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English Negative Polarity Item Any Acquisition by Indonesian Speaking Learners of English

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A B S T R A C T

This study conducted an approximate replication of Marsden et al., 2018 'What's in the Textbook and What's in the Mind: Polarity Item Any in Learner English'. Forty Indonesian speaking learners of English knowledge of English Negative Polarity Item were investigated and the results were compared with the results of the original study (ibid.) including the additional study conducted by the same authors. The purpose of this study is to provide a replicated and extended study to the reliability of the original study by investigating different populations and comparing their performance with the performance of the population in the original study as well as by adding an additional language item some to be tested in a Truth Value Judgment Task (TVJT). This study focused on English NPI any and how Indonesian speaker learners of English acquire its properties when the properties were both taught and not taught. The results confirmed the original study with an additional finding that there was no correlation between the learners' knowledge of any with their knowledge of some. Therefore, it is suggested that the existing instruction of the use of any should no longer be contrasted with some, but presented in a more meaningful context.

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1. Introduction

The study of negation has been widely documented in the literature for its universality that all languages have in their center of grammar (Hoeksema, 2000). Researchers are interested in conducting a study about negation because it is more than just about a syntactic notion as it also involves a semantic notion (Odlin, 1989). Specific to negation is Negative Polarity Items (NPIs) whose main characteristic is that they must fall within the scope of negation (Szabolcsi, 2004) as they are subject to principle A of the Binding Theory (Progovac, 1994). If the NPIs do not fall within the scope of negation, the sentence would be ungrammatical because the NPIs are not properly licensed (Ladusaw, 1996). Polarity sensitivity is part of NPIs although it does not mean that all languages have NPIs as only the polarity sensitivity is universal (Hoeksema, 2000). NPI *any* is different from *any* used in other contexts, such as free choice *any* which allows freedom of choice *(You can buy any bag that you like), any* as existential quantifier including conditionals *(Please call me if you need anything),* and *any* under the scope of *without (She resigned without any notice)* or *before (Think twice before you buy anything)* (Marsden et al., 2018). This present study focuses on NPI *any,* thus excludes *any* used in other contexts.

Certain syntactic rules determine the distribution of NPI *any* (Lakoff, 1969). Also, there are certain environments in which *any* can occur in that it can occur under the scope of negation (1) and in question (2) but not in affirmative (3) and outside the scope of negation (4) (Klima, 1964).

(1) John didn't order *any* food.
(2) Did John order *any* food?

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(3) *John ordered *any* food.
(4) **Anyone* didn't order *any* food. (asterisks * indicate ungrammaticality)

Furthermore, *any* can occur with a negative pre-verbal adverb such as hardly, seldom, and many more that positions before the main verb (5). However, it cannot occur with a non-negative adverb such as a possibility adverb (6).

(5) John hardly ordered *any* food.
(6) *John probably ordered *any* food.

Finally, *any* can also occur in a subordinate clause that contains a semantically negative verb in the main clause (7), but not with a non-semantically negative verb (8). A semantically negative verb is a verb that carries a negative meaning in a sentence without using a negative marker. Meanwhile, a non-semantically negative verb is a verb that does not carry any negative meaning in a sentence thus it requires a negative marker to make the sentence imply a negative meaning. The features and restriction of NPI *any* might seem a clear cut, but acquiring a proper understanding of its distribution is not a simple task for L2 learners.

(7) John regretted that he ordered *any* food.
(8) *John thinks that he ordered *any* food.

Given their complexity in nature, understanding and acquiring NPI *any* presents a big challenge to Indonesian speaking learners of English because the equivalent items of NPI *any* do not exist in Indonesian. NPI *any* can obtain its equivalent in Indonesian by using indefinite quantifiers derived from wh-words which are similar to several languages such as Korean, Dutch, Chinese, Japanese, and Malayalam (Whong et al., 2011). However, since additive, disjunction, or reduplicating question words need to be added following wh-words, determining which can fully satisfy the complex distribution of NPI *any* posits another difficult challenge for Indonesian speaking learners of English. Nonetheless, lack of research has been conducted to explore Indonesian speaking learners of English acquisition of NPI *any* despite ample research conducted in this field within the L2 research community.

2. Methods

The Original Studies

Najdi-Saudi Arabic Speaking Learners of English Knowledge of English NPI Any

Marsden et al (2018) investigated the relationship between Najdi-Saudi Arabic speaking learners of English conscious and unconscious knowledge of English NPI *any*. 114 female participants from a university in Riyadh, Saudi Arabia majoring in English in their third or fourth year participated in this study.

The distribution of Arabic *any, ʔayy,* was contrasted with English *any* and the result was that it has similar distribution with English in that it is allowed in negative sentences and yes-no questions, in a subordinate clause of a semantically negative verb, and with negative adverbs. The restriction of Arabic *ʔayy* in the environment where it cannot occur is also similar to English *any*. Arabic *ʔayy* is not allowed outside the scope of negation, in affirmative sentences, and in a subordinate clause of semantically non-negative verbs. The only difference between Arabic *ʔayy* and English *any* is that Arabic *ʔayy* is allowed to be used with semantically non-negative adverbs such as possibility adverb while English *any* is not.

Table1. Summary of grammaticality in investigated environments in English and Arabic

Structure pair	English *any*	Arabic *ʔayy*
G1 Question	√	√
U2 Affirmative Declarative	x	x
G3 not...*any*	√	√
U4 *Any*...not...	x	x
G5 Negative Main Verb	√	√
U6 Nonfactive Main Verb	x	x
G7 Negative Adverb	√	√
U8 Possibility Adverb	x	√

(√= Grammatical, x= Ungrammatical)

Marsden et al (2018) found that the Arabic-speaking group knowledge distribution of English NPI *any* developed simultaneously with their increased proficiency. Furthermore, the Arabic-speaking group results also revealed that the highest accuracy was attained on taught types and that their accurate performance was not affected by their conscious knowledge of textbook rules about *any*.

Their study concluded that learners could develop their knowledge of the distribution of *any* as their proficiency increases; the highest accuracy scores obtained by learners were within taught types (*any* in explicit negation and question); lower accuracy scores were obtained within *any* that are not covered by textbook instruction; and acquiring the knowledge of where *any* can occur beyond observable and unobservable inputs requires great effort although it is possible.

The Additional Study: Chinese Speakers of English Knowledge of English NPI Any

Following their previous study, Gil et al (2017) conducted additional research investigating 23 L1 Chinese speakers of English to compare their knowledge of English NPI *any* with the existing data from Najdi-Saudi Arabic speaking learners of English.

Table 2. Summary of grammaticality in investigated environments in English and Chinese (K. H. Gil et al., 2017)

Structure pair	English *any*	Chinese	
		renhe	*wh*-NPI
1 Question	√	√	√
U2 Affirmative Declarative	x	x	x
G3 not...*any*	√	√	√
U4 *Any*...not...	x	x	x
G5 Negative Main Verb	√	x	x
U6 Nonfactive Main Verb	x	x	√
G7 Negative Adverb	√	√	√
U8 Possibility Adverb	x	x	√

(√= Grammatical, x= Ungrammatical)

The findings reported some similarities and differences from the previous study. The similarities include the highest accuracy scores obtained by learners were within *any* in explicit negation and question; lower accuracy scores were obtained within *any* that are not covered by textbook instruction; and acquiring the knowledge of where *any* can occur beyond observable and unobservable inputs requires great effort although it is possible as shown by 9 learners in Chinese-speaking group and 15 learners in Arabic-speaking group who gave consistent accurate responses across all eight types. The significant difference found was related to Arabic-speaking and Chinese-speaking learners' results on *any* within negative adverb condition in which Chinese-speaking learners performed significantly better than Arabic-speaking learners. L1 transfer in the Chinese-speaking group was evident with this result whereas it was not evident in the Arabic-speaking group although both languages allow *any* to be used within a negative adverb condition.

Gil et al (2017) suggested that different classifications of negative adverbs in Chinese and English contributed to the significantly different results. Negative adverbs in English are classified as lexical semantic negators while negative adverbs in Chinese incorporate explicit negation morpheme *bu*. In contrast to this, negative adverbs in Arabic are under the same classification as in English, namely lexical semantic negators. Therefore, the Arabic-speaking group's lower acceptance of *any* within negative adverb condition could be associated with the absence of explicit negators. The results comparison of L1 English, L1 Arabic and L1 Chinese is presented in Table 3 below.

Table 3. Mean accuracy of eight sentence types of each L1 group

Sentence Type	L1 Chinese (*n*= 22)	L1 English (*n*= 15)	L1 Arabic (*n*= 25)
G1 Question	3.86 (0.36)	3.93 (0.26)	3.84 (0.37)
U2 *Affirmative Declarative	2.86 (1.28)	3.73 (0.46)	3.08 (1.22)
G3 not...*any*	3.91 (0.29)	4.00 (0.00)	3.68 (0.56)
U4 **Any*...not...	2.68 (1.13)	3.87 (0.35)	2.32 (1.38)
G5 Negative Main Verb	2.23 (1.11)	3.73 (0.46)	2.88 (1.09)
U6 *Nonfactive Main Verb	2.09 (1.30)	3.60 (0.63)	2.12 (1.42)
G7 Negative Adverb	3.36 (0.85)	3.93 (0.26)	2.92 (0.91)
U8 *Possibility Adverb	2.41 (1.50)	3.73 (0.80)	2.52 (1.23)

Note. Standard deviations are in parentheses.

The Replication Study

a. Linguistic Properties of Any in Indonesian

Unlike Arabic and Chinese, Indonesian does not have an equivalent item of *any*. The equivalent that corresponds to English *any* is indefinite pronouns that are used to modify a noun. It is obtained by forming a question word (what= *apa*, who= *siapa*, where= *mana*, when= *kapan*, which= *mana*) which has to be followed by additive *pun* or disjunction *saja* or by reduplicating a question word (Mintz, 1994; Sneddon et al., 2010). This kind of use of *wh*-morpheme is coined as '*wh*-indeterminate' or '*wh*-quantifiers' (Tsoulas & Gil, 2013).

Table 4. Indonesian *any* as exemplified by Mintz (1994:119)

Question word	Indonesian	English equivalent
Siapa (who)	Siapa pun WHO-ADD Siapa saja WHO-DISJ Siapa-siapa REDUPLICATION	whoever, *any*one
Apa (what)	Apa pun WHAT-ADD Apa saja WHAT-DISJ Apa-apa REDUPLICATION	whatever, *any*thing
Mana (where)	Mana pun WHERE-ADD Mana saja WHERE-DISJ Mana-mana REDUPLICATION	wherever, *any*where
Mana (which)	Yang mana pun (singular) WHICH-ADD Yang mana saja (singular) WHICH-DISJ Yang mana-mana REDUPLICATION	whichever, *any* which

Kapan (when)	Kapan pun WHEN-ADD Kapan saja WHEN-DISJ	whenever, *any*time

Note. The reduplication of *kapan-kapan* is not allowed in this context because it carries the specific meaning "at some time" (ibid.).

Mintz (1994) summarized that *wh*-reduplication is most commonly used in negative sentences although *wh*additive *pun* is also acceptable but not *wh*-disjunction *saja*. *Wh*-disjunction *saja* can be used in positive sentences and using *wh*-additive *pun* in positive sentences is also acceptable. However, although these indefinite pronouns are commonly used to modify a noun, an exception occurs with *wh*-replication because it can only follow a predicate instead of modifying a noun. Sneddon et al (2010) added that *wh*-disjunction *saja* can be used in positive and negative sentences as well as in questions. Unlike *wh*-additive *pun* and *wh*-disjunction *saja* which can occur as subjects, *wh*-reduplication cannot occur as subjects. Additionally, *wh*-reduplication follows negated predicates except for the *wh*-reduplication of *mana* (where) which can also follow positive predicates. Thus, it can be concluded from the explanation given that *wh*-reduplication is similar to English NPI *any* in that it occurs under local negation scope while *wh*-additive *pun* and *wh*-disjunction *saja* are not NPIs because they do not have distributional restriction.

Since the complete distribution of Indonesian *any* especially the ones with polarity sensitivity is seldom documented in the literature, three Indonesian native speakers who participated in the pilot test of this replicated study were asked to judge and discuss the grammaticality of eight sentence types tested in Acceptability Judgment Test (AJT). Out of eight sentence types tested, all the Indonesian native speakers revealed that *wh* reduplication can occur under the scope of negation and with semantically negative adverbs while *wh*-additive *pun* and *wh*-disjunction *saja* do not have distribution restriction as they can occur under all the environments tested. This is because additive *pun* is usually used to replace disjunction *saja* in a more formal language context (Sneddon et al., 2010). The judgment given by the Indonesian native speakers could give an addition to what

Mintz (1994) and Sneddon et al (2010) had explained. Based on the summary exemplified by Mintz (1994) and Sneddon et al (2010) as well as the judgment from the Indonesian native speakers, the distribution of Indonesian *any* within this replicated study investigated environments and the examples are as follows:

1. Question

Apakah	kamu	mau	makanan	apa	pun?
Do.Q	you	want	food	what.Q	ADD
Apakah	kamu	mau	makanan	apa	saja?
Do.Q	you	want	food	what.Q	DISJ

"Do you want *any* food?"

*Apakah	kamu	mau	apa-apa?
Do.Q	you	want	what.Q REDUPLICATION

"Do you want *any*thing?"

2. Affirmative declarative

Budi	mau	makanan	apa	pun.
Budi	want	food	what.Q	ADD
Budi	mau	makanan	apa	saja.
Budi	want	food	what.Q	DISJ

"*Budi wanted *any* food."

*Budi	mau	apa-apa.
Budi	want	what.Q REDUPLICATION

"*Budi wanted *any*thing."

3. Under the scope of negation

Budi	tidak	mau	makanan	apa	pun.
Budi	not	want	food	what.Q	ADD
Budi	tidak	mau	makanan	apa	saja.
Budi	not	want	food	what.Q	DISJ

"Budi did not want *any* food."

Budi	tidak	mau	apa-apa.
Budi	not	want	what.Q REDUPLICATION

"Budi did not want *any*thing."

4. Outside the scope of negation

Siapa	pun	tidak	mau	makanan	apa	pun.
Who.Q	ADD	not	want	food	what.Q	ADD
Siapa	saja	tidak	mau	makanan	apa	saja.
Who.Q	DISJ	not	want	food	what.Q	DISJ

"**Any*one did not want *any* food."

*Siapa-siapa		tidak	mau	apa-apa.
Who.REDUPLICATION		not	want	what.Q REDUPLICATION

"**Any*one did not want *any*thing."

5. Negative main verb

Budi	menyangkal	bahwa	dia	makan	makanan	apa	pun.
Budi	deny	that	he	eats	food	what.Q	ADD
Budi	menyangkal	bahwa	dia	makan	makanan	apa	saja.
Budi	deny	that	he	eats	food	what.Q	DISJ

"Budi denies that he ate *any* food."

*Budi	menyangkal	bahwa	dia	makan	apa-apa.
Budi	deny	that	he	eats	what.Q REDUPLICATION

"Budi denies that he ate *any*thing."

6. Non-factive verb

Budi	mengira	bahwa	dia	makan	makanan	apa	pun.
Budi	think	that	he	eat	food	what.Q	ADD
Budi	mengira	bahwa	dia	makan	makanan	apa	saja.
Budi	think	that	he	eat	food	what.Q	DISJ

"*Budi thinks that he ate *any* food."

*Budi	mengira	bahwa	dia	makan	apa-apa.
Budi	think	that	he	eat	what.Q REDUPLICATION

"*Budi thinks that he ate *any*thing."

7. Negative adverb

Budi	hampir tidak pernah	makan	makanan	apa	pun.
Budi	almost never	eat	food	what.Q	ADD
Budi	hampir tidak pernah	makan	makanan	apa	saja.
Budi	almost never	eat	food	what.Q	DISJ

"Budi hardly ate *any* food."

Budi	hampir tidak pernah	makan	apa-apa.	
Budi	almost never	eat	what.Q REDUPLICATION	

"Budi hardly ate *any*thing."

8. Possibility adverb

Budi	mungkin	makan	makanan	apa	pun.
Budi	probably	eat	food	what.Q	ADD
Budi	mungkin	makan	makanan	apa	saja.

Budi probably eat food what.Q ADD
"*Budi probably ate *any* food."
*Budi mungkin makan apa-apa.
Budi probably eat what.Q REDUPLICATION
"*Budi probably ate *any*thing."

Wh-reduplication (apa-apa) in examples has two possible meanings; lexical meaning and idiomatic meaning. The lexical meaning of it is whatever or *any*thing (Pusat Bahasa Departemen Pendidikan Nasional, 2018) and the idiomatic meaning as shown in examples (5), (6), and (8) is something negative. For example, in (5) *Budi menyangkal bahwa dia makan apa-apa* (Budi denies that he ate *any*thing) means that someone might have accused Budi to eat something that he should not have eaten and Budi denied that he ate something being accused to him. Therefore, *apa-apa* here carries the meaning of something negative instead of whatever or *any*thing. The same thing can be used to explain example (6) and (8) where *wh*-reduplication (apa-apa) carries the meaning of something instead of whatever or *any*thing.

As explained by Sneddon et al (2010), *wh*-reduplication can only follow predicates. Therefore, the examples of *wh*-reduplication above are given without *any* nouns. Table 5 shows the distribution of English *any* and Indonesian *wh*-indeterminate within the investigated environments.

Table 5. Summary of grammaticality in investigated environments in English and Indonesian

Structure Pair	English	Indonesian		
	any	*wh*-additive *pun*	*wh*-disjunction *saja*	*wh*-reduplication
G1 Question	√	√	√	x
U2 Affirmative Declarative	x	√	√	x
G3 not...*any*	√	√	√	√
U4 *Any*...not...	x	√	x	x
G5 Negative Main Verb	√	√	√	x
U6 Non Factive Main Verb	x	√	√	x
G7 Negative Adverb	√	√	√	√
U8 Possibility Adverb	x	√	√	x

(√= Grammatical, x= Ungrammatical)

The grey cells in Table 5 above show similar distribution between English NPI *any* and Indonesian *any*. As can be seen from Table 5, *wh*-additive *pun* and *wh*-disjunction *saja* are not NPIs. Only *wh*-reduplication is NPI as its distribution is restricted. The main difference between English and Indonesian is in question and negative main verb types therefore non-target like judgment could be predicted to occur within these sentence types. However, since *wh*-reduplication can only follow predicates and does not modify nouns as *wh*-additive *pun* and *wh*-disjunction *saja*, non-target like judgment within other sentence types could also be predicted especially since the test items contain English *any* that both modifies a noun and follows a predicate.

b. The English Positive Polarity Item Some

PPI *some* has a close semantic relation to NPI *any* (Ladusaw, 1996) therefore the instructed rules of *some* have almost always been contrasted with *any*: use *some* with positive sentences while *any* with negative sentences and questions (K. H. Gil et al., 2017). These explicit instructed rules lead to the highest accuracy of *any* with explicit negation and in question from Arabic-speaking and Chinese-speaking groups in the previous studies (Gil et al., 2017; Marsden et al., 2018). Although the instructed rules explicitly explain to use *some* with positive sentences, *some* can occur in almost all environments due to its property as PPI.

In contrast to NPI *any* which is subject to principle A of the Binding Theory, PPI *some* is subject to Principle B of the Binding Theory in which it "must not fall within the scope of negation" (Progovac, 1994). As it cannot occur under the scope of negation (Szabolcsi, 2004) (9), *some* mostly occur in affirmative contexts (10) although it can also occur with superordinate negation (Progovac, 1994) (11).

(9) *Ben didn't drink *some* juice.
(10) Ben drank *some* juice.
(11) I didn't say that Ben saw *someone*.

Besides syntactic notions which rule out the distribution of *some*, Lakoff (1969) added that semantic notions must be taken into consideration as *some* can also occur in environments where *any* can occur such as in questions (4), negative sentences (5), and conditional sentences (6). The occurrence of *some* in the same environments where *any* can occur will lead to different interpretations or meaning of a sentence therefore semantic notions should be incorporated in ruling out the distribution of *some*.

(12) Who wants *some* juice?

The interpretation of *some* in question (12) is that the speaker assumes to get an expected or a positive answer or a
'yes' while when *any* is used then an unexpected or a negative answer is expected. Using *any* in question can also mean that the speaker makes no assumption. The positive presupposition that a question containing *some* carries is what makes *some* allowed to be used in an offer or request where the surface structure of the sentence is questioned.

(13) Ben didn't drink *some* juice – it was organic juice.

Although *some* cannot scope below negation, the above sentence is allowed because *some* here is used as specificity marking in which it has a wide scope interpretation when used with negation (Giannakidou, 2001).

(14) If you drink *some* juice, I will hit you.

As Lakoff (1969) explained, the apodosis of the above sentence cannot be interpreted as a punishment because the speaker wants the hearer to drink the juice. However, if *some* is replaced with *any* then the apodosis is a punishment because the speaker does not want the listener to drink the juice.
Given its distribution, it is pivotal to contrast PPI *some* with NPI *any* in the test to get a better understanding of learners' knowledge development of NPI *any* in which if they know the rules of *any* then they will also know the rules of *some*. Understanding whether one NPI can be generalized by its so-called counterpart could help us understand whether learners' knowledge development of a certain polarity item goes simultaneously with their knowledge development of other polarity items. Thus, this replicated study aims to address three questions: 1) What do Indonesian learners of English in all proficiency groups come to know about the use of *any* when they are not taught the rules? 2) Does learners' conscious knowledge of the use of *any* correlate with their accurate judgment? and 3) Does learners' knowledge of *any* correlate with their knowledge of *some*?

c. Participants

The participants in this experiment were 40 Indonesian speaking learners of English (mean age= 20 years, *SD*= 2.3, range= 19-33) majoring in English at universities in Surabaya, Indonesia. 38 of them studied at the same university: 37 were undergraduate students in the fourth semester and one was a second-year Master's student. Meanwhile, two of them studied at a different university and were undergraduate students in the sixth semester. All had learned English and received English language instruction during their school education. Among all the participants, two participants: one Master's student and one undergraduate student, reported to have lived in English-speaking countries for one year and four months respectively. The participants in this experiment did not have homogenous proficiency. Therefore, to map their proficiency, a proficiency test in the form of a cloze test (from (Slabakova, 2000) was administered. The cloze test was used because it is flexible and provides easy scoring, thus it serves as an excellent tool in the experiment to assess L2 proficiency (Tremblay & Garrison, 2010). The cloze test consisted of 40 test items and an exact-word scoring method was

adopted. A *k*-means cluster analysis was used to regroup the learners based on their cloze test results into three proficiency categories: low intermediate, high intermediate and advanced. Ten participants were excluded due to their low accuracy on the designated fillers in the AJT. Thus, the total number of the remaining participants was 30 and their background information is summarized in Table 6 below.

Table 6. Summary of Indonesian speaking learners of English profiles

Proficiency Group	*n*	Age	Cloze Test scores out of 40	
		Mode (Range)	Mean (SD)	Range
Advanced	7	20 (20-21)	17.86 (1.21)	16-20
High Intermediate	14	20 (19-22)	12.64 (1.44)	11-15
Low Intermediate	9	20 (20-33)	8.56 (1.42)	6-10

Note. Some participants did not answer the question on age resulting in a smaller number of the total participants in calculating the mean age

Eleven native speakers of English participated in this study made up a control group and they completed the same test (TVJT) as the Indonesian speaking learners of English. Their responses were recorded and used as a benchmark to evaluate the results of the Indonesian-speaking group. The results of the control group will inform us of what is grammatical and ungrammatical in the language items tested. All the native speakers of English who participated at the time of testing in this study were undergraduate and postgraduate students in the UK.

d. Method

This replicated study will collect the learners' data using three instruments; AJT, TVJT, and questions. The combination of AJT and TVJT was used in this study in order to "yield a complete and more insightful picture of learners' knowledge" (Ionin & Zyzik, 2014).

A total of 64 sentences were used in the AJT of which 32 of them were test items and the other 32 were fillers. These items were divided into two lists with 32 items each of which contain 16 test items and 16 fillers. The TVJT consisted of 20 sentences accompanied by pictures; 10 test items as shown in Table 8 (5 pairs of *any* and *some* in negative sentences) and 10 fillers. The fillers where all affirmative sentences with 5 sentences contain *some* and 5 sentences contain 'all' to mask the effect of the test items containing some. Such manipulation would shed light on whether learners' performance on the AJT could lead to accurate responses in the TVJT as the semantic environment of the test items was restricted to negated sentences.

Unlike the previous research (Gil et al., 2017; Marsden et al., 2018) where the audio-recordings of each sentence in AJT was played, this experiment did not use any audio-recordings for both AJT and TVJT because the grammaticality of a string of words in syntax is most often obvious (Fernández, 2007).

Table 7. Summary of test types in AJT (Marsden et al., 2018)

Structure	Grammatical	Ungrammatical
Question/Declarative	G1: Question Do you have *any* homework today?	U2: *Affirmative Declarative *I've heard *any* news about the campaign.
Negation	G3: *not…any* The teacher did not set *any* homework.	U4: **Any…not* **Any*one did not follow the instructions.
Biclausal Main Verbs	G5: Negative Main V I'm sorry I said *any*thing about your driving test.	U6: *Non Factive Main V *I guess that you know *any*thing about my visit.
Adverbs	G7: Negative Adverb James hardly ate *any*thing at the party.	U8: *Possibility Adverb *Lucy probably bought *any*thing last week.

Note. G= grammatical; U= ungrammatical. G1, U2, and G3 are taught types while the others are not.

Table 8. Test sentences in TVJT

any in negative sentences	*some* in negative sentences
1a. Mary didn't catch *any* balloons.	1b. Mary didn't catch *some* balloons.
2a. Michael hasn't visited *any* countries in Asia.	2b. Michael hasn't visited *some* countries in Asia.
3a. Mary didn't read *any* books.	3b. Mary didn't read *some* books.
4a. Michael didn't buy *any* fruits.	4b. Michael didn't buy *some* fruits.
5a. Mary doesn't have *any* plants in her new flat.	5b. Mary doesn't have *some* plants in her new flat.

An additional task to collect learners' metalinguistic knowledge of how to use *any* was also administered, as shown in Figure 1. This task was also taken from the original study (Marsden et al., 2018).

Finally, please answer the following question: what is the grammar rule for when you can and cannot use the word ***any*** in English?

Grammar Rule:

.....

.....

Figure 1. Metalinguistic knowledge task

To investigate the data, the mean accuracy of each sentence type from each proficiency group was calculated and then *t*-tests were run using SPSS on each grammatical and ungrammatical pair in each proficiency group to measure the significant differences within the group. The between subject factors were the grammatical and ungrammatical pair whereas the within subject factor was the cloze test results. In order to find out whether participants' cloze test and metalinguistic test results affected their overall performance on eight sentence types, Pearson's bivariate correlation test was run to find the statistical significance. Finally, participants' mean scores on AJT were compared with their mean scores on TVJT to be used in Pearson's bivariate correlation test to examine whether their accurate performance across all eight types in AJT correlates with their ability to distinguish *any* and *some* in TVJT.

3. Results and Discussions

a. *Indonesian Speaking Learners of English Results on AJT and TVJT*

The results of Indonesian speaking learners of English on AJT as summarized in Table 9 below shows that the highest accuracy scores are (3 or more out of 4) uniformly within grammatical types that are taught: G1 (question) and G3 (not...*any*). Their accuracy is also high on G7 (negative adverb) but this is only in high intermediate and advanced groups. All groups' accuracy scores on non-taught types including one taught type (affirmative declarative) are low (below 3 out of 4).

Table 9. Mean accuracy out of 4 for each test item on AJT by Indonesian speaking learners of the English proficiency group

Sentence type	Group		
	Low Intermediate (*n*=9)	High Intermediate (*n*=14)	Advanced (*n*=7)
G1 Question	3.55 (0.37)	3.48 (0.48)	3.60 (0.34)
U2 *Affirmative Decl.	2.31 (0.89)	2.16 (0.56)	2.92 (0.74)
G3 not...*any*	3.47 (0.19)	3.57 (0.34)	3.75 (0.45)
U3 **Any*...not...	2.66 (0.69)	2.38 (0.60)	2.57 (0.71)
G5 Negative Main Verb	2.94 (0.58)	2.87 (0.52)	2.82 (0.53)
U6 *Nonfactive Main V.	2.02 (0.78)	2.23 (0.65)	2.57 (0.86)
G7 Negative Adverb	2.83 (0.62)	3.20 (0.54)	3.53 (0.41)
U8 *Possibility Adverb	2.22 (0.81)	2.21 (0.61)	2.78 (0.36)

Note. Standard deviations are in parentheses.

In order to reveal if some of the participants showed consistent accuracy across eight sentence types, the individual result was observed. In contrast to the individual consistency results on the Arabic-speaking group where Marsden et al (2018) found that 15 participants had consistent accuracy and on the Chinese-speaking group where Gil et al (2017) found that nine participants were consistently accurate, none of the Indonesian speaking participants were consistently accurate. The highest individual accuracy was being consistently accurate in seven sentence types out of eight. Three participants were being accurate in this context and all of them belong to each proficiency group. Surprisingly, the sentence type that they were not accurate was the same which is G5 (negative main verb).

Paired sample *t*-tests were conducted in each proficiency group to compare significant differences of the grammaticality and ungrammaticality pair. The results found that all proficiency groups performed better in the grammatical types than in the ungrammatical types. This is revealed by the greater mean scores in the grammatical types than in the ungrammatical types.

For the TVJT on *any*, all proficiency groups showed high accuracy. For the result on *some*, all groups showed similar performance where their mean scores are lower than native English speakers' mean scores and the advanced group result is slightly lower than lower intermediate and high intermediate groups. Based on Pearson's bivariate correlation test run, the results are similar to the correlation results between cloze test scores and AJT. The low intermediate and high intermediate groups have a positive correlation but not the advanced group. There is no statistically significant correlation in all proficiency groups' data because the *p* value is greater than 0.05. These correlation results show that there is no relationship between learners' accurate judgement on AJT with their accurate judgement on TVJT and vice versa.

1.1 Comparison of Indonesian-speaking with Arabic-speaking and Chinese-speaking Groups Results on AJT

Table 10 shows that the Indonesian-speaking group had more similar results with the Chinese-speaking group than with the Arabic-speaking group in which the highest accuracy obtained were in question (G1), not...*any* (G3), and in negative adverbs (G7). While the results from the Arabic-speaking group showed that the highest accuracy obtained were in taught types: question (G1), affirmative declarative (U2) and not...*any* (G3). Indonesian-speaking and Chinese-speaking groups' accuracy was also similar in affirmative declarative (U2) but their performance on this sentence type is lower than in question (G1), not...*any* (G3), and in negative adverbs (G7). Turning to the effect of L1 transfer which was not evident in Arabic-speaking but evident in Chinese Speaking groups, transfer from Indonesian was also not evident. Should the transfer be evident, target-like performance would occur in other sentence types except for G5 (negative main verb) since the use of *any* in this sentence type is ungrammatical in Indonesian.

Table 10. Mean accuracy out of 4 for each test item on AJT by Indonesian-speaking advanced group, Chinese-speaking group from Gil et al (2017) with L1 English and Arabic-speaking advanced group from Marsden et al (2018) for comparison.

Sentence type	Group			
	L1 Indonesian (*n*=7)	L1 Chinese (*n*=22)	L1 English (*n*=15)	L1 Arabic (*n*=25)
G1 Question	3.60 (0.34)	3.86 (0.36)	3.93 (0.26)	3.84 (0.37)
U2 *Affirmative Decl.	2.92 (0.74)	2.86 (1.28)	3.73 (0.46)	3.08 (1.22)
G3 not...*any*	3.75 (0.45)	3.91 (0.29)	4.00 (0.00)	3.68 (0.56)
U3 **Any*...not...	2.57 (0.71)	2.68 (1.13)	3.87 (0.35)	2.32 (1.38)
G5 Negative Main Verb	2.82 (0.53)	2.23 (1.11)	3.80 (0.41)	2.88 (1.09)
U6 *Nonfactive Main V.	2.57 (0.86)	2.09 (1.30)	3.67 (0.62)	2.12 (1.42)
G7 Negative Adverb	3.53 (0.41)	3.36 (0.85)	4.00 (0.00)	2.92 (0.91)
U8 *Possibility Adverb	2.78 (0.36)	2.41 (1.50)	3.73 (0.80)	2.52 (1.23)

Note. Standard deviations are in parentheses.

In order to answer the second question which asks whether learners' conscious knowledge of the use of *any* correlate with their accurate judgment, the learners were regrouped into three knowledge groups namely learners who cited the correct rules, learners who cited the wrong rules, and learners who chose the 'don't know' option, following the classification made by Marsden et al (2018). Then the mean scores of taught and non-taught types, as well as the cloze test scores of each group, were compared. Out of 30 learners, only 3 learners could cite the correct textbook rules of *any* and 2 learners cited the wrong rules. The remaining 25 learners chose the 'don't know' option. The learners who cited the correct rules of *any* belong to each of the proficiency groups while the learners who cited the wrong rules belong to low intermediate and high intermediate groups. The data show that learners who cited the correct rules had higher accuracy in taught types than learners who cited the wrong rules and those who chose the 'don't know' option respectively. Their accuracy is also higher than both groups in non-taught types but in this case the group who cited the 'don't know' rules being in between. The correct group cloze test scores were also higher among the other groups, which means that learners' ability to cite the correct rules of the use of *any* was not the only explanation for their high accuracy because their general English proficiency which is higher than other groups could be another explanation. Referring to the results on the correlation between learners' cloze test scores and their AJT, it was clear that there was no correlation. However, since the learners were regrouped into three knowledge groups and reinvestigated, it can be concluded that both conscious knowledge of the use of *any* and general English proficiency influence their accurate judgment on AJT although which one of these having the most effect on learners' accurate judgment on AJT remains unknown thus needs to be further analyzed.

Indonesian speaking learners of English highest accuracy are within taught types (G1; question and G3; *not*...any) and their performance is similar to Chinese-speaking group rather than with Arabic-speaking group in which another high accuracy was obtained in *any* in the negative adverb. To look further whether the Indonesian-speaking group's high accuracy in this sentence type is due to their L1 transfer as in the Chinese-speaking group, the distribution of Indonesian *any* should be consulted. Indonesian *any* that is equivalent to English NPI *any* is *wh* reduplication. The distribution of *wh*-reduplication is limited to *any* under the scope of local negator *not* and in the negative adverb. This suggests that their accurate performance is due to L1 transfer since *wh*-reduplication is allowed in the negative adverb. However, there is one thing that should be kept in mind; *wh*-reduplication cannot be used to modify a noun because it is used following the predicate. Out of 4 sentences of *any* in negative adverb in the test items (Marsden et al., 2018), 3 of them used *any* after predicates:

James hardly ate *anything* at the party.

I seldom see *anyone* at the weekend.

Miss Jones rarely says *anything* at staff meetings.

and only 1 sentence that used *any* to modify a noun:

I barely took *any* notes during the lecture.

Therefore, associating their high performance in this sentence type with L1 transfer is possible. However, a different conclusion can be drawn if the learners were tested with this sentence type in which *any* is used to modify a noun instead of following a predicate. If they are tested with this kind of structure and their accuracy is still high, this could be associated with the poverty of stimulus problem instead of L1 transfer since their L1 would not be facilitative in this context.

The results of the metalinguistic test in the original study (Marsden et al., 2018) found that learners' conscious knowledge of the rules of *any* did not lead to accurate judgment on AJT but learners' general English proficiency was the one which could assist them to give accurate judgment. In other words, the better general English proficiency a learner has, the higher accuracy rates that the learner will have. However, the finding of this replicated study does not entirely resonate with their finding in this context. Moreover, there was one learner who was consistently accurate in seven sentence types out of eight and could cite the correct rules of the use of *any* despite being in the low intermediate group. The correlation results run to find the relationship between learners' cloze test scores and conscious rules of *any* were compared with their accurate judgment in AJT. The result implies that general English proficiency represented by cloze test scores cannot be the sole predictor of L2 learners' accuracy in AJT as reported in the original study (Marsden et al., 2018). This is because the results in the Indonesian-speaking group suggested otherwise. In other words, both general English accuracy and the conscious knowledge of rules of the use of *any* affect their accurate judgment in AJT.

This replicated study added an additional test to develop further insights into the interaction between accurate performance in *any* and *some* or in AJT and TVJT. Although the test items were designed to be in the same environment which is a negative sentence with an explicit negator *not*, the results were not entirely as expected. The result on *any* in negative sentence was expected as learners had high accuracy in this context however the result of *some* in a negative sentence was not as good as *any* in negative context. The reasons to explain this could be because of their less logical reading as adults which also means they were faced with syntax-semantics mismatches where there are two possible meanings in one-word order (Slabakova, 2008).

The current investigation revealed that an accurate judgment of *any* in AJT did not lead to an accurate judgment of *some* in TVJT. In other words, the knowledge development of one polarity item develops separately from the knowledge of another polarity item. It has been shown by the Indonesian-speaking group correlations results between NPI *any* and PPI *some*. In this case, separating the grammar instruction of *any* and *some* might facilitate learners to better understand and acquire the characteristics of these two distinct polarity items. Therefore, not contrasting the instruction of *any* and *some* in teaching materials but rather separating it in a way where learners could understand their difference and their licensing categories could be worth considering.

4. Conclusion

The results of this study lend support to two findings of the original study (Marsden et al., 2018) in which learners performed better in taught types than non-taught types and that conscious knowledge of the rules of *any* did not lead to accurate judgment. Furthermore, there is an additional research question in this present study asking whether learners' accurate judgment of *any* in AJT correlates with their accurate judgment of *some* in TVJT. The correlation tests run showed that there was no correlation between these two. This suggests that the existing instruction of the use of *any* could be improvised in which it should no longer be contrasted with *some* but presented separately in a meaningful context that facilitates better understanding and acquisition of L2 learners.

Some aspects in this present study could not be controlled as this is an approximate replication study. For example, the original study involved a large number of participants but this present study involved a small number of participants. Therefore, the result of this present study might not be generalizable since it was also based on a different learner population. The findings of the present study,

although necessarily limited by smaller sample size, have raised a question to be addressed in future studies: what are the main problems encountered by Indonesian learners of English in discriminating the exact environments for *any* and *some.*

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