THE IDENTIFICATION OF MORPHOGRAPHEMIC CHANGES IN INDONESIAN WRITING RESULTS OF DYSGRAPHIC STUDENTS AT YAYASAN PANTARA JAKARTA AS A SECOND LANGUAGE ACQUISITION

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Abstract:
The importance of acquiring Indonesian language as a second language underlies the research towards the Indonesian writing results of dysgraphic students at Yayasan Pantara Jakarta. It is very important for Indonesians to acquire Indonesian language because Indonesian language is used as the first language for some city dwellers and a second language for most Indonesians. The main purpose of the research is to identify the morphographemic changes that occur in dysgraphic Indonesian writing results as the second language acquisition at Yayasan Pantara Jakarta. The research used descriptive-qualitative method. The data was taken at Yayasan Pantara Jakarta Elementary School after being conducted direct field survey toward dysgraphic students. The writing analysed based on online KBBI (Indonesian Dictionary) and some theories related to the research. We used the primary theories from Bussmann (1996), Ševčíková (2018), and BOTH (2016). This research also supported by other supporting theories, such as Kidd et al. (2018), Bitchener & Ferris (2012), Sousa (2016), etc. From the analysis of the Indonesian writing results of dysgraphis students at Yayasan Pantara Jakarta, we found some types of morphographemic changes, they are prothesis, epenthesis, paragoge, syncope, apocope, metathesis, and substitution. Prothesis, epenthesis, and paragoge are parts of addition or insertion, while syncope and apocope are parts of deletion.

Keyword:
dysgraphic students, Indonesian writing results, morphographemic changes, second language acquisition

INTRODUCTION

Language acquisition is an undeniable process which definitely occurred to everyone. Since we were born, we have been learning to acquire language. Childhood is the golden age for acquiring a language but not all people are able to do so because of their disabilities. There are some people who have learning disabilities like dysgraphia, dyslexia, dyscalculia, etc. Their disabilities may prevent them to acquire language as quick as other people who have no disability but it does not mean that they can learn nothing. Even with their disabilities, they are still able to learn many things, including to acquiring a language, whether it is the first or second language acquisition. They merely need more attempt and time to do it, especially to acquire other languages.

Second language acquisition is one of the most important things that we have acquired because most Indonesians have their own local language that they have been using as their first language and Indonesian language is their second language. Considering that Indonesian language is national language, so it is obviously important for Indonsians to acquire it, including people with learning disabilities like dysgraphia. They are still able to acquire second language, although they have the main problem in writing. Their writing results has uniqueness. They intend to convey

something thoroughly but sometimes they find difficulty in expressing what they want to say in written expression or written language. Their difficulty sometimes triggers occurring changes on the writing results. They may add or delete one or more letter within a word. They may also substitute a letter within a word. This phenomenon relates to morphographemic changes where there is alternation of morpheme or grapheme of the word.

LITERATURE REVIEW

The paper is analyzed by the written words based on online KBBI (Kamus Besar Bahasa Indonesia) or online Indonesian Dictionary and some relevant theories related to the research, such as regarding the morphographemic itself, we use theories from Bussmann (1996), Ševčíková (2018), and BOTH (2016). We also use other supporting theories to support the analysing in this research, such as Kidd et al. (2018), Bitchener & Ferris (2012), Sousa (2016), etc.

Online KBBI is the official word search page in the Indonesian Dictionary that has been developed and managed by Badan Pengembangan dan Pembinaan Bahasa (English 'Language Development and Fostering Agency') to provide the widest possible access to information for the public and facilitate community participation in the development of Indonesian vocabulary (Pencarian - KBBI Daring, 2016; Tentang Kami - KBBI Daring, 2016).

Language acquisition is the process by which speakers acquire the ability to process a target language, here, the term is used to refer to first (i.e., native) language acquisition (Kidd et al., 2018). On the other hand, there is also second language acquisition (SLA) where SLA theorists and researchers are interested in how individuals learn or acquire a second language (Bitchener & Ferris, 2012). In second language acquisition, error analysis studies the types and causes of linguistic errors which sometimes includes the evaluation and correction of errors (Bussmann, 1996). The error may be conducted by students with dysgraphia because they have writing problems that lead to excessively rapid or slow writing, messy and illegible papers, and frustration (Sousa, 2016). Dysgraphia, also known as agraphia, is a spectrum disorder describing major difficulties in mastering the sequence of movements necessary to write letters and numbers (Sousa, 2016). Bussmann (1996) reveals the errors may be classified according to: [1] modality, i.e. level of proficiency in speaking, listening comprehension, writing, and reading; [2] levels of linguistic description, e.g. phonetics/phonology, orthography, graphemics, morphology, syntax, lexicon, phraseology, or stylistics; [3] form, i.e. omission, insertion, substitution, contamination, etc.; [4] type, i.e systematic errors vs occasional errors or errors in competence vs errors in performance; and [5] cause, e.g. interference, development-related errors, interlanguage. Since the research is about morphographemic changes in dysgraphic Indonesian writing results, this research relate to those all of error classification that proposed by Bussmann (1996).

Morphographemics is the area dealing with systematic discrepancies between the surface form of words and the symbolic representation of the words in a lexicon (Black et al., 1986). The term of morphographemics is known as morphographemic changes but Ševčíková (2018) introduces it as morphographemic alternations. An alternation is understood as a substitution of a grapheme by another one that occurred during derivation in addition to the proper affixation; the term is used both for the process of replacing a grapheme with another one in a particular morphosyntactic context and for the pair of graphemes occurring in a particular position of the base word and the target word (Ševčíková, 2018). Ševčíková (2018) makes classification based on the vowel alternations, consonant alternation, and mixed alternation, where the vowel (i.e. vowel-to-vowel) alternations are classified according to the quantity and quality of the base (in the base) and target graphemes (in the derivative), that included: [1] in quantitative alternations, a vowel is substituted for the same vowel with opposite quantity; [2] in qualitative alternations, a vowel is replaced by a different vowel with the same quantity; [3] in quantitative-qualitative alternations, a vowel in the base word is replaced by a qualitatively different vowel with opposite quantity in the target word; [4] vowel deletion can be described as a type of vowel alternations, too; a vowel (mostly e in Czech derivation) is substituted by a zero (vowel-zero alternation); [5] vowel insertion is described as a replacement of a zero by a vowel (zero-vowel alternation); [6] individual alternations when a single consonant is substituted by another one; [7] consonant deletion and insertion is peripheral in contemporary Czech, cf. deletions in verb-to-verb derivation and in derivation from proper nouns of foreign origin , and insertion of the initial j (which is not a prefix); [8] a substitution of a pair of consonants by a particular pair of consonants is called a group alternation; [9] mixed alternations, a vowel is replaced by a combination of a vowel and constant; this type is mostly found in deverbal derivation. While, BOTH (2016) classifies four major group based on the altered part of the word: [1] changes at the beginning of the word, consists of aphaeresis and prosthesis; [2] changes inside

the word, consists of epenthesis and syncope; [3] changes at the end of the word, consists of apocope and paragoge; and [4] change that can occur anywhere in the word, like metathesis.

According to alternation classification of Ševčíková (2018) and BOTH (2016), we concluded that the alternations that happen included insertion/addition, deletion, metathesis, and substitution. Insertion is phenomena when a new segment is articulated in the initial (prosthesis), medial (epenthesis) and final (paragoge) position (RODRIGUES & Manuela, 2019). Prothesis [Greek prósthesis 'addition'] is insertion of a sound (usually a vowel), at the beginning of a word through motivation of the given syllable structure, e.g. initial /sp, st, sk/ clusters in Latin were broken up in Spanish and French by a prothetic e; cf. Lat. spiritus. stella, schola: Span. espíritu, estrella. escuela: Fr. esprit, étoile, école 'spirit,' 'star,' 'school (Bussmann, 1996). Epenthesis involves the addition of letters, sounds or entire syllables to a word (Johnson, 2021). Paragoge is the addition of a letter or syllable to the end of a word (Leverkuhn, 2021). Deletion is a process of losing some segment in a word and according to Lass (1991) there are three kinds of deletion process, those are aphaeresis; syncope; and apocope (Ditiya, 2017). Aphesis [Greek 'release, dismissal'], also known as aphaeresis or deglutination or procope or prosiopesis, is the loss of initial vowel, consonant, or syllable, as in opossum ~ possum, or the loss of initial [k] before [n] in knee, knight so it becomes nee, night (Bussmann, 1996). Syncope is the shortening of a word by omission of a sound, a letter, or syllable from the middle of the word; for example, bos'n for boatswain (BOTH, 2016). Apocope [Greek 'cutting off'] is loss (synchronic or diachronic) of a final vowel, consonant, or syllable, as in comb [ko:mb] □ [ko:m] (Bussmann, 1996). Metathesis is transposition within a word of letters, sounds, syllables, as in the change from Old English brid to modern English bird or in the confusion of modren for modern (BOTH, 2016). Substitution is a type of error and within this group different errors can be made, e.g. substitution of first/second/third consonant in cluster, substitution due to metathesis, substitution in combination with addition etc. (Collée, 2018).
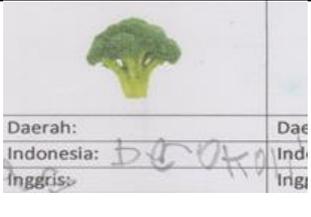
METHODS
The methodology of this research was descriptive-qualitative research where we researched phenomena relating to or involving quality or kind, includes surveys and fact-finding enquiries of different kinds towards dysgraphic students' writing results at Yayasan Pantara Jakarta (Kothari, 2004). We took sample of dysgraphic writing results for being analysed.

RESULTS AND DISCUSSION
Based on the research, we found some morphographemic changes in Indonesian writing results of dysgraphic students at Yayasan Pantara Jakarta as a second language acquisition. The changes included prothesis, epenthesis, paragoge, syncope, apocope, metathesis, and substitution as in the table below:

Table 1. *Indonesian Writing Results in Dysgraphic Students of Yayasan Pantara Jakarta*

No	Correct Word	Incorrect Word	Morphographemic Change	Student	Figure
1	JERUK	AJERUK	PROTHESIS	A	
2	BROKOLI	BEROKOLI	EPENTHESIS	F	

|					
				H	
3	BANTAL	BANTALA	PARAGOGE	I	
4	ALPUKAT	APUKAT	SYNCOPE	C	
5	GAJAH	GAJA	APOCOPE	A	
				E	
6	PISAU	PIASU	METATHESIS	G	
7	TERUNG	TARONG	SUBSTITUTION	B	

According to the table above, there are three morphographemic changes that included in addition. The dysgraphic students at Yayasan Pantara Jakarta wrote something referred to each picture with three types of addition, they were prothesis, epenthesis, and paragoge.

Prothesis

Figure 1. Handwriting Result
of Student A
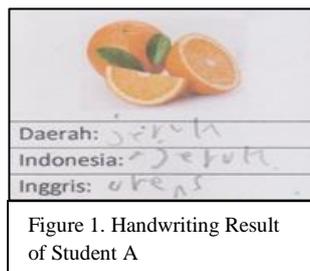
Student A wrote *'jeruk'* (English 'orange') incorrectly. Based on online KBBI, the correct Indonesian written language of orange is *jeruk*. The student wrote 'ajeruk' instead of *'jeruk.'* There is a morphographemic change on it. It is called prothesis, a morphogragemic change which shows there is an addition of letter in the beginning of the word. In this case, student A added letter 'a' in the beginning of *'jeruk'* so that the writing become 'ajeruk.' The addition changes its total letters of the word. The word that should consist of five letters become six letters.

Epenthesis

Figure 2.1. Handwriting
Result of Student F

Figure 2.2. Handwriting
Result of Student H
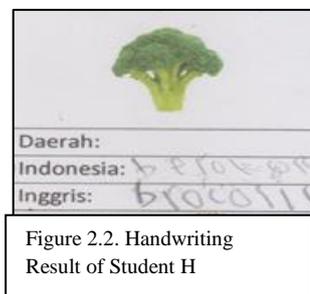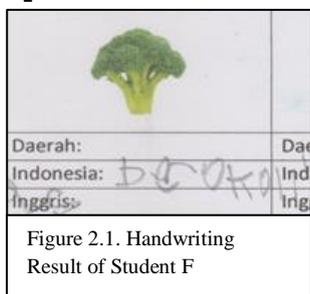
Indonesian writing of student F and student H indicated there was a morphographemic change on their writing. They should not write 'berokoli,' but *'brokoli'* (English 'broccoli') because based on online KBBI, the right way to write broccoli in Indonesia is *brokoli*. There is an addition of letter in the middle of the word, which is called epenthesis. Student F and student H wrote *'brokoli'* by adding an epenthetic letter 'e' between letter 'b' and letter 'r.' Because of that addition, it become 'berokoli' which consists of eight letters, not seven letters.

Paragoge

Figure 3. Handwriting Result
of Student I

Paragoge, a morphographemic change that trigger an addition in the end of the word, was found in Indonesian writing of student I. The student added letter 'a' in the end of *'bantal'* (English 'pillow') so the writing become 'bantala.' Whereas, Indonesian language for pillow based on online KBBI is *bantal*. The word should have ending letter 'l' instead of 'a' and the total amount of letters should be six but the actual was seven letters. This change indicated that there was an addition in the end of the word that had been written by student I. The change is called paragoge.

We also detected deletion in the Indonesian writing results of dysgraphic students at Yayasan Pantara Jakarta. Although there are three types of deletion in morphographemic changes, we only found two of three. They are syncope and apocope, while there is no procope in their Indonesian writing results.

Syncope

Figure 4. Handwriting Result of Student C
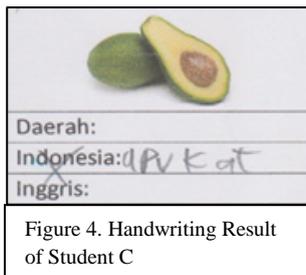
Based on online KBBI, the writing way of avocado in Indonesian language is *alpukat*. While, student C did not write it as in online KBBI, *'alpukat'* (English 'avocado') but 'apukat.' We recognized this as one of deletion types in morphographemic changes. The name is syncope, a morphographemic change that indicates there is deletion of letter in the middle of the word. In this case, student C deleted letter 'l' which should be between letter 'a' and letter 'p' but the actual is the student did not put letter 'l' between those letters. As this condition, the total of letters change. If we see in online KBBI, it consists of seven letters. It differs when we see the student's writing, it consists of six letters.

Apocope

Figure 5.1. Handwriting Result of Student A

Figure 5.2. Handwriting Result of Student E
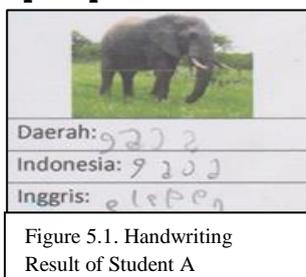
Other students also wrote something with indication of deletion type on their writing. They were student A and student E. According to online KBBI, Indonesian language for elephant is *gajah*. Rather than to write *'gajah'* (English 'elephant'), student A and student E wrote 'gaja' instead. There is a letter which is not included on their writing. They removed the last letter or letter 'h' on *'gajah'* so it become 'gaja' and the word that should consist of five letters decreased become four letters only. This phenomenon showed that student A and student E experienced one of morphographemic changes. The name for this change is apocope. Apocope occurs when there is indication of deletion of letter in the end of the word.

Beside addition and deletion, we found the other morphographemic changes, they are metathesis and substitution. As we can see on Table 1, student G's Indonesian writing result indicated metathesis, while student B wrote with indication of substitution on his/her Indonesian writing result.

Metathesis

Figure 6. Handwriting Result of Student G
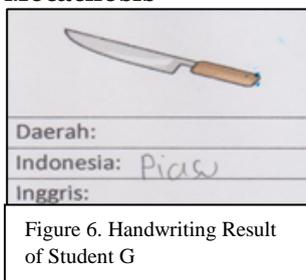
Student G wrote 'piasu' to refer the available picture. It was written with indication of metathesis on it because based on online KBBI, to refer the available picture which was known as knife is actually written *'pisau'* in Indonesian language. The student did not write *'pisau'* (English 'knife') but he/she wrote 'piasu.' There were two letters exchange its position where there was movement of 's' to the fourth position to replace 'a' and vice versa, 'a' moved to the third position to replace 's.' This phenomenon is called metathesis, an exchange of letters position within a word.
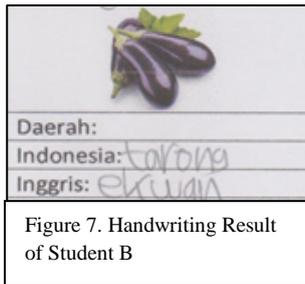
Substitution

Figure 7. Handwriting Result of Student B

We detected substitution on student B's Indonesian writing. The student wrote 'tarong' to refer the picture of eggplant but it should be written 'terung' (English 'eggplant') if we see on online KBBI. The student substituted letter 'e' with letter 'a' and also substituted letter 'u' with letter 'o' so it become 'tarong' not 'terung.' In morphographemic change, this is called substitution, a phenomenon which shows there is one or more letter within a word changed or substituted by another letter. These findings may need further discussion since the theory about morphographemic change itself is still not as much as morphophonemic change. Although we found an old theory from the 1980s regarding morphographemic changes, it may not as same as the latest context.

CONCLUSION

Second language acquisition of dysgraphic students may seem more difficult rather than other people, especially in writing. They rarely produce written word properly. Their written words may indicate addition of one or more letter within a word, or other indication that relates to morphographemic changes as can be seen in finding and discussion above. This research has found a lot of types of morphographemic changes in Indonesian writing results of dysgraphic students at Yayasan Pantara Jakarta. On their writing results, we found alteration that alter the total number of letters within its word, they are: prothesis, epenthesis, and paragoge that include in addition/insertion; as opposed to addition, there is deletion that consists of syncope and apocope, while procope exluded from the finding of this research; then we also found alteration that did not change the total number of letters within its word, they are metathesis and substitution.

The implication of this research hopefully can help teachers to get more understanding about how dysgraphic students need more attention when they acquire second language, especially for Indonesian dysgraphic students who use Indonesian language as their second language so they are able to communicate effectively with other Indonesians and/or other Indonesian speakers. It is very important to learn Indonesian language because it is the mother tongue for some city dwellers and a second language for most Indonesians (Legge, 2021).

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