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## THE EFFECT OF AGE OF LEARNING (AOL) AND INTERLANGUAGE ON ENGLISH ORAL UTTERANCE ACCURACY AND COMPLEXITY OF ASIAN EFL LEARNERS WITH 'TENSES-LESS' L1 BACKGROUND

By

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**Abstract:** *The younger age of English-language learning has often been associated with the success of English as a second or a foreign language learning. Hence, this study aims at investigating whether language learners with younger 'Age of Learning' (AoL) perform better accuracy and produce more complex English oral utterances than those of older-AoL. The study participants were six international graduate students at an Australian university. They are from China, Indonesia, and Vietnam and share similar "tenses-less" L1 background. The study participants were grouped into two cohorts (younger-AoL and older-AoL). The results showed that younger-AoL participants generally have higher syntactic complexity, lexical complexity, and accuracies than the older group in their English oral utterances. However, the older-AoL group outperformed participants with younger-AoL in the past-tenses accuracy. In addition, despite having younger AoLs, none of the participants in the younger-AoL group achieves nativelike accuracy.*

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## INTRODUCTION

Over the years, there have been intense debates on the younger learners' superiority to the older learners in the second language acquisition. In the critical period hypothesis (CPH), age plays as a robust factor determining SLA success (DeKeyser, 2000), while other studies contend that different second language (L2) proficiency could be due to different learning styles among L2 learners (Bialystok, 1997) or individual differences (Dörnyei, 2005). In addition to the debate on age effect in SLA, there is an argument concerning the influence of interlanguage. Previous studies have often found that different L2 learners' interlanguages are often more than the sum of their target inputs and transfers from their first languages (Ortega, 2009).

However, previous studies on the age of onset (AO) and L2 attainment mostly took place in the settings of target language countries. Little was conducted in second language instruction of pedagogic setting like ESL or EFL, especially in countries with 'tenses-less' language background such as China, Indonesia, and Vietnam. Therefore, this study sets out to investigate the effect of age of learning (AoL instead of AO), along with the possible influence of interlanguage, on EFL learners' English accuracies and complexities on oral

utterance productions. The research questions are:

1. Do younger-AoL participants perform better accuracy than older-AoL participants in producing English oral utterances?
2. Do younger-AoL participants produce more complex English oral utterances than older-AoL participants?

## LITERATURE REVIEW

### Interlanguage Theory

Interlanguage has been a fundamental concept in the field of SLA since it was firstly coined and introduced by Selinker in 1972. The interlanguage theory firstly acknowledges SLA learning is different from the process of first language acquisition because SLA involves different learning circumstances as well as the influence of L1 rules and language habits. Central to the stages of SLA learning is the issue of crosslinguistic transfer taking place at an individual level as a result of a psycholinguistic process (Robinson & Ellis, 2008). The occurrence of this crosslinguistic transfer could be due to learners' application of distinct L1 linguistic system in L2 or overgeneralization of L2 salient rules to the unusual linguistic features of L2. Interlanguage sees learners' L2 error production as conceptual, for they are situated in the interaction of L1 and L2 linguistic system complexities. Learners' "mistakes" serve as a lens to view their steps or progress in understanding some L2 rules. When L1 and L2 share similarities on relevant linguistics unit or structures, correct language productions or positive transfers take place. On the other hand, negative transfers (inference) occur when the L2 has significant differences from the learners' native languages. When there is no significantly improvement in L2 learners' interlanguage, fossilization takes place (Ortega, 2009).

Since its first introduction, interlanguage theory has garnered criticism and debates from intensive empirical studies such as the language innateness theory (Dulay & Burt, 1973) contending that majority of L2 learners' errors was not originated from learners' L1. If the learners' L2 production is not target-like, it must be learner-internal.

### Age and Second Language Instruction

Studies in second language learning have consistently shown inverse correlations between Age of Learning (AoL) and target language attainment (Abrahamsson, 2012). DeKeyser (2000) asserts that the age of first meaningful exposure to L2 serves as a strong predictor of the success of L2 acquisition. An explanation to this is the existence of critical period hypothesis (CPH) for language acquisition where the brain is predisposed for L2 learning success. For studies supporting the CPH, biologically-based brain maturation is argued to constrain second language acquisition (Granena & Long, 2012). For nativelike attainment, ages of 6 and 7 are usually considered as the maximum AO (Hyltenstam, 1992; Long, 1990). Bialystok & Hakuta (1994) argue that started from those ages, children's capacity to attain nativelikeness gradually declines until they reach 16-17 (puberty) or beyond. A number of studies criticising CPH and disputing the brain maturational constraints at puberty include Bialystok and Miller (1999), Birdsong (2009), Herschensohn (2007), and Muñoz & Singleton (2011).

While in the practices of second language instruction and school program's foreign teachings, it has been believed that 'younger is better' (Lightbown & Spada, 2013). However,

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Lightbown & Spada (2013) assert that, based on their research and experience, starting L2 instruction earlier serves younger-AoL learners no guarantee on achieving more successful L2 proficiency. In learning L2, older-AoL learners might benefit from the use of more explicit approaches and analytic abilities that would possibly lead to better L2 metalinguistic awareness.

### **Accuracy**

The use of language in both phonological as well as grammatical ways follows some specific sets of rules. Accordingly, the accuracy in the use of language depends on how well a user has been able to follow those norms (Pallotti, 2017). The learners need to enhance their understanding of these critical normative aspects so that they become able to demonstrate their accuracy with regards to language use (Wang, 2009). To be precise, the efficiency in language depends on the ability to follow the linguistic rules and, therefore, the aspect of accuracy plays a vital role in determining learners' language proficiency by checking the extent to which they can accurately follow these rules (LaScotte & Tarone, 2019). Thus, this dimension plays a significant role in language acquisition and use.

### **Complexity**

Complexity is one of the most significant determinants of L2 learners' learning progress and their L2 efficiency. In this regard, Brezina & Pallotti (2019) assert that the evaluation of L2 learners' language efficiency should be addressed by assessing the extent to which the learners understand the lexical as well as syntactic complexities of L2 and the extent to which they are able to maintain that complexities in speaking. Additionally, Dean (2014) asserts that with regards to language learning, the aspects of complexity include language task complexity and L2 proficiency complexity. Therefore, these aspects should be analysed by efficiency in conceptually and practically addressing the complex systems of the language. Moreover, the proficiency of L2 learners will also depend on their competence in both cognitive and linguistic complexities to cover the entire spectrum of language learning (Derwing & Rossiter, 2003). Therefore, this is important for learners to enhance their efficiency in addressing these complexities, and it is also needed from the teachers that they assess the performances as well as learning progresses of these learners based on this criterion.

## **METHODS**

### **Participants**

The participants of this study are six international graduate students at an Australian university. They are English non-native speakers hailing from China, Indonesia, and Vietnam and share similar 'tenses-less' L1. The participants are equally divided into two AoL-based cohorts (younger and older) designed to investigate the AoL influence on their L2 speaking accuracy and complexity.

Participants	Nationality	L1	AoL*	LoE**	LoR***
<b>Younger AoL Group</b>					
D	China	Chinese	7	14	0.5 Year
P	Indonesia	Indonesian	7	15	0.5 Year
L	Vietnam	Vietnamese	7	22	0.5 Year
<b>Older AoL Group</b>					
J	China	Chinese	10	12	0.5 Year
R	Indonesia	Indonesian	11	21	1 Year
T	Vietnam	Vietnamese	13	14	0.5 Year

\*AoL: Age of Learning (First exposure to second language instruction)

\*\*LoE: Length of Exposure to English learning

\*\*\*LoR: Length of Residence in Australia (living in English-speaking country)

### Instrument

This study used a semi-structured interview designed to analyse participants' accuracy and complexity on their English spontaneous and actual oral utterance productions.

### Procedure

**Interview:** In the first place, the participants were told about the purpose of the interview as well as being asked whether they were concerned or not for taking participation on the study. Following participants' agreement to participate, they were told that the interview questions would cover topics on the strategies employed in their English L2 learning. The participants had to answer the interview questions spontaneously while being audio-recorded. After finishing the interviews, the participants were finally informed about the actual purpose of the recording, to analyse their accuracies and complexities in their L2 English spoken utterances.

### Data analysis:

While analysing participants' spoken utterances, the following formula will be employed:

<b>Target-like Use (TLU) Analysis</b> (for inflectional morphemes and articles)	→	$\frac{\text{number of correct supplings}}{(\text{number of obligatory contexts} + \text{number of oversupplings})} (/)$
<b>Syntactic Complexity</b> (amount of subordination)	→	$\frac{\text{number of separate clauses (main, subordinate)}}{\text{number of AS-units}} (/)$
<b>Lexical Complexity</b> (type/token ratio)	→	$\frac{\text{number of different words}}{\text{total number of words in the text}} (/)$

## DATA ANALYSIS & RESULT

This section provides analyses of the data and results presented in three different analyses on target-like use accuracy, the common error areas performed by study participants, and complexity of produced oral utterances. Additional analysis is on the ranks of individual accuracy level of the study participants.

**TABLE 1**  
TLU Analysis

Participant		L1	AoL	TARGET-LIKE USE (TLU) ANALYSIS				
				3 <sup>rd</sup> Person Singular -s	Past Tense	Plural -s	“the” article	“a/an” article
Younger AoL Group	D	Chin.	7	1	0.28	1	1	NA
	P	Indo.	7	1	0.48	0.33	0.8	1
	L	Viet.	7	1	0.56	0.69	0.88	1
		<i>Mean</i>		<i>1</i>	<i>0.44</i>	<i>0.67</i>	<i>0.89</i>	<i>1</i>
Older AoL Group	J	Chin.	10	0.5	0.67	0.76	0.56	1
	R	Indo.	11	0.5	0.58	0.5	0.94	0.86
	T	Viet.	13	0.33	0.5	0.2	0.78	0.83
		<i>Mean</i>		<i>0.44</i>	<i>0.59</i>	<i>0.49</i>	<i>0.76</i>	<i>0.9</i>

Overall mean: Younger AoL group (mean=0.8) and older AoL group (mean=0.64)

Based on overall TLU analysis in Table 1, younger-AoL group is more accurate than the older-AoL group. The younger group outperformed the older group in 4 of the 5 TLU aspects encompassing 3<sup>rd</sup> person singular present suffix -s, plural suffix -s, English definite article “the”, and English indefinite article “a/an”. The older group only outperformed the younger group in past tense accuracy. The TLU area where both groups scored the highest mean is in the use of the English indefinite “a/an” article. The most salient gap between the two groups is in the 3<sup>rd</sup> person singular present suffix -s where all younger participants scored 1 while the older group showed significantly lower scores (half and less than half of the younger group). In addition, another noticeable gap between the groups is on the production of bound plural suffix -s for nouns where the overall mean score of older group is 0.18 points lower

than the younger group's.

**TABLE 2**  
Rank of individual accuracy based on TLU analysis

Rank	Participant	Group	L1	AoL	Overall Mean of TLU Accuracy
#1	L	Younger AoL	Vietnamese	7	0.83
#2	D	Younger AoL	Chinese	7	0.82
#3	P	Younger AoL	Indonesian	7	0.72
#4	J	Older AoL	Chinese	10	0.7
#5	R	Older AoL	Indonesian	11	0.68
#6	T	Older AoL	Vietnamese	13	0.53

At individual level, L in the younger group is the most accurate participant (mean=0.83), while T in the older group (starting learning English at 13 years old) comes up to be the least accurate one (mean=0.53). Table 2 also illustrates an inverse correlation between AoL and L2 accuracy (the older, the less accurate).

**TABLE 3**  
The areas of common errors performed by participants

Error Type	Participant	L1	AO	Error Example
<b>S-V Agreement</b>	T	Viet.	13	<ul style="list-style-type: none"> <li>I think learning English <i>give</i> me ...</li> <li>No one <i>understand</i> Vietnamese.</li> </ul>



	R	Indo.	11	<ul style="list-style-type: none"> <li>Bahasa or Javanese which <i>are</i> tenses-less languages</li> <li>There <i>were</i> no digital translator.</li> <li>Reading and writing <i>is</i> better than my speaking.</li> <li>One <i>love</i> strawberry flavour.</li> <li>My personality <i>influence</i> this.</li> <li>It somehow <i>discourage</i> me.</li> </ul>
	P	Indo.	7	<ul style="list-style-type: none"> <li>My basic English <i>are</i> from...</li> </ul>
	J	Chin.	10	<ul style="list-style-type: none"> <li>When teacher <i>say</i> ...</li> </ul>
<b>Non-existence of Plural Morpheme -s / Singular-Plural Form Inconsistencies</b>	T	Viet.	13	<ul style="list-style-type: none"> <li><i>Multiple question</i>[Ø]</li> <li><i>Three or four hour</i>[Ø]</li> <li>I have very <i>few chance</i>[Ø]</li> <li><i>Some slang</i>[Ø] in Australia</li> </ul>
	R	Indo.	11	<ul style="list-style-type: none"> <li>I only take <i>one tenses</i> and then I master it</li> <li><i>One persons</i></li> <li><i>Two ice cream</i> for one person</li> </ul>
	P	Indo.	7	<ul style="list-style-type: none"> <li><i>Each tenses</i></li> <li><i>One of my main strategy</i>[Ø]</li> </ul>
	J	Chin.	10	<ul style="list-style-type: none"> <li><i>Other Chinese student</i>[Ø]</li> <li><i>A good marks</i></li> <li><i>More new friend</i>[Ø]</li> </ul>

Linking Verb Absence in Non-verbal Sentence	T	Viet.	13	<ul style="list-style-type: none"> <li>People around me [Ø] not native speaker.</li> </ul>
	P	Indo.	7	<ul style="list-style-type: none"> <li>I think it [Ø] not something different.</li> </ul>
	J	Chin.	10	<ul style="list-style-type: none"> <li>It [Ø] very passive.</li> <li>I [Ø] really interested in ...</li> </ul>
Double Verbs in Verbal Sentence	P	Indo.	7	<ul style="list-style-type: none"> <li>I'm just <i>feel</i> interested to learn English.</li> <li>I'm <i>not</i> explicitly say ...</li> <li>I was say that ...</li> </ul>
Inaccurate Noun Form	T	Viet.	13	<ul style="list-style-type: none"> <li><i>The different</i> between the method</li> <li><i>Many different</i> because you know ...</li> </ul>
Inaccurate Tense Form	P	Indo.	7	<ul style="list-style-type: none"> <li>I <i>don't have find</i> anything difficult.</li> </ul>
Incomplete & Inaccurate Collocation	T	Indo.	13	<ul style="list-style-type: none"> <li>My friends who are not <i>good in</i> English</li> <li>Students not all of them are <i>good in</i> English</li> </ul>
	P	Indo.	7	<ul style="list-style-type: none"> <li><i>Interested to</i> learn English</li> <li><i>Interested to</i> do that ...</li> <li>We are <i>interested</i> [Ø].</li> <li>I was the one who is mostly <i>interested</i> [Ø] English</li> </ul>
	J	Chin.	10	<ul style="list-style-type: none"> <li>I <i>went in</i> my university to study for my master now.</li> </ul>

The details of common error exhibited by the participants are presented in Table 3. In general, the three most common mistakes of participants are incorrect S-V agreements,



absence of plural marker in plural nouns, and inaccurate collocation forms. The other types of error include the absence of copular verbs used in English copular sentences, the use of 'be' preceding verbs in base form in sentences with present tense, inaccurate uses of noun forms, and inaccurate productions of tenses forms. Most of the errors are produced by older-AoL participants particularly T and R with AoLs 13 and 11 respectively.

**TABLE 4**  
Analysis on syntactic and lexical complexities

Participants	L1	AoL	LoE	LoR	Syntactic Complexity	Lexical Complexity
<b>Younger AoL Group</b>						
D	Chin.	7	14	0.5 Year	2.11	0.56
P	Indo.	7	15	0.5 Year	2.36	0.39
L	Viet.	7	22	0.5 Year	2.26	0.31
<i>Mean</i>					<i>2.24</i>	<i>0.42</i>
<b>Older AoL Group</b>						
J	Chin.	10	12	0.5 Year	2.08	0.33
R	Indo.	11	21	1 Year	1.80	0.27
T	Viet.	13	14	0.5 Year	1.78	0.45
<i>Mean</i>					<i>1.89</i>	<i>0.35</i>

As demonstrated in the Table 4, participants from the younger AoL group consistently have higher syntactic complexities (mean=2.24) and lexical complexities (mean=0.42) than those from the older AoL group (mean=1.89 for syntactic complexity and mean=0.35 for lexical complexity). While closely examining older AoL group's results, it is also found that syntactic complexity has an inverse relationship with AoL. In other words, when AoL increases, syntactic complexity decreases.

## DISCUSSION

### Accuracy

Second language speaking is considered to be complicated for L2 learners because they have to decide what and how to say within a very short period of time. Skehan (1989) has characterised accuracy as a part of L2 principal proficiency dimensions. In L2 speaking, accuracy is seen as the extent to which oral production conforms the norms of the target language (Ellis, 2003). To reveal the oral English accuracy of the participants, this study focused on different target forms presented in the TLU analysis (Ellis & Barkhuizen, 2005).

The TLU analysis has shown that younger-AoL group performed better overall accuracy than the older group in their English oral utterances. This finding supports DeKeyser's (2000) study on the robustness of age effect on the superiority of younger learners' L2 attainment. The ranking on participants' grammatical accuracy further strengthens

DeKeyser's claim by revealing that low accuracy often correlates with higher AoL (Table 2). Possible factor that supports the age effect is that, in the context of second language instruction, having an earlier opportunity for English learning benefits more on participants in the younger-AoL group as they have longer exposure to L2 instructions at school than those participants in older-AoL group. During the interviews, two of the younger-AoL participants (L and P) narrate that they started learning English in their first grade where they were taught basic English words and sentences through interesting materials and activities like songs, games and storytelling - meaning that the younger-AoL group is exposed to more implicit young-learner-friendly second language learning that has more resemblance to L1 acquisition. L and P further added that they previously enrolled in bilingual classes and English-instructed undergraduate programs, indicating that they had more exposure to the target language. Meanwhile, the participants in the older-AoL group, which started learning English between the fourth and sixth grades of elementary school, reported that they were more exposed to grammar learning. However, starting L2 learning at a late AoL is not always considered to be disadvantageous. As older learners were exposed to more explicit learning, they would benefit from better L2 metalinguistic awareness (Lightbown & Spada, 2013). This could explain why in the TLU analysis for past tense suffix *-ed*, older-AoL participants perform better than the younger-AoL participants as the older-AoL participants have better metalinguistic awareness in learning English grammar.

Despite having younger AoLs, none of the participants in the younger-AoL group achieves nativelike accuracy. This is understandable because their learning and acquisitions took place in the contexts where participants are still intensively exposed to L1 communication on their daily basis. This leads to the possibility of crosslinguistic transfer in participants' English oral utterances as illustrated by participants' L2 errors and inaccuracies presented in Table 3. In interlanguage, Selinker (1992) asserts that errors do not necessarily indicate bad L2 performances. The errors made are systematic, they are not deliberately produced. Interlanguage sees there must be explanations to the occurrence of these errors due to the influence of L1 on L2, or the interaction between L1 and L2 systems. Due to participants' L1s being 'tenses-less' and having no plural marker, Table 5 and Table 6 explain the interlanguage transfer on participants' inaccuracies on S-V agreement and English plural noun formation.

TABLE 5

The similarity of 'tenses-less' L1 background of participants

Language		Present		Past		Future	
Singular	Eng.	She	<i>eats</i>	She	<i>ate</i>	She	<i>will eat</i>
	Chin.	Tā	<i>chī</i> [Ø]	Tā	<i>chī-</i> <i>-guò</i>	Tā	<i>huì chī de</i>
	Indo.	Dia	<i>makan</i> [Ø]	Dia	<i>telah makan</i>	Dia	<i>akan makan</i>
	Viet.	Cô ấy	<i>ăn</i> [Ø]	Cô ấy	<i>đã ăn</i>	Cô ấy	<i>sẽ ăn</i>
Plural	Eng.	We	<i>eat</i> [Ø]	We	<i>ate</i>	We	<i>will eat</i>
	Chin.	Wōmen	<i>chī</i> [Ø]	Wōmen	<i>chī-</i> <i>-le</i>	Wōmen	<i>zhè jiù chī</i>
	Indo.	Kami	<i>makan</i> [Ø]	Kami	<i>telah makan</i>	Kami	<i>akan makan</i>
	Viet.	Chúng tôi	<i>ăn</i> [Ø]	Chúng tôi	<i>đã ăn</i>	Chúng tôi	<i>sẽ ăn</i>

In participants' L1 background, different aspect of time does not change the morphological form of the verb used. As for the time signals, most L1s use adverbial element for indicating time.

**TABLE 6**  
Plural noun formation in participants' L1

Noun	Chinese	Indonesian	Vietnamese
Book	Shū	Buku	Sách
Three books	Sān běn shū[Ø]	Tiga buku[Ø]	Ba cuốn sách[Ø]
Some books	Yīxiē shū[Ø]	Beberapa buku[Ø]	Vài cuốn sách [Ø]

The non-existence of plural morphemes in participants' L1s could serve as an explanation for the participants' omission of plural suffix -s in forming an accurate English plural noun.

As for collocational inaccuracy, the third most common error, the inaccurate productions of the formulaic sequences could be due to different L1s' semantic prosodies determining the whole meaning of the words' combinations (Xu, 2018).

Finally, with regards to participants' AoL, the findings on accuracy have supported the notion that earlier AoL can be a strong predictor on the participants' English oral accuracy. However, in the context of second language instruction, younger-AoL group's better accuracy could also be influenced by other factors such as their L2 education experience, different exposure opportunity, and learners' L1. Accordingly, in this context where ESL/EFL classrooms are typically administered only once or twice a week, other factors supporting the attainment of L2 accuracy should be encouraged (Lightbown & Spada, 2013).

### Complexity

The analysis on complexity has shown that participants from the younger AoL group tend to use syntactically and lexically more complex utterances than those of the older AoL group. According to Ellis (2009), this implies that participants with younger AoL have better capacity to use more advanced language and have a greater willingness to take risk. At the same time, they may have greater likelihood of restructuring in their interlanguage systems.

While saying that the participants with younger AoL tend to use more complex utterances in general, it is important to note that their complexities might hinder the communication message to their interlocutors. For example, in the utterances gathered from participant L, it is found that she tended to make long sentences by joining a few independent clauses with coordinating conjunctions (such as *and* and *but*). At the same time, in some of her independent clauses, each of them could have more than two subordinate clauses attached. As such, participant L's overall interview responses may sound overly complex to some people, native speakers in particular.

In fact, during and after the interviews, some participants reflected that they might have used very complicated languages because their previous education mainly focused on written English in formal academic settings. Even though the participants admitted that they would have to improve their oral English and grammatical accuracy when studying in an English-speaking country, their education backgrounds have already created a very deep perception in their minds that complex language is always better than simple language.

From the above reflection, it is speculated that the participants have experienced the environmental factors described by Lightbown and Spada (2013), which states that unlike child L2 learners, adult learners are often in situations that demand complex language that can express complicated ideas. Because of that, adult learners often experience embarrassments associated with poor mastery of their L2. With the negative feelings caused by those embarrassments, they would be motivated to use more advanced and sophisticated

languages.

### Conclusion

After analysing the spoken language produced by six participants in the interviews, the findings of this paper show that participants with younger AoL generally have higher syntactic complexity, lexical complexity and higher accuracies in using 3rd person singular present tense suffix -s, plural suffix -s, the definite article *the* and the indefinite article *a/an*. On the other hand, with regards to participants with older AoL, they outperformed participants with younger-AoL in the accuracy in using past tense suffix -ed. However, the overall results indicate that participants with younger AoL generally have better L2 English proficiencies than those with older AoL as predicted by the CPH.

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