and post-tests, the study revealed that Javanese students frequently performed phonological fossilization in uninterrupted speech compared to separated words as the students uttered vowels /æ/, /ɪ/, /ə/, /ʌ/, /i:/ in front and medial positions; diphthongs /əʊ/, /eɪ/, /aʊ/ in front and medial positions; along with consonants /dʒ/, /tʃ/, /θ/, /ð/, /ʃ/, /v/, /ʒ/, /z/, /k/, /t/ in front, medial and back positions. They were inclined to drop /θ/, /d/ and /t/ in back position,

consonant clusters in front, medial, back position, and /j/ after plosive bilabial. These fossilizations were induced by intervention of the sound and spelling systems of their native language

All the above studies tried to investigate students' spelling errors in various levels of education and from different Indonesia's regions where English was regarded as a foreign language. On average, those studies placed omission and substitution in the top rank of the errors made. The studies also revealed that the students had trouble correctly presenting certain English consonants and vowels. This was because of the inconsistency between English sounds and letters and even the learners' L1 interference.

Attempting to fulfill the previous studies' gap, the current research refers to a specific teaching syllabus of EFL writing for a seventh grade of secondary school in determining the data collection. It also employs different perspectives of error analysis, adapting theories of Carney's (1997) spelling errors and Richards's (1980) sources of errors. As such, the study is aimed at exploring and categorizing spelling errors among junior high school students as well as the sources contributing to the spelling errors. The significance of the study appears as it focuses on the problems of seventh-grade students in EFL writing, especially by revealing the students' difficulty in producing English spelling and finding out the error sources. The impacts of this study are projected to map the potential problems of seventh-grade students in English spelling and help teachers find effective ways of teaching spelling, and provide the right solutions to these problems to enhance students' writing skills and communicative competence in practicing L2. Regarding the background of the study, this investigation tries to answer the following questions:

- 1) What categories of spelling error do students commit in their writing?
- 2) How do the sources of errors contribute the students' spelling error in writing?

B. LITERATURE REVIEW

There has been an intense discussion among researchers why error is always related to mistake. Some think that both are similar, and they do not consider them differently. Instead, many have tried to differentiate error from mistake with various definitions, yet their discussion refers to

the same conclusion. Errors are a faulty aspect of learners' speech and writing due to deviation from specific rules of mature language performance (Dulay et al., 1982). Similarly, Brown (2007) asserts that error is significant deviance from the adult grammar of a native tongue, indicating the learners' interlanguage proficiency.

In contrast, mistake is due to error of language performance that is either random guesswork or slipping. Additionally, error is a systematic, constant deviation as the trait of student's linguistic structure at a particular learning stage. Simultaneously, mistake is deviance caused by performance aspects such as memory constraint, exhaustion, and emotional stress (Fauziati, 2009). In such a case, the students have accommodated specific faulty patterns from the intended language's viewpoint into their system (Gass & Selinker, 2008).

Leacock et al. (2010) further assert that amidst linguistic errors constructed by writers, spelling error contributes to the most dominant stance, notwithstanding in the native language writers or language learners. Spelling is defined as the constructing word enactment precisely from a respective letter (Richards & Schmidt, 2010). It is a complex cognitive activity since acquiring correct spelling is commonly uneasy for lots of people, yet it is quite crucial as a prove of learners' language proficiency (Dada, 2015). This difficulty arises from the irregularity of English spelling in which it does not always directly reflect the sound that is heard when a word is spoken (Kuiper & Alan, 2004). The irregularity will then make learners prone to committing errors. For example, the absence of letters <k> and <gh> in 'know' and 'light' is attributed to the inconsistency between English sounds and letters (Al-Sobhi et al., 2017).

Spelling errors are sound or letter errors in word spelling (Al-Jarf, 2010). According to Liu (2015), spelling errors can occur either typographically or cognitively. Typographic errors include letter insertion, omission, substitution, and transposition or inversion (Cook, 2004; Dadzie & Bosiwah, 2015; Sénéchal et al., 2016) cognitive errors derive from sound sameness, for example, spelling 'acedemy' for 'academy'. Furthermore, Ellis (2008) maintains that spelling errors mirror blanks in students' comprehension as they did not know what the correct was. For example, students failed to differentiate regular forms of the verbs from the irregular ones, resulting in the misspelled words such as 'payed' for 'paid' and 'buyed' for

'bought' (Naruemon, 2012). Accordingly, students made spelling errors because of their incompetency in the target language (Summaira, 2011). Despite long periods of drilling and practicing in classrooms, spelling errors occur ubiquitously since the errors still emerge extensively in students' writing (Botley et al., 2007). Hence, spelling errors demand more related learnings and practices to perform before being self-corrected.

Applied linguistic researchers have conducted in-depth studies of learning difficulties or problems in the SLA process. Further, the result of the studies has led to three widely accepted approaches to analyze L2 learners' errors, i.e., Contrastive Analysis (CA), Interlanguage (IL), and Error Analysis (EA) (Al-Sobhi et al., 2017; Krish & May, 2020). CA focuses on the comparison of L1 and L2 linguistic systems and tries to estimate errors and areas of student's problems in the process of obtaining L2 owing to L1 interference (Richards & Schmid, 2010). Meanwhile, IL provides an analysis of a sort of language constructed by learners at a certain period of L2 development. Specifically, IL possesses three simultaneous features of errors, i.e. systematic, permeable, and fossilized (Hong et al., 2011). Unlike the previous approaches in SLA, EA is solely devoted to identifying and describing students' actual errors in classrooms rather than predicting errors or examining a continuum language between the L1 system and L2 system (Fauziati, 2014).

EA deals with a procedure to examine and reveal errors produced by learners (Al-Qudat, 2015). Moreover, EA seeks to identify some aspects of language learning, such as the learners' strategies, causes of learners' error, and the common difficulties faced by the learners (Richards & Schmidt, 2010). As an SLA study approach, EA mostly focuses on students' error and the reasoning of how the errors can give an awareness of the essential stages of SLA (Hameed, 2016). It is hence clear that EA is an effective method to scrutinize errors in word's structure, either in written or spoken formats. EA is applicable for this study as it attempts to explore students' spelling errors in essay writing. The result of analysis would then serve a pedagogic implication for students by showing what they have mastered or not mastered yet in learning English and demanding the material development created by the teachers (Ting et al., 2010). Consequently, this study mainly aims to investigate and

categorize spelling errors as well as the causes of errors made by secondary school students in Lampung, Indonesia.

According to Carney (1997), many spelling errors are variant, slip, malapropism, jumbling, and split. Those names represent the categories of spelling errors that will be examined in this study.

1. Variant

Variant error is when the letters are incorrect, but the sounds can be similarly heard. Most casual errors are simply an error of choice among competing spellings of the phoneme. So, 'compleat' is instantly recognizable as 'complete' and 'prefurred' as 'preferred'.

2. Slip

These are accidental errors, not errors of understanding. A common type of slip is when the writer anticipates in the string of letters a later spelling that requires some attention. Doubling a wrong letter is a very common slip, for example, 'innacuracy' for 'inaccuracy', 'ommitted' for 'omitted', mainly where there are false analogies such as 'innocent', 'committed'.

3. Malapropism

This is a word choice error due to perplexity among similar-sounding words. This would presumably be the case with children errors such as 'changed' for 'chased', 'brave' for 'brother', 'rise' for 'rest', 'hole' for 'hold', 'when' for 'win', and 'wilds' for 'wildest'. The malapropism cannot be identified by an ordinary spellchecker (Chiru et al., 2010) so that lexical chains may serve as the representations of context for detecting and correcting malapropisms (Hirst & St-Onge, 1998) or restoring lexical cohesion for tracking down and amending the errors (Hirst & Budanitsky, 2015).

4. Jumbling

Jumbling is an error that involves confusion between elements of word structure. Spelling errors, as such, violate some spelling rule. So, 'feild' for 'field' violates the well-known graph tactic rule about the ordering of <i> and <e>. However, the rule in this sense does not imply generality: 'liesure' or 'leisure' violates a very marginal letters rule. Occasionally there are subsystem mistakes: 'feasible' is a fairly technical word and, perhaps for that reason, attracts the spelling 'pheasible'.

5. Split

Mistakenly putting a gap in what is needed to be a single word structure can be called a split as in 'to gather', 'out side', 'be fore', 'in tact'. Very subtle differences of stress and phrase structure need to be observed: 'we went on to a night club' and 'we went onto a yacht'; 'we drove in to the center' and 'we drove into the hedge'; 'I don't want any more jam' and 'She doesn't go there anymore'.

Spelling error occurs due to several underlying factors as an integrated part of the SLA process. Some experts call it the cause of error or sources of error. In essence, both of them have the same referent, i.e. the thing or condition that facilitated the error in writing L2 spelling. In this case, Richards (1980) points out some factors that may contribute errors known as sources of spelling errors as follows.

1. Interference, an error caused by the transfer of L1 rules to L2 production;
2. Overgeneralization, an error due to the application of target language rules improperly;
3. Performance error, an unsystematic error owing to poor condition, such as nervousness, fatigue, confusion, and strong emotion;
4. Markers of transitional competence, an error resulted from developmental sequences in SLA;
5. Strategy of communication and assimilation, an error due to the production of the target language regardless of grammar;
6. Teacher-induced error, an error caused by ineffective pedagogical processes.

Those theories were utilized as the main foundation in analyzing data of students' spelling errors, starting from the error categorization under five kinds, i.e. variant, slip, malapropism, jumbling, and split. The spelling errors were then supplemented with information on the sources of errors which were summarized in five types adapted from Richards (1980).

C. METHOD

Design

This is a kind of descriptive qualitative study using the Error Analysis (EA) framework devoted to analyzing spelling errors of seventh-grade students at a selected secondary school in Lampung, Indonesia. The design of descriptive qualitative aims to comprehend and portray the phenomenon which occurs to the issue examined in the natural setting (Creswell, 2014). This study attempts to analyze and categorize EFL learners' spelling errors and the possible sources contributing to spelling errors. The results of the analysis could be realized as the fundament for designing practical approaches and techniques of teaching EFL writing specifically, spelling for the seventh-grade students. Several analytical procedures were used to analyze the data, i.e., collecting students' writing samples and identifying, describing, and explaining errors (Ellis & Barkhuizen, 2005).

Participants

There were 38 twelve-year-old students as the research participants chosen by using purposive sampling. The motive of purposive sampling is not to gain an enormous sample but to select individuals, places, or things that can give the most decadent and most detailed data to answer the research questions (Lodico et al., 2010). The selected sample came from Madrasah Tsanawiyah Negeri (Henceforth MTsN) Tanggamus, Lampung, Indonesia. The students were all taught with EFL writing and were classified as beginners who were subject to errors in spelling English words. Besides, based on preliminary research and also information from the teacher, students of the class chosen made the most spelling errors in writing tasks among other classes.

Data collection and analysis

There were two instruments employed in data collection, i.e., documentation and questionnaire. The instruments were relevant to error analysis as an approach to examine spelling errors in written essays and sources of a spelling error. Accordingly, documents constitute resourceful texts in the qualitative study to realize the participants' speech and writing (Creswell, 2014). The participants were requested to write a well-organized descriptive essay on describing

people or places in approximately 150-300 words in line with the EFL writing syllabus for the seventh grade. Besides, the time allocation was also sufficient under English teacher supervision. The documents of the writing task were then analyzed to determine and categorize spelling errors made by the students.

Besides documentation, the study also employed a questionnaire to gather data. A set of questions or written assertions were proposed to participants to respond to some factual information relevant to the subject explored (Sugiyono, 2013). The study used close-ended items with a pre-set response 'yes' or 'no' as suggested by Creswell (2014) to elicit students' rational background on sources contributing to their errors. These questions were designed in line with Richards's (1980) error sources: interference, overgeneralization, performance error, markers of transitional competence, strategies of communication and assimilation, and teacher-induced error.

Data were mainly analyzed and coded based on Carney's (1997) classification of spelling errors under five categories: variant, slip, malapropism, jumbling, and split. The coded data were then provided with a descriptive statistic using frequency and percentage. Statistics in the context of the frequency of a particular case may be employed in a qualitative study (Perry, 2008) used as a complement supporting the research conclusion (Maxwell, 2010). In the final stage, the data that had been examined concerning the types and sources of spelling errors were then verified for validity by an expert in English and Indonesian.

D. RESULTS AND DISCUSSION

Categories of spelling error

The results of the study are discussed concerning the objectives as stated earlier. Thus, this segment provides the discussion in the following order: a) categories of spelling errors found in students' written essays, and b) the possible sources of spelling errors. The study has identified the errors in their written essays and classified them into five categories, i.e., variant, slip, malapropism, jumbling, and split, adapted from Carney (1997) as illustrated in table 1.

TABLE 1. Frequency of Students' spelling Errors

Spelling Errors	Frequency	Percentage	Examples
Variant Error	41	44.09	favorit/ favorite; uniq/ unique; pleying/ playing; everage/ average; therteen/ thirteen; always/ always
Slip Error	16	17.20	ziper/ zipper; diferent/ different; sleping/ sleeping; noose/ nose; manggo/ mango
Malapropism Error	12	12.90	lost/ lots; bat/ but; worm/ warm; with/ white; fest/ fast; on/ one
Jumbling Error	9	9.68	bron/ born; noes/ nose; puer/ pure; freind/ friend; dialy/ daily
Split Error	15	16.13	to gather/ together; flash light/ flashlight; foot ball/ football; color full/ colorful; water fall/ waterfall
Sum	93	100	

Table 1 explicitly shows that of the 93 errors observed in all, the variant errors represent the highest number with 44.09% (41), followed by slip errors with 17.20% (16), and split errors with 16.13% (15). However, this study reveals that malapropism and jumbling errors appeared less often than the prior error categories, with 12.90% (12) and 9.68% (9), respectively. The discussion for each category

Variant error

Variant error happened due to students' mistake of choosing among competing spellings of the phoneme. Variant error is when the letter is incorrect, but the sound remains the same, making the students difficult to distinguish the word's spelling. Nevertheless, errors are instantly identifiable. This finding concurs with Carney's (1997) point in which this type of variant error is incurable because it can make the word meaningless. Some students wrote 'favorit', 'uniq', 'pleying', 'therteen', 'always', which were immediately recognizable as 'favorite', 'unique', 'playing', 'thirteen', 'always'. Those erroneous forms have similar spelling to the correct ones but still meaningless.

Among the cases of variant error, omission and substitution presented the most frequently found case. Those are classified under vowel and consonant errors that either illegally omit, double, insert or substitute letters or graphemes to the word (Cook, 2004). Here omission is represented by excluding letters from the words spelled (Dadzie & Bosiwah, 2015). Omission, in this case, can be categorized as an error related to the influence of L1 toward L2 in which the students' spelling errors mirror L1 orthographic knowledge and completely discount the L2's (Samuddin & Kris, 2018). Correspondingly, they employed their knowledge of Indonesian orthography to spell words as the sounds they heard (Sari, 2015). For instance, some students spelled 'favorite' and 'unique' with 'favorit' and 'uniq' by omitting vowel letters <e> and <ue>, respectively. This reflects their Indonesian orthographic knowledge for the absence of vowels after consonants at the final position of the words.

Also, substitution errors occur when the writer substitutes one of the letters of the standard spelling of a word with another. Similar to omission, substitution occurred owing to the students' prior orthographic knowledge when making a substitution error (Senechal et al., 2016). This factor is also in line with typical orthographic features of English letters, which have the inconsistent pronunciation of consonants or vowels, dependent on the context (Altamimi & Rashid, 2019). For instance, sound /f/ can be regarded as letters <f>, <ff>, and <gh> as in 'life', 'different', and 'laugh'; letter <c> can be pronounced /k/ and /s/ as in 'car' and 'mice', as well as vowel letter <u> reads /a/ as in 'hungry'. The current study found that some students replaced <a> with <e> in 'pleying' for 'playing', 'always' for 'always', and 'everage' for 'average'; <i> with <e> in 'therteen' for 'thirteen' for the reason of Indonesian sound background what they heard. This finding aligns with Alhaisoni et al. (2015), who claimed that substitution was mainly signaled by replacing vowels more often than consonants, mainly related to pronunciation. The major cause of substitution is the subtle divergence between English pronunciation and spelling, leading to the incorrect choice of letters when writing words.

Slip error

Slip is an accidental error, only carelessness, not error of understanding. The study found some erroneous forms of students' spelling, representing slip errors. The errors comprise doubling the wrong letter, insertion, transposition, and mistyping, as suggested by Carney (1997). Doubling the incorrect letters appears as the students skip a letter in a double letter word or add multiple letters in a single letter word (Nurchalimah, 2019). The study came up with some findings, for instance, 'sleping' for 'sleeping', 'swimming' for 'swimming', 'manggo' for 'mango', and 'colorfull' for 'colorful'. Among others are the examples of insertion, transposition, and mistyping resulting in ambiguity (Altamimi & Rashid, 2019) concerning the mere spelling carelessness of the writer: 'fatt' for 'fat' and 'wheen' for 'when'.

Malapropism error

Malapropism occurs when the students are confused with similar sounds or spelling of morphemes or words with quite different and malapropos meanings. These lexical errors led to misunderstanding due to identical sounding morphemes or words (Carney, 1997).

The difference between variant error and malapropism is that malapropism is confusion between a word to another that has similar soundings or spellings, but the meanings are different. Restoring lexical cohesion is one of some methods for tracking down and amending the errors by searching for tokens that are meaningfully irrelevant to their context and are spelling variants of words that would be linked to the context (Chiru et al., 2010; Hirst & Budanisty, 2015). The study found some students' errors in sentences, for example.

1. She is petulant *bat* [but] she is very kind.
2. He has given *lost* [lots] of money.
3. He is not only a great athlete but also *worm* [warm], caring person.

Error detection can be started by identifying the words 'bat', 'lost' and 'worm' as the tokens semantically unrelated to the sentence contexts, respectively. Therefore the sentences may not make sense. The correction then takes the word 'but', 'lots', and 'warm' regarded as the spelling variations of the contexts' words. This finding concurs with the assertion of Hirst & St-Onge (1998) that lexical chains may serve as the context presentation for detecting and correcting malapropisms, for example, using WordNet.

Jumbling error

This type of error involves students' confusion between elements of word structure (Carney, 1997). Jumbling error happened as the students reversed the order of the word elements, causing the word meaningless. As can be figured out from table 1, jumbling was the least common errors that occurred. Even though this kind of error ranked the lowest, jumbling error cannot be left aside because the study aims to enhance learners' writing performance. For instance, the students jumbled the words 'bron' for 'born', 'noes' for 'nose', 'kaind' for 'kind', 'freind' for 'friend', and 'dialy' for 'daily'.

The finding may suggest that the spellings of 'bron', 'freind', 'dialy' could be attributed to students' carelessness regardless of English orthographic rules. This case corroborates the findings of Dadzie & Bosiwah (2015) and Al-Qudat (2017) that claimed this error as inversion. However, this present study has a different view, especially for the spellings of 'kaind' and 'noes', which could be due to students' ignorance of the inconsistencies in English spellings with their sounds and not mere carelessness. In other words, this finding also corresponds to Alhaisoni et al. (2015), who considered this type of error as transposition as the writer jumbled the letters due to the sounds they heard.

Split error

Split error is an error that happened when the students mistakenly put a gap in what must be spelled as an unattached word (Carney, 1997). The writing system has sometimes been inconsistent, relatively based on meanings, as 'al right' means 'certainly' and 'all right' means 'all correct'. This resulted in the students' difficulty in determining whether the word should be written as a single word or not. For instance, 'to gather' for 'together', 'flash light' for 'flashlight', 'foot ball', 'color full' for 'colorful', and 'water fall' for 'waterfall'. This finding is following Sari's (2015) assertion that this type of error was regarded as a segmentation error in which students segmented a word into the incorrect structure of smaller parts.

Sources of spelling error

Table 2 presents the data obtained from the students' responses to the questionnaire. The questions were supposed to elicit the respondents' position on the issues concerning the sources of spelling error adapted from Richards's (1980) classification.

TABLE 2. Sources of Spelling Errors

Sources of Error	Items	Yes	Percentage	No	Percentage
Interference	Does your mother tongue affect you in spelling English words?	37	96.77	1	3.23
Overgeneralization	Do you consider you to recognize lots of English rules but are unable to apply them suitably through writing?	25	64.51	13	35.49
Performance Error	Do you feel nervous, shy, or afraid while you are being asked to write English by your teacher?	33	87.09	5	12.91
Markers of transitional competence	Do you often commit spelling errors in the learning process of writing English?	12	32.25	26	67.75
Strategies of communication and assimilation	Do you attempt to write English in the class regardless of correct spelling?	10	25.80	28	74.20

Teacher-induced error	Are you keen on teacher's effective techniques to improve your writing skill?	31	80.64	7	19.36
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Students' responses on the potential sources of spelling errors in table 2 indicate that 37 students (96.77%) were influenced by their mother tongue when spelling English words, regardless of English spelling rules; 25 students (64.51%) were not able to apply properly English rules they know; 33 students (87.09%) felt nervous, shy, or afraid in their involvement in writing activity in the classroom, so they might face difficulties while practice; 12 students (32.25%) stated their views that they commonly made errors in writing English; 10 students (25.80%) admitted that they did writing English without considering the spelling correctly; 31 students (80.64%) thought that there should be effective teaching techniques to improve their writing skill.

The survey results show that interference was ranked first (96.77%) among the sources contributing students' spelling errors, followed by performance error (87.09%), teacher-induced error (80.64%), and overgeneralization (67.75%). The lowest ranking was subsequently occupied by markers of transitional competence (32.25%) and strategies of communication and assimilation (25.80%). As the primary source of a spelling error, the application of the native language's rules to the target language production signifies the occurrence of interference (Richards, 1980).

Accordingly, the study findings indicate that most spelling errors were attributed to L1 interference, as evidenced by the response of 37 students (96.77%) who stated that they transferred their mother tongue in spelling English words. Student's spellings of 'favorit' for 'favorites' and 'uniq' for 'unique' reflected their Indonesian orthographic knowledge for the absence of vowels after consonants at the final position of the words. Also, the consistency of Indonesian rules between sound and spelling was applied in spelling English words, for example 'alveys' for 'always', 'pleying' for 'playing', and 'ziper' for 'zipper', by analogizing

sounds they heard. These results corroborate Sari's (2015) finding that the linguistic distinctions between L1 and L2 gave impediments to the students when acquiring L2 and might contribute errors to L2 production.

Performance errors are closely related to unsystematic errors resulting from negative conditions such as memory lapses, fatigue, sheepishness, and fear. Such things eventually lead to carelessness and confusion in writing English spelling. This finding aligns with Carney (1997) and al-Qudat (2017), who confirmed that cases of transposition or miss ordering such as 'foucs' for 'focus', 'dialy' for 'daily', and 'deid' for 'died' were attributed to carelessness and confusion in spelling the target language.

Student responses to the teaching techniques are quite positive, were 31 students (80.64%) preferred interesting and effective teaching techniques for EFL writing, especially for the spelling. When a teacher teaches monotonously and sometimes makes spelling mistakes themselves, students' interest in learning will decrease. Effective teaching will generate enthusiasm for students to learn and that is expected to improve their writing skills. This finding also strengthens the assertion of Dada (2015) that errors are the symptom of ineffective teaching in which the teacher did not deliberately teach spelling.

Furthermore, overgeneralization is said to be an error attributable to the expansion of English rules to non-applicable areas. Students have already known the rules of writing English; however, they practiced these rules improperly. For instance, they wrote 'goed' for 'went', 'tooths' for 'teeth' compared to 'arrive-arrived' and 'book-books'. This overgeneralization assumes the same rule as regular forms whereas there is also the irregular which has different applications in spelling. Similarly, it was also stated by Naruemon (2012) that the students applied the past tense regular -ed verbs to the supposed irregular verbs, for example, 'payed' for 'paid' and 'buyed' for 'bought'. It seems that in this case, students failed to differentiate regular forms of the verbs from the irregular ones, resulting in the misspelled words.

The next sources of spelling errors are markers of transitional competence and strategies of communication and assimilation. These kinds of error occur during the developmental stages of SLA in which the learner's language intuition has to experience diverse challenges to accommodate the understanding of the second language (Kocatepe, 2017; Yasin & Ahamad Syah, 2019). This finding corroborates the assertion of Al-Sobhi et al. (2017) that the students' lack of language knowledge as they did not fully understand the L2 spelling rules during SLA process, especially the inflectional suffixes <-es>, <-ed>, <-ing>, as in 'tomatos', 'halfs', 'stoped', and 'replied' could have led to their incorrect spelling. The current findings are also in line with Altamimi & Rashid (2019), who claimed that inconsistent spelling could sometimes be attributed to a transition period when the learner is acquiring the correct spelling, but it is not yet stable

E. CONCLUSION

The present study has attempted to examine spelling errors made by Indonesian secondary school students who learned EFL writing and the sources contributing students' spelling errors. The study reveals that the linguistic discrepancies between English and Indonesian could be the primary source contributing students' spelling errors. For instance, the presence of vowels at the final position of the English words, which Indonesian EFL students might not be accustomed to it represents the different natures of both spelling systems. Misspelling cases of 'favorit' for 'favorite' and 'uniq' for 'unique', for instance, represented the direct transfer of Indonesian orthographic rule to L2 spelling for the absence of vowels after consonants at the word's ending. Moreover, the inconsistency between English graphemes and phonemes could also cause some confusion, which leads to spelling errors. Furthermore, the inconsistency between English graphemes and phonemes could also create misunderstanding, which results in poor performance in spelling.

The findings indicate that the uppermost percent of students' spelling errors were concentrated on the categories of variant, slip, and split. At the same time, malapropism and jumbling were found at least in frequency. These errors can still be identified instantly because students reduce, replace, or separate letters, both consonants and vowels in words. For example students omitted <f> on 'diferent' for 'different' and <p> on 'ziper' for 'zipper', replaced the

vowel <a> with <e> on 'always' for 'always', 'everage' for 'average' and segmented 'football' for 'football' and 'color full' for 'colorful'. Student responses indicated some main sources that facilitated spelling errors, including L1 interference when students spelled letters according to what they heard depending on the Indonesian orthographic knowledge and performance errors due to carelessness or ignorance of the English spelling rules, such as spelling the words 'slepung' for 'sleeping', and 'freind' for 'friend'.

The study would suggest some pedagogical implications mainly intended to provide an overview for teachers to map potential students' spelling errors in the future, especially on certain words that are regarded as difficult to spell. Besides, the results of this study can also be considered as an evaluation material for teaching spelling that so far, it might not be effective. Principally the study urges the integration of teaching spelling and pronunciation as an effective technique to overcome students' difficulties in recognizing the inconsistency between English spelling and sounds. Consequently, providing students more practice for drilling and pronouncing simultaneously certain words that were often misspelled will be helpful for maintaining students' spelling accuracy and can ultimately enhance the competency of EFL students' writing. In addition, it is highly recommended that teaching English spelling should be integrated with writing lessons in the Indonesian school's curriculum to address students' spelling problems at an early stage, which will further facilitate the improvement of young EFL students' writing.

Nonetheless, since this study focused on secondary school students who are categorized as English novice learners, it has not been able to provide empirical data as a basis for mapping spelling problems for advanced students who have better abilities than novice learners. Further studies could reach the analysis of spelling problems for advanced students to expand the database for improving students' spelling skills more comprehensively following the Standard of English.

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