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EFL learners' metacognitive awareness in listening strategies: A study in Indonesian higher education

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ABSTRACT

The goal of this research is to investigate metacognitive awareness in listening strategies among English Language Education students. To achieve its goal, this research employed a mixed-methods approach, combining a questionnaire and interviews. The original questionnaire used in this research is Vandergrift's Metacognitive Awareness Listening Strategy (MALQ). Participants were 68 students of the English Language Education Department. The data analysis in this study describes the listening strategies used by English Language Education Department students. The data analysis of this study showed the listening strategies used by EFL students in the English Language Education Department. The findings showed that the problem strategy was the most widely used strategy by the students, shown by the highest mean score of 4.93/6.00. It was followed by other strategies, namely: planning & evaluation, direct attention, mental translation, and person knowledge strategies. Thus, the person knowledge strategy is the least used by the students. Therefore, in other words, students prefer using their prior knowledge and contexts to understand when they are listening to translate words in their head, maintain concentration, compare the effects of listening, and judge the difficulty level of listening.

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INTRODUCTION

Listening is one of the important language skills that students must master. The success of students' ability to communicate depends on the efficiency of listening strategies (Harmer, 2007, cited in Reinnati et al, 2022). Further, Purba and Zaki (2022) mentioned that listening skills are very essential in language learning. Rost (2009, cited in Rohmatika et al. (2021) added that listening helps us understand our environment, which supports the development of good communication. Many researchers have defined listening skills. Gilakjani et al (2011) stated that listening is a practice of paying attention to speakers and attempting to understand what the speaker is saying. Further, Murgia (2024) stated that listening comprehension is a dynamic and complex cognitive activity to decode and interpret the message. Consequently, many learners encounter difficulties in comprehending second language (L2) spoken input and lack insight into the underlying causes of this challenge. Unfortunately, when teaching listening skills, teachers typically focus on only distributing listening material, such as audio or video. Consequently, it leads to no interaction between teacher and student or student and student (Datta & Roy, 2022; Maghfiroh, 2015; Khoiriyah, 2021). This condition leads to the stuck improvement of students' listening comprehension.

The informal interviews were also done before gathering the primary data, aligning with a linear pattern. From the interviews, students perceive listening in English as challenging yet attainable. Listening comprehension is an intricate cognitive process in which pupils employ their linguistic proficiency (vocabulary, phonetics, and syntax) as well as their prior knowledge to comprehend spoken information (Silalahi, 2003; Tran & Duong, 2020; Otodu & Khoiriyah, 2023). To solve this problem, the students must have a metacognitive awareness to help them monitor and evaluate the effectiveness of their listening strategies.

Metacognition significantly enhances student learning. The term metacognition was first introduced by John Flavell in the late 1970s, and it refers to the process of thinking about cognitive phenomena or simply reflecting on one's own thinking (Flavell, 1979). According to Flavell (1979) and Muijs & Bokhove (2020), metacognition is made up of two components: knowledge and regulation. Metacognitive knowledge is nonexistent without the presence of self-awareness as a learner, understanding of the factors that can impact results, comprehension of strategic approaches, and awareness of the appropriate timing and rationale for employing those methods (Gourgey, 1998; Zimmerman, 1995). Another facet of metacognition involves the process of structuring one's own cognitive abilities, a factor that numerous studies consider to be significant (Andriani & Mbato, 2021; Zimmerman, 1995).

Maftoon & Alamdari (2020) stated that metacognitive strategies are critical for influencing listening comprehension and are easily taught. On the other hand, Balashov et al. (2021) said the metacognitive quality of personality, specifically

metacognitive awareness, plays a crucial role in organizing mental and behavioral processes. Additionally, it is closely linked to the academic achievement of students engaged in learning activities. However, Özçakmak (2021) defines metacognition as a cognitive ability that is considered higher order since it develops in response to an individual's self-awareness and proficiency in learning how to learn.

Metacognitive learning strategies assist students in determining what they need to do when faced with various problems. Metacognitive awareness in listening starts with setting goals for the listening task, such as understanding specific information or the main idea of a conversation (Robillos, 2022; Xu & Huang, 2018). Therefore, metacognitive awareness is very important in listening because it allows individuals to monitor, regulate, and evaluate their understanding of listening texts. According to a study by Balashov et al. (2021) about 'Metacognitive Awareness and Academic Self-Regulation of HEI Students', the researchers found that students who possess a high level of metacognitive awareness exhibit a robust association with internal (autonomous) motivation and identified self-regulation. Conversely, students with a low level of metacognitive awareness demonstrate a strong correlation with external self-regulation of their learning behavior.

The correlation between metacognitive awareness and listening strategies is significant in the learning process. Multiple studies have demonstrated that instruction in metacognitive methods can improve listening abilities (Coskun, 2010; Pratama et al., 2022). The correlation for metacognitive awareness and listening skills achievement is noteworthy (Rahman & Baharudin, 2023; Susilowati, 2016). Utilizing metacognitive strategies in the listening class fosters independent learning and encourages self-awareness, resulting in the development of influential listening strategies (Marantika, 2021; Werdiningsih et al., 2022). Applying the principles of metacognitive activities to teach listening involves planning, monitoring, and evaluating. "Thinking about one's own thinking before, during, and after the process of learning" is what is meant by metacognition in learning (Aliyu, 2021; Jaleel & Premachandran, 2016; Zhang & Guo, 2020). Ultimately, understanding the importance of metacognitive awareness is essential for developing listening strategies and acquiring listening skills.

Previous research on metacognitive awareness strategies has looked at self-regulation, anxiety, and the influences of metacognitive strategies on reading. The above-mentioned studies were conducted in secondary and high school students. Hence, this research will be conducted in Indonesia, specifically at a private university, to determine the type of metacognitive awareness that students frequently employ in listening skills. Therefore, this study fills the knowledge gap by investigating the types of metacognitive awareness in listening strategies employed by students in the English Language Education department. This study is expected to provide valuable

insights and contributions to the understanding of the effectiveness of metacognitive awareness in the context of English Language Education at the university.

RESEARCH METHODOLOGY

Research Design

This study was designed to find out the listening strategies that are most used by the English Language Education Department at Universitas Internasional Batam. To obtain both quantitative and qualitative data, this study used mixed methods. According to Creswell. (1999) Mixed methods are a research approach that combines qualitative and quantitative elements in one study to gain a comprehensive understanding of the phenomenon under study. In addition, qualitative data were collected through interviews to gain a comprehensive and contextual understanding by interacting directly with the participants. This approach offers a more holistic understanding of the phenomenon under study.

Participants

The participants of this study were 68 students majoring in the English Language Education department at one of the private universities in Batam. The respondents were chosen because they have listening classes and should be able to fill out the questionnaires and answer the interviews

Instruments

This study employed two types of research instruments, namely a questionnaire and an interview. The questionnaire uses the MALQ (Metacognitive Awareness Listening Questionnaire) developed by Vandergrift (2006). The purpose of the MALQ is to evaluate the cognitive understanding and proficiency of language learners in handling the EFL listening process.

Table 1. Metacognitive awareness listening questionnaires

Strategy or belief/perception	Scale					
Before I start to listen, I have a plan in my head for how I am going to listen.	1	2	3	4	5	6
I focus harder on the next when I have trouble understanding.	1	2	3	4	5	6
I find that listening in English is more difficult than reading, speaking, or writing in English.	1	2	3	4	5	6
I translate in my head as I listen.	1	2	3	4	5	6
I use the words I understand to guess the meaning of the words I don't understand.	1	2	3	4	5	6

Strategy or belief/perception	Scale					
When my mind wanders, I recover my concentration right away.	1	2	3	4	5	6
As I listen, I compare what I understand with what I know about the topic.	1	2	3	4	5	6
I feel that listening comprehension in English is a challenge for me.	1	2	3	4	5	6
I use my experience and knowledge to help me understand.	1	2	3	4	5	6
Before listening, I think of similar texts that I may have listened to.	1	2	3	4	5	6
I translate keywords as I listen.	1	2	3	4	5	6
I try to get back on track when I lose concentration.	1	2	3	4	5	6
As I listen, I quickly adjust my interpretation if I realize that it is not correct.	1	2	3	4	5	6
After listening, I think back to how I listened and about what I might do differently next time.	1	2	3	4	5	6
I don't feel nervous when I listen to English.	1	2	3	4	5	6
When I have difficulty understanding what I hear, I give up and stop listening.	1	2	3	4	5	6
I use the general idea of the text to help me guess the meaning of the words that I don't understand.	1	2	3	4	5	6
I translate word by word, as I listen.	1	2	3	4	5	6
When I guess the meaning of a word, I think back to everything else that I have heard to see if my guess makes sense.	1	2	3	4	5	6
As I listen, I periodically ask myself if I am satisfied with my level of comprehension.	1	2	3	4	5	6
I have a goal in mind as I listen.	1	2	3	4	5	6

Thus, this questionnaire was used to assess metacognitive awareness in listening tactics. This questionnaire consists of 6 items in the problem-solving dimension, 5 items in the planning evaluation dimension, 3 items in the mental translation dimension, 4 Items In the directed attention dimension, and 3 Items in the person knowledge dimension. To avoid bias, this study also conducted interviews after the questionnaires were analyzed to gain a comprehensive and contextual understanding by interacting directly with the participants. This approach offers a more holistic understanding of the phenomenon under study.

Data Collection

The questionnaire was distributed to the 68 students of the English Language Education Department by using an online platform (Google Form). Using an online platform to distribute the questionnaire causes easier and quicker data collection and lower costs (Ary et al, 2010, cited in Pratiwi, 2021). After collecting the data from questionnaires, this study interviewed some students. This study did not conduct interviews with all students who filled in the questionnaires.

Data Analysis

The quantitative data were analyzed using descriptive statistical techniques. This study used Microsoft Excel to provide the data, then moved the data from Microsoft Excel to SPSS to conduct a statistical analysis of the data obtained from the questionnaire. The analysis of the quantitative data used the interpretation of the scale developed by Vandergrift (2006). The selection of such a scale is to record the growth of metacognitive awareness for the students' evaluation.

Table 1. The interpretation of the scale

Scale	Meaning Range	Level	Score Range
6	Strongly Agree	Very High	5.17 - 6.00
5	Agree	High	4.33 - 5.16
4	Partially Agree	Average	3.49 - 4.32
3	Partially Disagree	Average	2.67 - 3.50
2	Disagree	Low	1.83 - 2.66
1	Strongly Disagree	Very Low	1.00 - 1.82

RESULTS

The results include the responses of students to 21 statements regarding their utilization of metacognitive awareness in listening strategies. The statements in this research were based on Vandergrift et al. (2006) metacognitive awareness, listening questionnaires, and are categorized into 5 sections: planning-evaluation, direct attention, person knowledge, mental translation, and problem-solving.

Planning-Evaluation

Table 3. Planning-evaluation results

MALQ Aspects		Statements	Scale Results						Mean
			SA	A	PA	PD	D	SD	
Planning-Evaluation	PE 1	Before I start to listen, I have a plan in my head	10 (14.7%)	23 (33.8%)	24 (35.3%)	6 (8.8%)	3 (4.4%)	2 (2.9%)	4.37

MALQ Aspects		Statements	Scale Results						Mean
			SA	A	PA	PD	D	SD	
		for how I am going to listen.							
	PE 2	Before listening, I think of similar texts that I may have listened to.	8 (11.8%)	29 (42.6%)	19 (27.9%)	7 (10.3%)	4 (5.9%)	1 (1.5%)	4.40
	PE 3	After listening, I think back to how I listened, and about what I might do differently next time.	6 (8.8%)	36 (52.9%)	22 (32.4%)	2 (2.9%)	2 (2.9%)	0 (0%)	4.62
	PE 4	As I listen, I periodically ask myself if I am satisfied with my level of comprehension.	17 (25%)	28 (41.2%)	17 (25%)	3 (4.4%)	2 (2.9%)	1 (1.5%)	4.76
	PE 5	I have a goal in mind as I listen.	11 (16.2%)	30 (44.1%)	20 (29.4%)	5 (7.4%)	1 (1.5%)	1 (1.5%)	4.62
								∑Mean	**4.55**

The table shows that the level of Planning-Evaluation strategies in students' metacognitive awareness in listening strategies is High (4.55/6.00). All aspects of planning-evaluation strategies fulfill the High level of metacognitive awareness. The highest score is on the aspect of evaluating the students' own satisfaction with their listening level of comprehension, which achieved a mean score of 4.76/6.00.

Direct-Attention

Table 4. Direct-attention results

MALQ Aspects		Statements	Scale Results						Mean
			SA	A	PA	PD	D	SD	
Direct Attention	DA 1	I focus harder on the text when I have trouble understanding.	18 (26.5%)	28 (41.2%)	19 (27.9%)	2 (2.9%)	1 (1.5%)	0 (0%)	4.88
	DA 2	When my mind wanders, I recover my	12 (17.6%)	26 (38.2%)	24 (35.3%)	4 (5.9%)	2 (2.9%)	0 (0%)	4.62

MALQ Aspects		Statements	Scale Results						Mean
			SA	A	PA	PD	D	SD	
		concentration right away.							
	DA 3	I try to get back on track when I lose concentration.	18 (26.5%)	30 (44.1%)	18 (26.5%)	2 (2.9%)	0 (0%)	0 (0%)	4.94
	DA 4	When I have difficulty understanding what I hear, I give up and stop listening.	4 (5.9%)	8 (11.8%)	19 (27.9%)	10 (14.7%)	19 (27.9%)	8 (11.8%)	3.18
								∑Mean	4.40

The above table indicates that the level of direct attention strategies of the English Language Education Department students is considered High (4.40/6.00). Among the four aspects in direct-attention strategies, the highest mean score (4.94/6.00) is in the aspect of students' attempt to get back on track when they lose concentration. However, though the students achieve a high level of direct attention strategy, they possess an average level of strategy in their persistence when dealing with difficulty in understanding what they hear.

Person Knowledge Results

Table 4. Person knowledge results

MALQ Aspects		Statements	Scale Results						Mean
			SA	A	PA	PD	D	SD	
Person Knowledge	PK 1	I find that listening in English is more difficult than reading, speaking, or writing in English.	11 (16.2%)	10 (14.7%)	18 (26.5%)	11 (16.2%)	10 (14.7%)	8 (11.8%)	3.66
	PK 2	I feel that listening comprehension in English is a challenge for me.	16 (23.5%)	21 (30.9%)	15 (22.1%)	6 (8.8%)	6 (8.8%)	4 (5.9%)	4.34
	PK 3	I don't feel nervous when I	13 (19.1%)	17 (25%)	22 (32.4%)	9 (13.3%)	5 (7.4%)	2 (2.9%)	4.26

MALQ Aspects	Statements	Scale Results						Mean
		SA	A	PA	PD	D	SD	
	listen to English.							
							∑Mean	4.09

The table shows that the average mean score for person knowledge strategies is 4.09/6.00. In other words, the English Language Education Department students are at the average level of person knowledge strategies. Most students admit that listening skills are the most difficult skill compared to other skills (reading, writing, and speaking), which achieved the lowest mean score (3.66/6.00).

Mental Translation Results

Table 5. Mental translation results

MALQ Aspects		Statements	Scale Results						Mean
			SA	A	PA	PD	D	SD	
Mental Translation	MT 1	I translate in head as I listen.	18 (26.5%)	23 (33.8%)	16 (23.5%)	5 (7.4%)	4 (5.9%)	2 (2.9%)	4.59
	MT 2	I translate key words as I listen.	14 (20.6%)	26 (38.2%)	20 (29.4%)	2 (2.9%)	3 (4.4 %)	3 (4.4%)	4.54
	MT 3	I translate word by word, as I listen.	7 (10.3%)	15 (22.1%)	24 (35.3%)	8 (11.8%)	9 (13.2%)	5 (7.4%)	3.82
								∑Mean	**4.32**

The table shows that the mental translation strategies of the English Language Education Department students are at an average level (4.32/6.00). Most students agree that they are still translating word by word when they listen, which reaches the lowest mean score of 3.82/6.00. Further, students mostly admit that they translate in their heads (4.59/6.00) and translate keywords (4.54/8.00) when they are listening.

Problem-Solving Results

Table 6. Problem-solving results

MALQ Aspects		Statements	Scale Results						Mean
			SA	A	PA	PD	D	SD	
Problem-Solving	PS 1	I use the words I understand to guess the	22 (32.4%)	24 (35.3%)	20 (29.4%)	1 (1.5%)	0 (0%)	1 (1.5%)	4.94

MALQ Aspects	Statements	Scale Results						Mean
		SA	A	PA	PD	D	SD	
	meaning of the words I don't understand.							
	PS 2	As I listen, I compare what I understand with what I know about the topic.	14 (20.6%)	33 (48.5%)	18 (26.5%)	1 (1.5%)	2 (2.9%)	0 (0%)	4.82
	PS 3	I use my experience and knowledge to help me understand.	27 (39.7%)	30 (44.1%)	10 (14.7%)	3 (1.5%)	0 (0%)	0 (0%)	5.31
	PS 4	As I listen, I quickly adjust my interpretation if I realize that it is not correct.	11 (16.2%)	26 (38.2%)	25 (36.8%)	6 (8.8%)	0 (0%)	0 (0%)	4.62
	PS 5	I use the general idea of the text to help me guess the meaning of the words that I don't understand.	15 (22.1%)	33 (48.5%)	20 (29.4%)	0 (0%)	0 (0%)	0 (0%)	4.93
	PS 6	When I guess the meaning of a word, I think back to everything else that I have heard, to see if my	19 (27.9%)	30 (44.1%)	18 (26.5%)	0 (0%)	0 (0%)	1 (1.5%)	4.96

MALQ Aspects	Statements	Scale Results						Mean
		SA	A	PA	PD	D	SD	
	guess makes sense.							
							∑Mean	4.93

The table shows that the level of problem-solving strategies of English Language Education Department students is at a high level (4.93/6.00). The students have a high level of problem-solving strategies when they can use their prior knowledge to help them understand when they are listening (5.31/6.00).

Table 7. Summary results

No.	Metacognitive Awareness Listening Strategies	Mean Score	Level
1.	Planning & Evaluation	4.55	High
2.	Direct attention	4.40	High
3.	Person Knowledge	4.09	Average
4.	Mental Translation	4.32	High
5.	Problem-Solving	4.93	High
	∑Mean	**4.46**	**High**

Table 7 indicates that the level of English Language Education Department students' metacognitive awareness is at a high level (4.46/6.00), indicating that the students have already developed good competencies in monitoring, regulating, and evaluating their understanding of listening texts. Compared to other metacognitive listening strategies, problem-solving strategies reach the highest level of mean score. In other words, students can utilize the problem-solving strategies when they encounter challenges in listening comprehension. However, the students are still at an average level in utilizing person knowledge strategies (the lowest mean score).

Question: "When you encounter problems or gaps in understanding while listening in English, what steps will you take?"

Student 1: *"As I listen, I attempt to connect the information I hear to what I already know. This aids in my comprehension of the larger situation."*

Student 2: *"I usually try to monitor my understanding of the material by asking, 'Do I really understand this?"*

Student 3: *"To cope with listening, I use vocabulary memorization strategies, watching English videos and movies, and listening to music as ways to improve my listening comprehension.''*

From the interviews conducted with the students, it can be concluded that they employed a range of problem-solving strategies when listening in English, demonstrating a strong sense of metacognitive awareness. They actively connect the information they hear with their existing knowledge, constantly monitoring their understanding and expanding their vocabulary by watching videos, movies, and listening to music in English. This highlights the significance of being aware of one's own thinking process and using various strategies to overcome challenges in comprehending English in listening.

DISCUSSION

The data generated from the questionnaire and interview were linked to prior studies, theories, and concepts found in the literature. Based on the quantitative data, the most dominant metacognitive awareness listening strategy used by the students of the English Language Education Department is problem-solving strategies. The second dominant strategy used is the planning and evaluation strategy.

The data is aligned with the previous studies and literature. The "problem-solving strategy" is the most frequently used of the five metacognitive awareness strategies in MALQ. Goh (2000); Vandergrift (2003), in Kadwa and Alshenqeeti (2020) believe that when students translate what they hear frequently, they use metacognitive strategies, including problem-solving and monitoring. These strategies stand for monitoring, information searching, and problem-solving (Balashov et al., 2021). The "planning-evaluation strategy" is the second strategy of awareness; this is the kind of strategy students use to arrange themselves so they can hear and assess the outcomes of their listening efforts. This strategy evaluates the goal's understanding and indicates the deliberate character of the understanding process (Amin & Adiansyah, 2020; Khoiriyah & Soeparto, 2022; Ramadhanti & Yanda, 2021; Schraw & Dennison, 1994).

In addition, according to Alber and Safriyanti (2021), one of the most common strategies that listeners use is the "direct attention strategy". This refers to the strategy they use to stay focused and on task, such as regaining concentration when it falls or intensifying their focus when they encounter difficulties in understanding. Another crucial factor to consider is the "mental translation strategy," which encompasses the strategies that listeners should refrain from employing to become proficient listeners (Vandergrift, 2003). The initial low-key approach is the "person knowledge strategy," which entails perceiving English as a stimulating task. Put simply, students view listening as a challenging endeavor, directing their attention towards the level of difficulty and exerting their utmost effort to excel in this regard (Khosravi & Jalilzadeh, 2020; Wulanjani & Indriani, 2019).

The results of this study line up with the research conducted by Kadwa and Alshenqeeti (2020) as both studies showed problem-solving as the dominant domain. However, it is important to note that their study focused specifically on junior high school students. On the other hand, the result of this study is different from those of Fu et al. (2023), who conducted about exploration of the correlation between metacognitive awareness and listening skills; the study found there is a positive correlation in listening. In contrast to the results of Krishman (2019), this study carried out a study on the influence of metacognitive strategy training. The results showed that problem-solving has the highest average.

Moreover, the study conducted by Al-Khresheh and Alruwaili (2024) as this study showed problem-solving as the dominant domain, like the results of the current study. The participants in both studies were university students. Similar results were observed in a study conducted by Kadwa and Alshenqeeti (2020) where the problem-solving strategy emerged as the dominant strategy. However, it is important to note that their study focused specifically on junior high school students. On the other hand, the results of this study are different from those of In'nami and Koizumi (2022) who found the person knowledge strategy to be the prevailing approach. In contrast to the results of Bozorgian and Muhammadpour (2022), this study reveals different results regarding the highest-scoring strategies, including direct attention, mental translation, and person knowledge strategies. These variations may arise as a result of varying research environments.

The implications of this study on metacognitive awareness in listening strategies for listening teaching can include several things. The findings of this study can help in designing teaching strategies that consider students' metacognitive awareness related to listening skills. In addition, the results of this study can also be used to develop evaluation methods that take into metacognitive aspects of listening strategies. Based on the results of this study, which show that the problem-solving strategy is the most widely used strategy by students in the listening context. This can have an impact on improving students' problem-solving skills, especially in the context of listening comprehension and problem-solving. Thus, the implications of this study can help improve the effectiveness of listening, teaching, and students' problem-solving skills.

Listening with metacognitive awareness strategies can help create problem-solving abilities. Understanding one's own cognitive processes, such as how one listens to, comprehends, and reacts to auditory information, is referred to as metacognitive awareness. Metacognitive awareness strategies assist students in tracking their understanding of audio texts, recognizing obstacles, and using a variety of techniques to comprehend them more fully. Students will be able to recognize comprehension issues and design solutions for them. This can improve one's problem-solving ability.

Metacognitive strategies can help students become more proficient at problem-solving while they listen.

CONCLUSION

This study investigated the various metacognitive awareness strategies used by students in the English Education Department. This study found that the most dominant metacognitive awareness listening strategy employed by the students is the problem-solving strategy. Meanwhile, the least dominant strategy used is the person knowledge strategy.

Furthermore, the students conducted further analyses by making comparisons between their existing knowledge and the context of their listening activities. Moreover, they use their expertise to gain a deeper comprehension. Students would often rely on their own interpretations while listening to determine if they were accurate or not. They used the overall concept of the text to aid in deducing the significance of unfamiliar words. In addition, students often rely on their memory of past experiences with words to determine their meaning, to see if their guess is correct.

CONFLICT OF INTEREST

All authors declare that they have no financial or non-financial interests, relationships, or affiliations that could be perceived as influencing the content of this manuscript or affecting its impartiality.

AUTHOR (S) CONTRIBUTION

Pratiwi, T.L.: Conceptualization (lead), methodology (lead), writing –original draft (supporting), review (lead), securing funding. Zaki, L.B.: Examination (lead), critical review of research framework (supporting), validation of methodology and findings (supporting), and ensuring the overall scholarly quality and compliance with academic standards. Darsono, E.R.F.: Conceptualization (supporting), methodology (supporting), writing –original draft (lead), review (supporting), editing (lead).

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