

INVESTIGATING THE ROLES OF IMPLICIT AND EXPLICIT KNOWLEDGE IN THE PRODUCTION OF GRAMMATICAL ERRORS

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ABSTRACT

This research aims to investigate the role of implicit and/or explicit knowledge in the production of grammatical errors in academic texts. The reasons why this research is conducted is due to the fact that the students are still producing errors even though they have learnt English since elementary school. The data is gained from the academic text written down by fifteen English department students studying in a university in Jakarta. It is analyzed by using two different measurements: (1) Delayed Grammatical Judgment Tests (GJT), and (2) Interview including Metalingual Comment to investigate the role of explicit knowledge in the production of grammatical errors. The other two measurements are also used; they are (1) Timed Grammaticality Judgment Test (TGJT), and (2) Oral Production Test (OPT) to investigate the role of implicit knowledge. The results show that 19.2% of grammatical errors are produced due to the implicit knowledge and 80.8% is due to explicit knowledge. Since the explicit knowledge plays an important role in producing the grammatical errors, it can be concluded that teaching English grammar for university students is still important. If possible, the English Grammar lessons should be given more rooms in the overall curriculum in the university, especially in the English Department.

Keywords: Explicit knowledge, implicit knowledge, grammatical errors

ABSTRAK

Penelitian ini bertujuan untuk menyelidiki peran pengetahuan implisit dan/atau eksplisit dalam produksi kesalahan tata bahasa dalam teks akademik. Penelitian ini dilakukan karena siswa masih melakukan kesalahan meskipun mereka telah belajar bahasa Inggris sejak sekolah dasar. Data diperoleh dari teks akademik yang ditulis oleh lima belas mahasiswa jurusan Bahasa Inggris yang belajar di salah satu universitas di Jakarta. Data dianalisis dengan menggunakan dua pengukuran yang berbeda, yaitu (1) Tes Penilaian Gramatikal Tertunda dan (2) Wawancara termasuk Komentar Metalingual untuk menyelidiki peran pengetahuan eksplisit dalam produksi kesalahan tata bahasa. Dua pengukuran lainnya juga digunakan, yaitu (1) Tes Penilaian Gramatikalitas Berwaktu, dan (2) Tes Produksi Lisan untuk menyelidiki peran pengetahuan implisit. Hasil penelitian menunjukkan bahwa 19,2% kesalahan tata bahasa disebabkan oleh pengetahuan implisit dan 80,8% karena pengetahuan eksplisit. Karena pengetahuan eksplisit berperan penting dalam menghasilkan kesalahan tata bahasa, dapat disimpulkan bahwa pengajaran tata bahasa Inggris bagi mahasiswa masih penting. Jika memungkinkan, pelajaran Tata Bahasa Inggris harus diberikan lebih banyak ruang dalam kurikulum di Universitas. khususnya di prodi Bahasa Inggris.

Kata Kunci: Pengetahuan eksplisit, pengetahuan implisit, kesalahan tata bahasa

INTRODUCTION

Not all grammatical features are easy to produce by the L2 second language learners; they still produce grammatical errors even in academic writing, such as in thesis

writing. One of them is error in the production of the English tenses. The second language learners tend to use one or two tenses in all chapters. In addition, the second language learners sometimes mistakenly use past verbs after have in perfect tenses. The other error

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regarding tenses is usually about the usages of will and be going to in future tenses. The second language learners use will and be going to interchangeably. (Sukasame, Kantho, & Narrot, 2014; Wongranu, 2017; Darus & Ching, 2009; Sawalmeh, 2013). Next, subject and verb agreements have also been produced incorrectly by the second language learners while writing. In the higher level, the error occurs after neither and either. It is also found out that second language learners in the lower-level use be before verbs, such as 'I am not agree'. (Ondrakova & Siruckova, 2015; Darus & Ching, 2009). Another grammatical point which is also produced incorrectly is regarding conditional *if*. It is argued that simple conditional (type 1) is the easiest to understand but the most difficult to produce (Berent, 1985). In some countries such as China, prepositions are also incorrectly produced in academic writing. The students are found to use on Monday, in Monday, and at Monday at the same time. (Darus & Ching, 2009; Sawalmeh, 2013). Another grammatical error detected in the academic writing is regarding double negatives. The sentence such as 'I rarely do not talk to the principal' is still found in the academic text. (Sawalmeh, 2013). Sawalmeh (2013) also adds that word order tends to be one of the grammatical features to be produced, especially the adjective order. The second language learners do not use the correct adjective order in the sentences. For example, they write 'the big expensive teaching aids' while actually the adjective of opinion, such as expensive, must precede the adjective of size, such as big. Articles are also found to be produced incorrectly, especially the usages of 'the' before the musical instrument, such as 'I can play a guitar, while it should be written down as 'I can play the guitar'. (Ondrakova & Siruckova, 2015; Sawalmeh, 2013). The other grammatical errors found are regarding the countable and uncountable nouns (Wongranu, 2017), noun ending (Lee, 2004) and collocation (Alsullayi, 2015).

The evidence of grammatical errors in academic writing written down by second language learners shows that there is a sort of

failure in transferring the explicit instruction to explicit knowledge and later from implicit knowledge to implicit transferring. At the stage of explicit instruction, Schmidt, (2001) argues that the production of grammatical errors is due to the lack of noticing at the input stage. This failure to notice has led to different ways of teaching grammar in order that the second language learners have the implicit knowledge (Hinkel & Fotos, 2001).

In relation to the production of grammatical errors and implicit and explicit Knowledge written down by the second language learners, there are two different concepts. The first concept is that the explicit instruction leads to the mastery of explicit knowledge. The second language learners use the explicit processing to produce the sentence in the second language. The grammatical errors are due to that explicit processing (DeKeyser, 2000). The other concept is proposed by Krashen (1994) who argues that the explicit instruction leads to implicit Knowledge. The second language learners use the implicit processing producing L2, including the production of grammatical errors in L2. However, some evidence shows that all of them depend on the grammatical features themselves. For example, Spanish college second language learners who are studying in Spain and never go abroad produce grammatical errors in past unreal conditional due to the implicit knowledge and errors in real conditionals are due to explicit knowledge (Berent, 1985).

This research is a continuation of previous studies (Ellis, 2005; Erlam 2006; Loewen, 2009) which have analyzed the second language learners' grammatical proficiency in relation to both implicit and explicit knowledge. This research, as shown in the research questions, discusses the grammatical errors produced by the second language learners – studying in an English Department in a university in Jakarta – and the reasons why those second language learners produced them by adapting the instruments from Han & Ellis (1998). Even though the previous studies show that the second language learners produced grammatical errors

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in tenses and articles, it does not mean that the results should reflect the grammatical errors produced by the participants of this research.

This current research has indicated the answer to the following research questions. (1) Which features of English grammar in the undergraduate thesis do the university second language learners in Indonesia mistakenly produce? (2) To what extent does the explicit knowledge influence the production of grammatical errors? and (3) To what extent does the implicit knowledge influence the production of grammatical errors?

This research is conducted to figure out the reasons why Indonesian students conduct similar grammatical mistakes even though they have already learnt English for more than 12 years. Those reasons are considered as important since the researches which have been conducted mostly discuss the evidence of grammatical mistakes produced by the students. They do not discuss the reasons which are actually very useful in order that the students do not conduct grammatical mistakes in the future.

LITERATURE REVIEW

First of all, implicit knowledge is defined as an intuitive knowledge which enables the second language learners to use the language spontaneously without any reflection. Explicit knowledge is conscious and declarative knowledge used to monitor language production (Zhang, 2015). There have been several methods in order to measure whether the second language learners have had both implicit and explicit Knowledge. The general methods should prompt the second language learners to verbalize any rules or patterns they might have noticed while performing the experimental tasks (Lewicki, Hill, & Bizot, 1988; Payne, 1994, Rebuschat, 2013).

This research will adapt a method proposed by Han & Ellis (1998) to measure the second language learners' implicit and explicit knowledge. There are two valid tests in order to measure the explicit knowledge,

there are (1) Delayed Grammatical Judgment Tests (GJT), and (2) Interview including Metalingual Comments. In delayed GJT, each participant is given unlimited time to judge ungrammatical sentences produced by themselves. Later, the responses are scored as either correct (1 point) or incorrect (0 points). Below is an example of a question of Delayed GJT (Unlimited time).

Instruction: Read the sentence below and judge whether it is a correct sentence or not!

Sentence: The teacher, together with the second language learners, are playing the language games.*

It is scored as a correct one when the students have successfully identified that the auxiliary verb 'is' must be used instead of 'are'.

As mentioned earlier, the second method in order to measure the explicit knowledge is by conducting an interview to gain the metalingual comments from the second language learners. The participants are asked to correct sentences which contain errors that should be underlined. Next, the rule-stating section required participants to provide written explanations for the ungrammatical sentence. The responses should be scored as either correct (1 point) or incorrect (0 points). Below is an example of Metalingual Comments.

The participant is shown a sentence in a slide: The questionnaires is delivered in the first meeting*.

Each participant should explain why the sentence is incorrect. The following sentences are the examples of Metalingual comments by participant 1 (1) The questionnaires are ..., (2) We have to use "are" because the subject is "participants".

After the explicit knowledge is analyzed, the implicit knowledge is also measured by using different instruments which are also adapted from Han & Ellis (1998). There are two different measurements named (1) Timed Grammaticality Judgment Test

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(TGJT), and (2) Oral Production Test (OPT). Timed Grammaticality Judgment Test (TGJT) is a computer-delivered test consisting of ungrammatical sentences. There are two steps to deliver this test: (1) In 3.5 seconds, participants should choose: correct or incorrect, and (2) A percentage accuracy score is calculated. Below is an example of TJGT.

The participant is shown a sentence in a slide: The participants are afraid for making mistakes.*

Slide 1 will be shown in 3.5 second. It consists of one ungrammatical sentence. After that, the second slide is shown in 2 seconds. The aim is to see the respondent's response.

Slide 2: Correct or Incorrect

The second measurement of implicit knowledge is the Oral Production Test (OPT). In this measurement, each participant should listen to ungrammatical sentences. They then attempt to repeat the sentence correctly and are audio recorded. The scoring is based on whether learners successfully repeated/corrected the target structure in each sentence or not. After that, a percentage accuracy score was calculated.

RESEARCH METHODOLOGY

The source of the data is the academic texts written down by 15 second language students in a university located in Jakarta in the academic year 2017-2018. Those academic texts are the proposal for their undergraduate thesis, covering the introduction, theoretical framework, and the research methodology. The data for this research are the grammatical errors produced by those fifteen second language students in the undergraduate thesis proposals.

The data is collected by close reading those fifteen (15) undergraduate thesis to find the grammatical errors. When the grammatical errors are found, they are written down in the separate paper. If one type of grammatical error is later written down correctly in another

sentence, then it cannot be classified as a grammatical error. As a result, it will be deleted from the list. After that, the errors are classified. The classification is ranked based on the highest to the lowest occurrences.

Next, the explicit knowledge measurements are prepared. The first measurement is Timed Grammatical Judgment Test (TGJT). Two ungrammatical sentences from each category are chosen and presented in a computer test program. There is a total of 20 ungrammatical sentences in this test. The participants are given 3.5 seconds to decide whether each sentence is correct or not. If the sentences are successfully identified, they are produced due to the implicit knowledge. The second measurement to see the role of implicit knowledge is the Oral Production Test (OPT). This time, the researcher is reading 20 ungrammatical sentences; each student is repeating each sentence. On one hand, if the sentence is repeated as it is, without correcting the mistakes, then it is categorized as error due to implicit knowledge. On the other hand, if the students can correct the sentence while repeating it, it is categorized as errors due to explicit knowledge.

After the implicit knowledge is measured, the explicit knowledge measurements are presented. These measurements are composed by taking other ungrammatical sentences from all of the categories. First, the delayed grammatical judgment test is conducted by putting the ungrammatical sentences in PowerPoint presentation which are later shown to the participants. Each participant is given unlimited time to analyze the ungrammatical sentences. They must say whether the sentence is correct or incorrect. If it is incorrect, they must correct it to prove that they really know that the sentence is incorrect. If the correction is still incorrect, it is considered as incorrect and fail this test. After that, an interview is conducted to get the metalingual comments. The interview basically discusses the why the students produce the grammatical errors.

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FINDINGS AND DISCUSSION

Table 1 below shows the number of errors produced by the fifteen students, together with its type.

Table 1. Type of grammatical errors produced by the participants

Participants	Art	V	SV	S-P	O	Der	PA	Col	Ger	TE	Total
1	1	2	4							1	8
2	1	4	1	2		2		2		1	13
3	5	3	4	2							14
4	2	2	1						1		6
5	8	3		1	1			2			15
6	3	4	1		2	1					11
7	7			3							10
8	2		5	1	1				1		10
9		1	2	1							4
10		2									2
11	1	7	2	1	1	1	3		2		18
12	3		3	1		2	1			1	11
13			4								4
14	5	6	1	4	2					1	19
15	3	5	2	4	2		1				17
Total per item	41	39	30	20	9	6	5	4	4	4	162

Note:

- SV : Subject – Verb agreement
 TE : Transitional Expressions
 V : English verbs
 Art : Articles
 S – P : Singular – Plural Nouns
 Der : Derivation
 Ger : Gerunds
 Col : Collocations
 PA : Possessive Adjectives
 O : Omission

Articles

As can be seen in the table above, most grammatical errors are regarding the usages of articles, “a”, “an”, and “the” in the sentences. There are 41 errors regarding articles from 162 errors found. The following sentence contains an example of grammatical errors in article, produced by the participants. “Writer thinks that this research is important because ...”. In this sentence, the article “the”

should actually be added at the beginning of the sentence.

From 41 errors in using the articles, 9 of them are categorized as implicit knowledge. It means that when the participants are shown their own mistakes, they fail to say whether those sentences contain grammatical errors in 3.5 seconds. In addition, they just repeat the ungrammatical sentence without correcting it. Most errors in this category are about missing articles at the beginning of the sentence. The other 32 errors happen due to the explicit knowledge. While showing the sentence which contains the errors, the participants can directly recognize that the articles are mistakenly produced. In addition, during the interview, the participants can provide some reasons and the grammar rules why the sentences contain errors. These errors are usually about the application of ‘a’ and ‘an’ followed by adjectives and nouns in a sentence.

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The English Verbs

The next grammatical errors which are mostly produced by the participants are related to the usages of the English verbs. There are 39 errors out of 162 errors found. In this context, the verbs are not used in correct forms, missing verbs in complex sentences, or should actually be used in different tenses. Other errors are regarding the uses of verbs in causative verbs. An example of errors in tenses is "In the previous study, the researcher explains ...". Instead of using present tense, past tense should be applied in that sentence. An example of causative verbs which is mistakenly produced is "This make the fans or audience analyzing ...". The verb 'analyzing' should be changed into 'analyze'. The other example of missing verbs in the sentence is "Ellen DeGeneres is one of the most famous and talented American comedians whose jokes very sensitive and directly talks about the audience". Auxiliary verb 'are' should be added before the phrase 'very sensitive'. The latter is an example of an error which is failed to be recognized by the participant. It is, therefore, can be categorized as the implicit knowledge.

From 39 errors regarding the English verbs, 6 of them occur due to the implicit knowledge. The participant cannot recognize the errors in the sentence in limited time given in the Timed Grammatical Judgment Test. They also can only repeat the ungrammatical sentence without correcting the mistakes in the Oral Production Test. Most errors which fail to be recognized are regarding the causative verbs. The other 33 verbs errors, which mostly cover the English tenses, can be identified by the participants in the Delayed Grammatical Judgment Test. Those ungrammatical sentences can be identified and corrected by the students during the interview. Those 33 errors regarding the English Verbs are categorized as errors due to the explicit knowledge.

Subject and Verb Agreement

The third errors which are mostly produced by the participants are regarding the subject verb agreement. There are 30 errors

found in this category. Most of the errors occur in long complex sentences or when there is a word or phrase between the subject and the verb. An example of this occurrence can be found in the following sentence "Another previous study only focus ...". As can be seen, there is a word 'only' between the subject 'previous study' and the verb 'focus'. The verb should be 'focused' since previous studies are usually use Past Simple Tenses.

From 30 subject verb agreement errors, 5 of them occur due to the implicit knowledge. The participants fail to identify whether each sentence is correct or incorrect. It means that they are not able to identify the errors. In the Oral Production Test, the students just repeat the five errors without any attempts to correct them. In addition, during the metalingual interview, the students do not know why they produce such errors. Most errors under this category are due to the complex sentences. In addition, when there is a transitional expression between the subject and verb, such as however, most of the participants cannot correct the errors. The other 25 errors can explicitly be recognized in the Delayed Grammatical Judgment test and corrected by the participants in the interview. The students can also provide the grammatical rules regarding the errors in this category. Those 25 errors are then categorized as explicit knowledge.

Singular and Plural Nouns

The participants also produced a lot of errors which are related to singular and plural nouns. There are 20 errors found in this type. It must be noted that the errors occur when the nouns are preceded by quantifiers such as 'one of the'. An example of a sentence which contains an error in plural noun is "Detective fiction is one of the story ...".

In the implicit knowledge measurement tests, all of the participants can directly state that all of the sentences are incorrect. In addition, in the Oral Production Test, they can repeat all of the sentences after those sentences are being corrected. It might happen since the interviewer puts stress in the incorrect singular and plural nouns. In

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addition, they can explain why the sentence contains errors. During the Delayed Grammatical Judgment Test, all of the students can provide the grammatical rules regarding the singular and plural nouns, both regular and irregular plural nouns. During the interview, the reasons why the students produced the errors are analyzed. It turns out that it is just a matter of mistyping; the students did not check and recheck the texts before they are submitted to the lecturer. It can, therefore, be said that all singular and plural nouns errors occur due to the explicit knowledge.

Omission

Next, there are 9 errors found under the category of omission. It means that the participants put unnecessary word(s) in the text. The example of omission can be found in the phrase 'because of that'. The participant can correct it right after he is shown the full sentence which contains that incorrect phrase.

From those 9 errors, 8 of them can be successfully identified by the participants in the Timed Grammatical Judgment test. All of the students identify those sentences as incorrect. While repeating the sentences, they can successfully repeat the correct sentences even though the researcher says incorrect sentences. During the Delayed Grammatical test, all of the students can explain why the sentences are ungrammatical ones. In the oral interview, all of the errors can be corrected by the participants. They are, therefore, occur due to the explicit knowledge. However, there is one dangling sentence which cannot be corrected by the participant. The sentence is "The end result of this research is to hopefully can enlighten the ...". Modal auxiliary 'can' should be deleted from the context since it is unnecessary. In the interview, the participant fails to recognize the error, not to mention correct it. This error is categorized as implicit knowledge. Due to the long sentences, the participant also fails to repeat the sentence successfully.

Derivations

In their writing, the participants also produce 6 errors in relation to derivations. Some adjectives and nouns are misused in the writing. For example, an error can be found in the phrase "... in the Mexico culture ...". The context is about the culture of Mexico; as a result, the correct phrase should be 'Mexican culture'. In other words, the Noun 'Mexico' should be replaced by the adjective 'Mexican'.

From 6 errors which are related to derivations, it is found out that 4 of them belong to implicit knowledge. The participants are not able to identify the error presented in the Timed Grammatical Judgment Test. In addition they also fail to repeat the sentence successfully. It might happen due to the fact that the nouns and adjectives are similar and have the same root. The derivations which can be corrected by the participants in the explicit knowledge measurement tests are related to the use of word 'research'.

Possessive Adjectives

There are five errors which are related to the possessive adjectives. Some participants forget to add apostrophes to the nouns. The example can be found in the following sentence "... it affects each character response to..." Since the context is talking about the response of the character, an apostrophe must be added. The correct sentence should be "... it affects each character's response to..."

From 5 pronoun errors, only one error is related to the implicit knowledge. The participant cannot identify the missing apostrophe in the sub clause in the complex sentence; this participant, in the Timed Grammatical judgment Test chooses this sentence as a correct one. This is a unique case since the participants can repeat the sentence successfully. This might happen since this sentence is presented later. The other five errors can be identified easily and corrected by the participants in the explicit knowledge measurement tests. Those errors, therefore, occur due to the explicit knowledge.

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Collocations

There are 4 errors which are related to collocations found in the data. Some verbs need certain particles in their usages. One of the examples is found in the following phrase "... enrich knowledge about interlanguage ...". The noun 'knowledge' should usually be followed by particle 'of'. The more proper phrase should be "... enrich the knowledge of interlanguage ...".

All of the errors cannot be corrected by the participants. They are not familiar with the common collocations of nouns or verbs which should be followed by the particles. All of the participants think that all of the sentences contain no errors. All of the errors, therefore, can be classified into implicit errors.

Gerunds

The participants produce some errors regarding the English gerunds. There are 4 of them found in the data. The participants mistakenly use base form + ed instead of base form + ing. Next, the participants also forget to use gerund after preposition. The example of the misuse of gerunds in sentence is "... when learns new language ...". The correct form should be "... while learning the new language ...".

There are 2 gerund errors which cannot be identified by the participants in the Timed Grammatical Judgment Test. Both of them are gerunds after prepositions. However, during the oral production test, the students can repeat the sentence successfully. Those errors should still be classified as errors due to implicit knowledge since the students fail to identify the errors. The other 2 errors can be identified by the participants. It is therefore considered as errors due to the explicit knowledge.

Transitional Expressions

The data shows that there are four errors regarding the transitional expression. All of them are about the transitional expressions which are put at the beginning of a sentence. For example: "But take a look ...". In a formal academic writing, a transitional

expression cannot be put at the beginning of a sentence.

From 4 errors in this type, two of them are categorized into errors due to implicit knowledge. The participants cannot identify the errors in the sentence. In addition, they cannot repeat the correct sentence in the Oral Production Test. The other two errors can be identified then corrected by the participants in the interview and Delayed Grammatical Judgment Test. These errors are related to transitional expression 'but' and 'and' at the beginning of a sentence.

CONCLUSION AND SUGGESTIONS

Conclusion

The most errors produced by the participants are errors in using the English articles. The least errors are errors in using the transitional expressions, collocations and gerund. In relation to explicit and implicit knowledge, thirty one errors are classified as implicit knowledge while the other one hundred thirty one (131) errors occur due to implicit knowledge. Regarding the type of errors, all of the singular and plural noun errors occur due to the explicit knowledge. The type of errors which mostly cannot be identified by the participants is the errors regarding the derivations. The errors which can easily be identified and corrected by the students are the ones which are related to the omission. These results show that the errors produced by the Indonesia students are typical errors produced by Asian students as presented in the previous studies in the background. The difference is only in the double negative. The Indonesian students as the participants rarely produced this kind of error.

The findings and discussions section show that 80,8% errors produced by the students can actually be identified and corrected by the students as the participants. It means that the students actually know the grammatical rules used in academic writing; they might just be a bit careless in writing. The other 19,2% of errors produced due to the implicit knowledge. The results of this

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research can actually be implemented during the teaching and learning processes in the classroom by focusing more on the grammatical rules, even though the English skills are taught as integrated skills.

Suggestions

Regarding the data analysis, it was found out that the oral production method, in which the participants must repeat the sentences, contains some bias in this research. When the researcher puts stresses in the errors in the Oral Production Test, the students know that that part of the sentence contains some errors. It is, therefore, suggested that the researcher does not need to stress the errors. Next, During the data gathering, it is quite difficult to meet the participants in person and interview them. For the next research, online interview and test can be conducted to save both the researcher and participants' time.

REFERENCES

- Berent, G. (1985). Markedness considerations in the acquisition of conditional sentences. *Language Learning*, 35(3), 337-372.
- Darus, S., & Ching, K. H. (2009). Common errors in written English essays of form one Chinese second language learners: A case study. *European Journal of social sciences*, 10(2), 242-253.
- DeKeyser, R.M. (2000) The robust ness of critical period effects in second language acquisition. *Studies in Second Language Acquisition*, 22, 499-533.
- Ellis, R. (2008). Investigating grammatical difficulty in second language learning: Implications for second language acquisition research and language testing. *International Journal of Applied Linguistics*, 18(1), 4-22.
- Ellis, R. (2005). Measuring implicit and explicit knowledge of a second language: A psychometric study. *Studies in second language acquisition*, 27(2), 141-172.
- Erlam, R. 2006. Elicited imitation as a measure of L2 implicit knowledge: An empirical validation study. *Applied Linguistics*. 27/3,464-491.
- Han, Y. & Ellis, R. (1998). Implicit knowledge, explicit knowledge, and general language proficiency. *Language Teaching Research*. 2, 1 - 23.
- Hinkel, E., & Fotos, S. (Eds.). (2001). *New perspectives on grammar teaching in second language classrooms*. Routledge.
- Krashen, S. (1994). The input hypothesis and its rivals. In N. C. Ellis (Ed). *Implicit and explicit learning of languages*. San Diego: Academic Press.
- Lee, I. (2004). Error correction in L2 secondary writing classrooms: The case of Hong Kong. *Journal of Second Language Writing*, 13(4), 285-312.
- Lewicki, P., Hill, T., & Bizot, E. (1988). Acquisition of procedural knowledge about a pattern of stimuli that cannot be articulated. *Cognitive Psychology*, 20, 24-37.
- Loewen, S. 2009. Grammaticality judgement tests and the measurement of implicit and explicit L2 knowledge. In R. Ellis et al. (eds.) *Implicit and explicit knowledge in second language learning, testing and teaching*, Bristol, Buffalo and Toronto: *Multilingual Matters*, 94-112.
- Ondrakova, J., & Siruckova, J. (2015). An Analysis of Mistakes in Written Assignments of Second language learners of German. *Procedia-Social and Behavioral Sciences*, 171, 847-853.
- Payne, J. W. (1994). Thinking aloud: Insights into information processing. *Psychological Science*, 5, 241-248.

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- Rebuschat, P. (2013). Measuring implicit and explicit knowledge in second language research. *Language Learning*, 63(3), 595-626
- Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3–32). Cambridge: Cambridge University Press
- Sawalmeh, M. H. M. (2013). Error analysis of written English essays: The case of second language learners of the preparatory year program in Saudi Arabia. *English for Specific Purposes World*, 14(40), 1-17
- Sukasame, N., Kantho, S., & Narrot, P. (2014). A Study of Errors in Learning English Grammatical Structures on Tenses of MatthayomSuksa 4 Second language learners of the Demonstration School, KhonKaen University. *Procedia-Social and Behavioral Sciences*, 116, 1934-1939
- Wongranu, P. (2017). Errors in translation made by English major second language learners: A study on types and causes. *Kasetsart Journal of Social Sciences*, 38(2), 117-122.
- Zhang, R. (2015). *Investigating the linguistic knowledge of a second language*. Bern: Peter Lang AG.