

Voice of Academia

Academic Series of Universiti Teknologi MARA Kedah

VOLUME

22

ISSUE 2
2026

eISSN: : 2682-7840

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e-ISSN:2682-7840



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Metacognitive Listening Strategies and Language Proficiency Among Malaysian Esl Pre-University Students

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ARTICLE INFO

Article history:

Received Mac 2026

Accepted June 2026

Published July 2026

Keywords:

ESL, Listening,
Metacognitive Listening
Strategies,
Pre-University students,
Language Proficiency

Corresponding Author:
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DOI:
[https://doi.org/10.24191/
VoA.v22i2.13435](https://doi.org/10.24191/VoA.v22i2.13435)

ABSTRACT

Metacognitive listening strategies have recently been highlighted for the many positive learning outcomes associated with them. In Malaysian ESL listening context, research in this area is still relatively new and growing. Thus, this study investigates the awareness and perceived use of metacognitive listening strategies among 171 Malaysian ESL pre-university students at a local post-secondary institution. It specifically identifies the students' level of metacognitive listening awareness, their perceived use of the most and least types of strategies during listening comprehension, and the relationship between students' perceived strategy-use and language proficiency. Using an adapted Metacognitive Awareness Listening Questionnaire (MALQ), findings indicate moderate metacognitive listening awareness among the ESL pre-university students at the post-secondary institution, with problem-solving and person-knowledge strategies perceived as the most and the least frequently used during listening respectively. The findings further reveal a statistically significant but practically weak relationship between perceived metacognitive listening strategy use and language proficiency, suggesting that proficiency differences do not translate into substantively different strategy use among the students. Given the limitations in using self-report data, a gross measure of proficiency categorisation and samples drawn from a single-institution context that tend to limit the generalisability of the findings, future studies may consider employing other observational measures to better capture strategy-use during authentic listening tasks, and utilising specific language proficiency tests for more precise proficiency categorisation among samples across different institutions to further illuminate the contextual factors mediating metacognitive awareness and strategy-use among Malaysian ESL pre-university students.

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1. Introduction

Listening has been regarded as the least understood language skill due to its intangible and multidimensional structure which is difficult to describe and gauge (Goh & Vandergrift, 2022; Graham, 2006; Walker, 2014). Yet it is a skill which development precedes other language skills like speaking, and it facilitates other skills in language learning which is vital for comprehension and interpretation of the language input (Krashen, 2009; Rost, 1994; as cited in Nunan, 1998).

In many second language (L2) or English as a Second Language (ESL) classrooms, learners generally struggle more with listening compared to other language skills (Graham, 2006), particularly those lacking proficiency in the target language (Bloomfield et al., 2010; Goh, 2008). The prevalent use of the conventional listen-and-answer pedagogy which generally focuses on scores obtained at the end of listening tasks is viewed as merely testing learners and serves very little in developing the learners' autonomy and listening skills (Field, 2008; Goh, 2008; Goh & Vandergrift, 2022; Sheerin, 1987). Thus, most recent research in listening has highlighted the importance of teaching learners how to listen by focusing on the process of listening and listening strategies although performance in listening tasks remains an indicator of general competency (Hamouda, 2013; Nguyen & Abbot, 2016).

One of the listening strategies that has received considerable attention in recent years is the metacognitive strategies in listening (Al-Khresheh & Alruwaili, 2024; Bozorgian & Shamsi, 2023; Dalman & Plonsky, 2022; Goh & Vandergrift, 2022; Tan et al., 2024). Grounded in Flavell's (1979; 1987) concept of metacognition, metacognitive strategies in listening involve an individual's knowledge about the factors that affect the course and outcome of his or her cognitive process (known as metacognitive knowledge) and the actual metacognitive activities an individual engages in to facilitate learning and memory (known as metacognitive regulation) (Goh, 2010; Goh & Vandergrift, 2022; Schraw & Moshman, 1995). In other words, these strategies involve learners' beliefs and consciousness about their own learning and the ability to orchestrate different mental processes in the use of strategies for planning, monitoring and evaluating during listening. As such, most research outcomes thus far have pointed to the importance of equipping learners with metacognitive strategies that can promote autonomy in listening and learning beyond the language classrooms (Al-Khresheh & Alruwaili, 2024; Goh & Vandergrift, 2022; Vandergrift et al., 2006).

1.1 *Listening in Malaysian ESL context*

In many Malaysian ESL classrooms, listening has not received the same level of emphasis as speaking, reading and writing despite increasing recognition of its importance in facilitating language learning (Fauziana & Parilah, 2020; Irma & Mohamad Jafre, 2020; Nair et al., 2014; Nur Anneliza et al., 2020). Listening undeniably still tends to take a backseat in the language classrooms despite the implementation of the Malaysia Education Roadmap 2013-2025, aimed at upgrading English proficiency among Malaysian students (Ministry of Education, 2013), in tandem with the integration of the Common European Framework of Reference for Languages (CEFR) into the Malaysian language syllabus in 2013 (Ministry of Education, 2013). This may be due to the prevailing exam-oriented culture where skills like reading and writing, which have traditionally dominated English language testing are typically prioritised over listening (Hazita Azman & Koo Yew Lie, 2010; as cited in Normazidah et al., 2012; Nambiar & Ransarini, 2012). Additionally, teachers' entrenched belief about listening, influenced by the misconception that it can be naturally acquired whenever speaking is practised, may have contributed to its less emphasis in language classrooms (Yongbai, 1992; as cited in Fauziana & Parilah, 2020; Osada, 2004).

Listening in many Malaysian large mixed-proficiency classes is also a challenge, particularly for less-proficient students who may struggle to keep pace with their more proficient peers in following listening instructions (Cross, 2011, 2018; Dennistoun, 2023; Goh, 1998; Graham & Macaro, 2008; Vandergrift & Tafaghodtari, 2010). As such, less-proficient students tend to receive little to no support during listening

where teachers are also often faced with challenges in accommodating students' varying proficiency levels and learning paces (Al-Subaiei, 2017; Ardi, 2015; Hedge, 2000; Joyce, 2019; Le & Renandya, 2016; Nguyen, 2022). Furthermore, learners' perspectives about listening also tend to vary. Some students tend to attach less importance to listening as a skill to be taught and learnt in the classroom compared to reading, speaking and writing, and many generally believe that listening lessons contribute the least to their language development (Ho et al., 2022; Nambiar & Ransarini, 2012).

Aside from that, being a relatively new skill tested in the national examination of SPM (Malaysian Certificate of Education) for form five students following the implementation of CEFR-based language syllabus across all secondary levels, as well as in the Malaysian University English Test (MUET) at post-secondary level (Ministry of Education, 2013; Mohd Sallehuddin & Nurul Farehah, 2017; Sufi & Stapa, 2020), the listening pedagogy has most likely undergone minimal changes from its common conventional listening comprehension approach (Normazidah et al., 2012). Thus, learners in both the secondary and post-secondary levels are less likely to be familiar with listening strategies, specifically metacognitive strategies (Fauziana & Parilah, 2020; Ho et al., 2022; Irma & Mohamad Jafre, 2020; Krishnan & Kepol, 2013).

Current research that addresses metacognitive strategies in listening in the Malaysian ESL context is growing at a relatively slow pace compared to its development worldwide (Zhang & Shen, 2023). Existing studies over the past decade (from 2013 to 2023) show that only a few studies have addressed ESL learners' use of metacognitive strategies in listening (e.g. Aiza et al., 2017; Jin, 2020; Krishnan & Kepol, 2013; Nair et al., 2014; Sedhu et al., 2017; Seyedehsima et al., 2022). As such, more insights on listening and the use of metacognitive strategies among ESL learners are needed to keep up with the current global trends in classroom listening practices that focus on the process of listening, while facilitating the effort to improve current classroom listening practices that benefit individual learners. As highlighted by Chamot (2004) and Vandergrift (2007), it is imperative to gain insights into the learners' current use of strategies for listening tasks they undertake in the language classroom to help teachers understand cultural and contextual factors that may be influencing their students, hence, facilitating a more tailored instruction that will likely help the learners develop and manage their listening strategies more effectively in handling different listening tasks. Therefore, arising from the paucity of studies in Malaysian ESL listening context, the present study addresses these three research questions:

- i) What is the level of metacognitive awareness in listening among ESL pre-university students during listening comprehension tasks?
- ii) Which of the five major types of metacognitive listening strategies do ESL pre-university students perceive to have used the most and the least during listening comprehension tasks?
- iii) Is there a significant relationship between perceived listening strategy use and language proficiency among the ESL pre-university students?

2. Literature Review

Listening is widely recognized as the cornerstone of language learning, yet it poses significant challenges for both teaching and learning. 'Listening' is generally understood as a process of constructing meaning and actively interpreting and integrating auditory input with prior knowledge and experiences and enhancing comprehension within both the immediate and broader socio-cultural context of the utterance (Vandergrift, 1999). As such, listening involves significant and active cognitive processing rather than a mere passive and silent activity.

Recent research has recognised the importance of considering metacognition in cognitive listening processes. Metacognition in listening refers to listeners' awareness of the cognitive processes involved in comprehension and their ability to oversee, regulate and direct these processes (Flavell, 1979; Goh, 2008). The regulation processes often involve the use of cognitive processes in planning, monitoring, problem-

solving and evaluating to effectively manage listening comprehension (Goh, 2008, 2010; Goh & Vandergrift, 2022; Vandergrift, 1999, 2004). This has led to a focus on strategy-based teaching approaches, focusing on learners' metacognitive activation, alongside cognitive development in listening. Researchers have argued that learners can benefit from learning to use listening strategies to compensate for incomplete understanding, missed linguistic or schematic input, misidentified clues and other listening limitations (Flowerdew & Miller, 2005; Rubin, 1994; Vandergrift, 2003). A form of listening pedagogy that has often been highlighted in many recent strategy-based listening instruction is the direct and explicit strategy teaching (Goh & Vandergrift, 2022; Vandergrift & Goh, 2012).

'Strategies' are deliberate, goal-directed and conscious procedures taken by a learner to control and improve their learning (Afflerbach et al., 2008; Oxford, 2003). 'Metacognitive strategies' often refer to Flavell's (1979, 1987) concept of metacognition as 'thinking about one's thinking' whereby learners use the strategies to manage their own learning by planning what they will do, checking how it progresses, and evaluating how it went (Cohen and Dörnyei, 2002; as cited in Altuwaresh, 2016). Cognitive strategies, on the other hand, are behaviours, techniques or thoughts employed by listeners to handle listening materials, and involve strategies like notetaking, translating, repeating, and elaborating (O'Malley et al., 1987). These two types of strategies are complementary to each other whereby the metacognitive functions complement the cognitive processes to foster effective listening comprehension (Flavell, 1976; as cited in Noushad, 2008). Another type of strategy is known as socio-affective strategies which are evidenced in cooperative learning and focus on the emotional aspect of learning (O'Malley & Chamot, 1990).

Research in metacognitive listening strategies has often referred to Vandergrift's (1997) metacognitive listening strategy taxonomy, and Vandergrift et al.'s. (2006) self-report Metacognitive Awareness Listening Questionnaire (MALQ). The MALQ has been widely used in gauging individuals' reflections on metacognitive listening strategies when performing listening tasks (Vandergrift & Tafaghodtari, 2010). It includes a description of listening behaviour known as strategies pertaining to awareness of L2 listening, comprising five subcategories of metacognitive listening strategies – 1) problem-solving, 2) planning and evaluation, 3) mental translation, 4) directed-attention, and 5) person-knowledge. Table 1 presents the five subcategories of the questionnaire, their descriptions, and corresponding items in the MALQ.

Table 1. Metacognitive Awareness of Listening Strategies (Vandergrift et al., 2006)

Strategies	Description of Strategies	Items in MALQ
Planning/ Evaluation (PE)	The strategies listeners employ to prepare for listening (i.e establish goals, formulate strategies, activate prior knowledge), and to evaluate their listening efforts post-listening	1, 10, 14, 20, 21
Directed attention (DA)	Strategies that listeners use to focus and stay on task	2, 6, 12, 16
Problem-solving (PS)	Strategies used by listeners to identify and resolve obstacles during listening by generating solutions and adjusting their listening strategies	5, 7, 9, 13, 17, 19
Person-knowledge (PK)	Listeners' judgement of their personal experiences, and perceptions of difficulty	3, 8, 15
Mental translation (MT)	The online mental translation strategy that involves translating into the first language	4, 11, 18

2.1 Previous Studies on Metacognitive Listening Strategies

Development and success in L2 listening have often been attributed to metacognitive awareness and effective strategy use as part of the elements in the listening construct proposed by Goh and Vandergrift

(2022). The systems model of second language listening illustrates the interrelationships between the person factors (cognitive and affective elements), listening context (environment, task, speaker, text), listening processes (cognitive, social, strategic processing) and listening outcomes which determine the success in listening that differs among listeners (Goh & Vandergrift, 2022).

Recent research has highlighted that metacognitive awareness and strategy use during listening vary among L2 learners which are profoundly influenced by individual differences such as learner proficiencies, constituting an element of the person factors (Al-Shammari, 2020; An & Shi, 2013; Dabbagh & Noshadi, 2014; Dalman & Plonsky, 2022; Li et al., 2022; Ngo, 2019; Renandya, 2012; Vandergrift & Baker, 2015; Zeng & Goh, 2018). Research has generally found that less-proficient learners tend to use fewer metacognitive strategies in listening while more-proficient learners use more strategies and in a more sophisticated and appropriate way (An & Shi, 2013; Cao & Lin, 2020; Chero, 2023; Cross, 2010; Goh, 1998; 2002; Hsieh, 2023; Lotfi et al., 2012; Vandergrift, 1997; 2003). However, Tuan et al. (2025) found that both groups of less- and more-proficient students majoring in English Studies programs at a university in southern Vietnam had a relatively high level of perceived metacognitive awareness.

In specific reference to the types of metacognitive strategies used during listening based on the descriptors in MALQ (Vandergrift et al., 2006), research found that both less- and more-proficient language learners were able to use the metacognitive strategies in planning after metacognitive strategy interventions (Chero, 2023; Jacobsen, 2015; Maftoon & Fakhri Alamdari, 2020; Ngo, 2016; Martinez & Touzard, 2018; Robillos & Bustos, 2022; Seyedehsima et al., 2022; Tanewong, 2019).

The use of mental translation strategy was mainly detected amongst less-proficient learners, (Goh, 1998; Goh & Hu, 2013; Maftoon & Fakhri Alamdari, 2020; Tanewong, 2019; Vandergrift, 2003; Vandergrift & Tafaghodtari, 2010; Vandergrift et al., 2007, Zeng & Goh, 2018) although some research also found that more-skilled EFL learners used mental translation more than their less-skilled counterparts during listening (Chero, 2023; Li et al., 2022; Robillos & Bustos, 2022, Tuan et al., 2025). The use of mental translation was considered beneficial for some L2 learners in bridging the language gap between their first and target language (Al-khresheh & Alruwaili, 2024) although Vandergrift et al. (2006) suggest that 'mental translation' strategy is viewed to negatively affect listening proficiency and to be avoided.

Inconsistent results were found in the use of problem-solving, monitoring, and evaluation strategies among the more- and less-proficient learners. Some studies revealed that more-proficient learners tended to demonstrate greater use of problem-solving, monitoring and evaluation strategies (Bozorgian, 2014; Goh, 1998, 2002; K  k, 2023; Vandergrift, 1997, 2003; Vandergrift & Tafaghodtari, 2010) compared to the less-proficient learners who tended to focus on word-level cognitive processing due to their limited linguistic knowledge, and hence, often resorted to mental translation (Al-Shammari, 2020; Goh, 2000, Goh & Hu, 2013; Hulstijn, 2013; Vandergrift, 2006; Zeng & Goh, 2018). However, a few studies have reported increased use of problem-solving, monitoring, and evaluating strategies among less-proficient learners after cycles of metacognitive strategy listening instructions (Jin, 2020; Mareschal, 2007; Tanewong, 2019) although these findings were less common in many studies. Nevertheless, it was discovered that the use of inferencing strategy, contextual clues and familiar content words or drawing on previous knowledge helps both the more- and less-proficient learners to bridge gaps in their understanding during listening (Zeng & Goh, 2018). Meanwhile, evaluation strategy was found to be less commonly employed, particularly among the less-skilled learners, and when it was used, the focus was on performance in terms of the accuracy of answers, rather than on strategy-use (Martinez & Touzard, 2018; Sedhu et al., 2017; Seyedehsima et al., 2022). Person-knowledge strategy was less commonly used by students in many studies (Aiza et al., 2017; Chen, 2010; Rahimi & Katal, 2012).

In the Malaysian ESL context, little is known about ESL students perceived metacognitive awareness and use of metacognitive strategies in listening, although there have been a few studies in recent years. These studies have generally focused on the impact of metacognitive listening instructions on listening

comprehension or performance, and metacognitive awareness post-intervention. Research outcomes have also suggested inconsistent perceived awareness and use of strategies among the less- and more-proficient listeners.

The planning strategies that include directed-attention and selective-attention were generally used by both groups of less- and more-proficient listeners to stay focused on tasks before listening (Aiza et al., 2017; Jin, 2020; Seyedehsima et al., 2022; Swaran Singh et al., 2022) although an earlier study of 34 Malaysian ES/EFL first-year university students by Selamat and Sidhu (2011) found that directed-attention strategy was mainly used by students in forcing themselves to focus and when comprehension problems occurred in listening to English lecture. They also found that monitoring strategies that include problem-solving strategy were mostly utilised, as similarly found by Seyedehsima et al. (2022) among groups of less- and skilled ESL university listeners with a slightly higher mean value for the skilled students although the difference was insignificant. The perceived and increased use of problem-solving strategy was also reported by Jin (2020) among ESL pre-university students after following a 15-week metacognitive strategy instruction. However, Aiza et al. (2017) found a decrease in its use, along with the mental translation and person-knowledge strategies among 100 Malaysian ESL diploma students, following a self-learning approach where notes on MALQ were supplemented to the students. Likewise, Swaran Singh et al.'s (2022) focus group interview of Malaysian lower-six students following a 4-week metacognitive strategy instruction found that monitoring strategies seemed to be constrained by cognitive overload, linguistic problems and time constraints, as similarly found by Nur Anneliza et al. (2020) who examined the relationship between metacognitive awareness and listening achievement of 169 ESL science foundation students. Besides, Nur Anneliza et al. (2020) found that the person-knowledge strategy was mostly utilised, followed by directed-attention, and planning and evaluation strategies. For these students, listening was perceived as a passive process of awaiting the correct answer from the audio stimulus, with little conscious engagement in metacognitive strategy use.

Thus, existing research on metacognitive listening strategies in Malaysian ESL context thus far has pointed to inconsistent findings that resulted in variations of strategy use among the less- and more-proficient learners. Along with the scarcity of such studies in Malaysian ESL context, it necessitates further research on metacognitive listening strategies employed by post-secondary Malaysian ESL students of varying language proficiencies which can provide more valuable insights into the strategies used during listening. This can indirectly inform instructors of more effective teaching practices that align with the students' needs, as well as provide a better understanding of the potential language differences in strategy use for learners in mixed-ability classrooms.

3. Methodology

This study employed a quantitative descriptive research design, utilising a survey approach, to gather data on Malaysian ESL pre-university students' level of metacognitive listening awareness, perceived metacognitive strategy use, and to examine if there is a significant relationship between students' perceived metacognitive strategy use and language proficiency. The survey approach is viewed to be mostly apt in gathering self-report data as "questionnaires are among the most efficient and comprehensive ways to assess frequency of language learning strategy use" (Oxford, 1996, p. 25).

3.1 Participants

Participants of this study were 171 Malaysian ESL pre-university students who enrolled in their first year of pre-university English course at a Malaysian post-secondary higher institution in Sabah. These students had just completed their upper-secondary education (Form 5), with varying levels of English

proficiency as indicated by their English paper grades in the national examination SPM (Malaysian Certificate of Education), which was taken at the end of their Form 5. The SPM grades are commonly presented in four major levels of achievement with its sub-levels, ranging from distinction (A+, A, A-), credit (B+, B, C+, C), pass (D, E) and fail (F), where the A-grades signify the highest level of achievement, while the F grade signifies the lowest. The B-range and C-range grades are bundled under one umbrella, 'credit', with different sub-levels, ranging from highest-credit (B+) to credit (C). Table 2 shows the demography of participants based on their language proficiencies.

Table 2. Participants' Demography of Language Proficiencies

SPM Grade	Grade Description	No. of Participants (N)	Percentage (%)
A- / A/ A+	Distinction to Highest Distinction	83	48.5
B+	Highest Credit	29	17.0
B	High Credit	23	13.5
C / C+	Credit to Upper Credit	30	17.5
D /E	Pass to Upper Pass	6	3.5
TOTAL		171	100

The students also most likely differed in the exposure to listening strategies based on their previous experiences in their secondary education and familiarity with English materials. Enrolled in the first-year pre-university English course, these students were still at the beginning of their first semester of study and had not undergone intensive or extensive listening instruction in their English language classes. For those reasons, these students were purposely selected as the sample for this study. This sample size is viewed to be adequate for a survey study whereby a sample size larger than 30 and less than 500 is considered most appropriate for most behavioural studies (Roscoe, 1975; as cited in Memon et al., 2020).

3.2 Research Instrument

The research instrument used to gather data in this study was slightly adapted from Vandergrift et al.'s (2006) Metacognitive Awareness Listening Questionnaire (MALQ) which has previously been validated through confirmatory factor analysis and its wide usage in research on metacognitive listening awareness. Its use in this study is most apt as it fits the purpose of serving as a tool in diagnosing students' metacognitive awareness of the process in L2 listening and perceived use of listening strategies at a specific point in time or over a period (Vandergrift et al., 2006). The MALQ, therefore, serves as a source of information about the current level of student strategic competence in processing English oral texts which could be used to improve current classroom listening instruction to suit the students' needs.

The adapted MALQ used in this study contains two parts. Part one gathered information about the students' level of education, and their SPM English paper grade. Meanwhile, part two of the questionnaires contains 21 items on a 6-point Likert scale ranging from 'Strongly Disagree' to 'Strongly Agree'. The scale is one without a neutral point to prevent participants from hedging in their responses (Vandergrift et al., 2006). All the items in the questionnaire are randomised and categorised into five groups – directed attention, planning and evaluation, problem-solving, person-knowledge, and mental translation (Vandergrift et al., 2006). Table 3 shows the five dimensions of metacognitive listening strategies and items investigated through the MALQ questionnaire.

Table 3. Dimensions of Metacognitive Listening Strategies in MALQ

Dimensions of Metacognitive Listening Strategies	Items
Directed Attention	2, 6, 12, 16
Mental Translation	4, 11, 18
Person Knowledge	3, 8, 15
Problem Solving	5, 7, 9, 13, 17, 19
Planning and Evaluation	1, 10, 14, 20, 21

The MALQ used in this study was adapted from its original use which referred to the French language and was changed to the English language for three of its items (item 3, 8 and 15). The adapted MALQ was also presented in a bilingual format with its Malay translation to elicit more accurate responses for students whose first language is Malay. The Malay translation of each item has been verified by a bilingual language reviewer for its appropriateness and accuracy.

The adapted MALQ was piloted with 25 participants who were not included in the main study, to ensure the clarity of the questionnaire and determine its readability, as well as to identify any potential difficulties or ambiguities. A reliability test was performed to evaluate the relationships between different variables, providing insights into the inter-connectedness of the strategies employed by the participants and Cronbach's Alpha showed a high reliability at .882 for all the 21 items.

3.3 Data Collection

The MALQ questionnaire was administered to Malaysian ESL pre-university students who had just completed their upper-secondary education (Form 5) and were enrolled in their first year, semester one of a pre-university English course at a Malaysian post-secondary higher-institution in Sabah. For ease of administering the questionnaire to a large population, the adapted MALQ was distributed via an online survey facilitated through Google Forms in which the students were provided with the survey link and detailed instructions, and they responded to the survey online. All procedures performed in collecting data were conducted following the ethical standards of the institutional research committee obtained prior to carrying out this study.

3.4 Data Analysis

Responses to the MALQ questionnaire were analysed descriptively using the Statistical Package for the Social Sciences (SPSS), version 29, in addressing the research questions. Descriptive analysis of frequencies, means, standard deviations, Spearman's correlation coefficient, and Mann-Whitney U test were performed to determine the level of metacognitive listening strategy awareness among Malaysian ESL pre-university students, the perceived use of the most and the least types of metacognitive listening strategies, as well as to determine if there is a significant relationship between the perceived use of metacognitive listening strategies and language proficiency.

To address the first research question – *what is the level of metacognitive awareness in listening among Malaysian ESL pre-university students during listening comprehension tasks?* the students' total responses to the 21 items based on the scale 1 (strongly disagree) to 6 (strongly agree) were calculated. Responses to negative statements (items 3, 8, and 16) were reverse scored so that the higher total scores indicate students' high level of metacognitive awareness in listening, while lower total scores indicate students' low level of metacognitive awareness. The grand mean (M) and standard deviation (SD) of the overall total scores were calculated. For each student's total response, any total score that had a mean score one standard deviation higher indicates a high level of awareness, while any total score that had a mean score one standard

deviation lower indicates a low level of metacognitive awareness in listening. Any mean score between the one standard deviation higher and lower indicates a moderate level of metacognitive awareness.

The analysis also distinguished the levels of awareness for students based on their language proficiency levels for a more detailed insight. For this purpose, the students were classified into two broad language proficiency categories based on their English SPM grades. The categorisation of students was guided by the SPM grading system and the SPM Examination Analysis System by the Malaysian Examination Board. Based on the Ministry of Education alignment with international standards, SPM English proficiency corresponds roughly to CEFR bands A1 through B2, with the primary target levels being B1 (threshold or intermediate level) or B2 (vantage or upper intermediate level) for secondary school students (Mohd Sallehuddin & Nurul Farehah, 2017; Sufi & Stapa, 2020). Since SPM is a standardised national exam which is CEFR-aligned and has been used for various post-secondary study programmes and educational sponsorship applications, the results provide a comparable measure of the students' general language proficiency.

To distinguish the students based on their language proficiencies, students with SPM English grades of B+ and above (highest credit to highest distinction) were considered to possess higher language proficiency levels and thus, labelled as highly proficient users. Meanwhile those with a grade B and below (C+, C, D, E, F) (high credit and below) were considered to possess lower language proficiency levels and thus, labelled as less-proficient language users. The cut-off point to distinguish between the two broad proficiency-based groups was between B+ and B grades based on the consideration that the "plus" distinction in the SPM grade reflects a stronger mastery threshold, in which B+ is one level below the distinction grade, which, in CEFR terms, aligns more closely with B2 at a vantage or upper intermediate level rather than B1, which is at an intermediate threshold level. Hence, 112 students were labelled as highly proficient language users, while 59 were labelled as less-proficient language users in this study. Table 4 shows the categorisation of participants based on their language proficiencies.

Table 4. Participants' Categorisation based on Language Proficiencies

SPM Grade	Grade Description	No. of Participants (N)	Percentage (%)	Category
A- / A/ A+	Distinction to Highest Distinction	112	65.5	Highly Proficient Language Users
B+	Highest Credit			
B	High Credit	59	34.5	Less-Proficient Language Users
C / C+	Credit to Upper Credit			
D / E	Pass to Upper Pass			
TOTAL		171	100	

In addressing research question two on the perceived use of the most and the least types of metacognitive listening strategies by the ESL pre-university students, a comprehensive analysis was performed by calculating the means and standard deviations for each of the five types of metacognitive listening strategies based on the students' responses to all 21 items in the questionnaire. The highest frequency of use is indicated by the mean score for each type of the metacognitive listening strategies and is presented in descending order from the most to the least utilised types of metacognitive listening strategies, offering a clear hierarchy in their utilisation by the Malaysian ESL pre-university students. Students' use of strategies for each subcategory was also correlated to find out the relationship between strategy use during listening by using Spearman's correlation coefficient. Spearman's rho measure of correlation was used with the non-parametric data derived from the MALQ questionnaire which made no assumption about the population as the characteristics of the population are unknown (Cohen et al., 2018).

Research question three seeks to examine the relationship between the ESL pre-university students' perceived listening-strategy use and their language proficiency levels. Using Spearman's rho correlation coefficient, the students' overall listening-strategy scores and their SPM English grade which were treated as ordinal data were analysed to determine the existence of such a relationship in this study. Leclezio et al.'s (2015) conventions for interpreting correlation strength using Spearman's rho was used to interpret the result of the correlational coefficient (r_s) in this study: (0.01 – 0.19 = no or negligible relationship, 0.20 – 0.29 = weak, 0.30 – 0.39 = moderate, 0.40 – 0.69 = strong, 0.70 – 1.00 = very strong). These interpretations align with those of Cohen's Spearman's rho effect sizes (1988, as cited in Cohen et al., 2018) where $r = 0.10$ (small), $r = 0.30$ (medium), $r = 0.50$ (large). Additionally, an independent non-parametric comparative test using Mann-Whitney U was used to statistically compare the MALQ scores of the highly-proficient ($n=112$) and less-proficient students ($n=59$) where the assumptions of normality are not met in the data in order to compare the perceived use of listening strategies between the highly- and less-proficient students.

4. Results

The findings of this study were based on three research questions. Research Question 1 seeks answers to the question – *What is the level of metacognitive awareness in listening among ESL pre-university students during listening comprehension tasks?* With a grand mean (M) of 4.68 and standard deviation (SD) of 0.44, any students' mean score that was one standard deviation higher than or equal to 5.12 was considered to be at the high level of awareness, while any mean score that was a standard deviation lower than or equal to 4.24 was considered to be at the lower level of awareness. Any mean score that was between 4.24 and 5.12 was at the moderate level of awareness.

Table 5 shows that most of the ESL pre-university students had a moderate level of metacognitive listening strategy awareness with 69% ($N=118$), while about the same number of students had high and low levels of awareness with 15.8% ($N=27$) and 15.2% ($N=26$) respectively when attending to English listening comprehension tasks. It was observed that high-level of metacognitive awareness was mostly demonstrated by highly proficient students, but there were also 13 (7.6%) of them who showed low level of awareness, like their less-proficient counterparts. Meanwhile, only a small number of the less-proficient students showed high level of metacognitive awareness at 2.3%, while the majority had moderate and low levels of awareness at 24.6% and 7.6% respectively.

Table 5. ESL Pre-university Students' Level of Metacognitive Awareness in Listening

Level of Awareness	Number of Students (Percentage)		Total	Percentage
	HP	LP		
High	23 (13.4)	4 (2.3)	27	15.8
Moderate	76 (44.4)	42 (24.6)	118	69.0
Low	13 (7.6)	13 (7.6)	26	15.2

HP – Highly-Proficient Learners, LP- Less-Proficient Learners

Research Question 2 addresses *which of the five major types of metacognitive listening strategies do ESL pre-university students perceive to have used the most and the least during listening comprehension tasks?* The overall listening strategy index, calculated by averaging all 21 items, shows a considerably solid pattern of agreement, signifying perceived use of metacognitive listening strategies during listening. Scores ranged from 2.68 to 5.30, with a mean of 4.68 (SD = 0.44), which sits comfortably between Slightly Agree and Agree. The small standard deviation indicates that students were similar in their perceived strategy use

thereby none of them perceived to have overused or underused the strategies during listening. Thus, as a group, they tended to engage with listening actively and positively.

Figure 1 presents a visual comparison of the total mean scores across the five types of metacognitive listening strategies in its descending order, indicative of their perceived usage among the ESL pre-university students. Problem-solving strategies were perceived to be mostly utilised by students during listening with the highest mean at 5.06. Students' responses to the six items (items 5, 7, 9, 13, 17, 19) of problem-solving strategies mostly show a strong to moderate relationship ($r \approx .470 - .311$), indicating perceived active use of the problem-solving strategies during listening that involve using experience and prior knowledge, known phrases to assist comprehension during listening, backtracking and adjusting interpretation during listening. However, using known phrases and experience or prior knowledge shows a negligible relationship ($r = .166$), suggesting that students tended to use one strategy independently of the other.

Meanwhile, the least used strategy with the lowest total mean score as perceived by the pre-university students was person-knowledge ($M=3.40$) that includes perceptions about oneself in dealing with listening such as perceived difficulties or challenges and the affective factor like nervousness (items 3, 8, 15). As such, students tended to perceive listening as a difficult skill which may affect their emotions negatively, in this case their nervousness when listening to English items (item 15). Students who found that listening in English was a challenge also tended to find it to be relatively more difficult than the other language skills with a strong relationship ($r = .551$), indicating a strong link between perceived difficulty and challenges.

The other subcategories of directed attention ($M=4.95$), planning and evaluation ($M=4.79$) and mental translation ($M=4.68$) are indicative of the students perceived active strategy utilisation during listening comprehension tasks with the mean scores hovering between the higher end of 'slightly agree' to 'agree'. Several strong relationships in the perceived use of these strategies were demonstrated by the students. Notably, "I translate in my head as I listen" (item 4) was highly correlated with "I translate keywords as I listen" (item 11) ($r = .569$), reflecting a cluster of translation-based strategies that were perceived to be actively used simultaneously by the students. Likewise, planning-related items, such as having a plan before listening (item 1) and having a goal in mind (item 21), were also strongly associated ($r = .467$), highlighting that strategic planning behaviours tend to occur together.

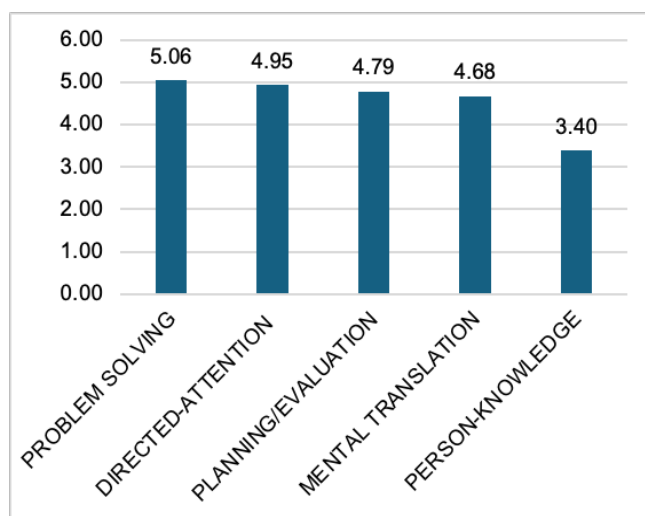


Figure 1. Use of Metacognitive Listening Strategies Across Five Subcategories

The findings pertaining to Research Question 3 – Is there a significant relationship between perceived listening strategy use and language proficiency among the ESL pre-university students? – were obtained

through a Spearman's correlational measure to examine the relationship between students' overall listening-strategy scores and their SPM English grade which were ranked from the lowest to highest grade. Table 6 shows a statistically significant but weak positive relationship between perceived listening strategy use and students' language proficiency, $r_s = .250$, $p = .001$ (two-tailed). Although the result suggests that greater strategy use tends to be associated with higher proficiency, the magnitude of the relationship is small, indicating limited practical significance. The finding also does not imply a causal relationship.

Table 6. Spearman's Correlation between Perceived Strategy Use and Students' Language Proficiency

Correlations				
Spearman's rho	Proficiency Level	Proficiency Level		
		Strategy use		
	Strategy use	Proficiency Level		
		Strategy use		
		Correlation Coefficient	1.000	.250**
		Sig. (2-tailed)	.	.001
		N	171	171
		Correlation Coefficient	.250**	1.000
		Sig. (2-tailed)	.001	.
		N	171	171

** . Correlation is significant at the 0.01 level (2-tailed).

To further determine the relationship between the perceived listening strategy use and language proficiency among the ESL pre-university students, a Mann-Whitney U test was conducted to examine the differences in the MALQ scores, indicative of perceived listening strategy use, between the highly- and less-proficient students. Table 7 indicates a statistically significant difference between the two groups with $U = 2349.000$, $z = -3.106$, $p = .002$ in their perceived strategy use. Highly proficient students (mean rank = 94.53, $n = 112$) demonstrated significantly higher levels of perceived strategy-use than the less-proficient students (mean rank = 69.81, $n = 59$). The findings suggest that proficiency level is associated with perceived listening strategy use. Specifically, highly proficient students reported significantly greater perceived use of listening strategies than the less-proficient students. However, the magnitude of the difference was small to moderate ($r = .24$), indicating that while proficiency level influences perceived strategy-use, other factors may also contribute to students' perceived use of listening strategies. This result aligns with the small effect size obtained from the *Spearman's correlational* measure.

Table 7. Mann-Whitney U test between Perceived Strategy Use and Students' Language Proficiency

Ranks				
	Proficiency Level	N	Mean Rank	Sum of Ranks
Strategy Use	High-	112	94.53	10587.00
	Less-	59	69.81	4119.00
	Total	171		

Test Statistics ^a	
	Strategy Use
Mann-Whitney U	2349.000
Wilcoxon W	4119.000
Z	-3.106
Asymp. Sig. (2-tailed)	.002

a. Grouping Variable: Proficiency Level

5. Discussion

This study set out to examine Malaysian ESL pre-university students' levels of metacognitive awareness in listening, the types of metacognitive listening strategies the students perceived to have used the most and the least during listening comprehension tasks, and whether there was a significant relationship between perceived strategy-use and language proficiency.

The results suggest that most Malaysian ESL pre-university students possessed an emerging but not yet fully developed ability to consciously monitor, regulate, and evaluate their listening processes, indicated by their moderate level of metacognitive awareness of listening strategies. Metacognitive awareness was considerably higher among the highly proficient students compared to the less-proficient students. This result reiterates the findings in most studies that more-proficient students demonstrate a higher level of metacognitive awareness and use strategies in a more sophisticated and appropriate manner compared to their less-proficient counterparts (An & Shi, 2013; Cao & Lin, 2020; Chero, 2023; Cross, 2010; Goh, 1998; 2002; Hsieh, 2023; Lotfi et al., 2012; Vandergrift, 1997; 2003). As such, it is also worth noting that the skewed sample distribution that weighted heavily towards highly proficient students may have influenced the overall moderate level of awareness found among the ESL pre-university students, and that more less-proficient students may possibly demonstrate a less moderate level of awareness in a more normally distributed population. Notably, although highly proficient learners were more likely to demonstrate high metacognitive awareness, the presence of highly proficient students within the low-awareness group suggests that language proficiency alone does not guarantee metacognitive sophistication. This finding aligns with previous research suggesting that metacognitive awareness is not an automatic by-product of linguistic competence but may instead require explicit instruction and reflective practice (Goh & Vandergrift, 2022; Vandergrift & Goh, 2012). Similarly, the small number of less-proficient students who exhibited high awareness indicates that some students may develop compensatory metacognitive behaviours to manage listening difficulties since all learners, regardless of their proficiency levels, can learn how to use metacognitive strategies throughout their learning efforts (Chamot, 2004).

This study also reveals that students reported having actively employed a range of metacognitive listening strategies, with problem-solving strategies perceived as the most frequently used, reflecting findings by Jin (2020), Seyedehsima et al. (2022) and Selamat and Sidhu (2011). The prominence of these strategies suggests that students tended to focus on real-time meaning construction by drawing on prior knowledge, contextual cues, and inferencing when encountering difficulties, in contrast to some earlier findings where monitoring strategies that include problem-solving strategy seemed to be constrained by cognitive overload, linguistics problems and time constraints (Al-Shammari, 2020; Aiza et al., 2017; Goh, 2000, Goh & Hu, 2013; Hulstijn, 2013; Nur Anneliza et al., 2020; Swaran Singh et al., 2022; Vandergrift, 2006; Zeng & Goh, 2018). However, the weak relationship between the use of prior knowledge and known phrases ($r = .166$) indicates that these strategies may be applied independently rather than as an integrated system, pointing to a potentially fragmented approach to problem-solving. This may be due to limited linguistic knowledge in assisting the students' cognitive processing during listening, particularly among the less-proficient students (Al-Shammari, 2020; Goh, 2000, Goh & Hu, 2013; Hulstijn, 2013; Vandergrift, 2006; Zeng & Goh, 2018).

Person-knowledge strategies were the least utilised, highlighting students' limited engagement with affective and self-evaluative dimensions of listening, as reflected in the findings by Aiza et al. (2017), Chen (2010), and Rahimi and Katal (2012). This may be due to the students' ingrained view of listening as a passive process of "awaiting the correct answer" during the prevalent use of traditional listen-and-answer pedagogies that offer little opportunity for learners to engage in self-reflection or manage their anxiety effectively (Normazidah et al., 2012; Nur Anneliza et al., 2020). Additionally, students' tendency to perceive listening as difficult and anxiety-inducing underscores the emotional burden associated with listening comprehension in a second language (Bloomfield et al., 2010; Goh, 2008; Graham, 2006). The strong association between perceived difficulty and listening challenges suggests that negative self-perceptions may reinforce listening anxiety, which in turn could impede effective strategy use and

performance on tasks. This finding is pedagogically significant as it suggests that metacognitive instruction should address not only cognitive strategies but also learners' beliefs, confidence, and emotional responses to listening.

The relatively high mean scores for directed attention, planning and evaluation, and mental translation further indicate that students are perceived to be strategically engaged before, during, and after listening tasks. The strong correlations within these subcategories, particularly among planning-related items and translation strategies, suggest that these behaviours tend to cluster together. While planning and evaluation strategies are generally associated with more effective listening, the frequent use of mental translation may reflect learners' continued reliance on first-language mediation. Perceived to be actively used during listening, mental translation may function as a helpful scaffolding tool to support comprehension, particularly among the less-proficient students whereby an average of 90% of them reported having used the mental translation strategy when handling listening comprehension tasks. While this supports learner comprehension, it may also act as a cognitive bottleneck that constrains the development of more automatic listening processes (Al-khresheh & Alruwaili, 2024; Vandergrift et al., 2006).

Findings related to research question three also reveal a statistically significant but weak relationship between perceived metacognitive listening strategy use and language proficiency as measured by the students' SPM English grades. The correlation coefficient between perceived metacognitive listening strategy use and language proficiency was relatively small ($r_s = .250$), indicating that proficiency differences did not translate into substantive differences in strategy use among the students. Similarly, the comparative Mann-Whitney U test demonstrated a small to moderate ($r = .24$) magnitude of differences in perceived strategy-use and language proficiency levels among the highly- and less-proficient students, suggesting that while proficiency level influences perceived strategy-use, other factors may also contribute to students' perceived use of listening strategies. These other factors may include the prevalent use of the product-oriented and conventional listen-and-answer listening instructions that focus on the scores obtained at the end of listening comprehension tasks which afford little opportunity for the use of authentic and dynamic listening comprehension strategies, along with the prevailing exam-oriented culture that possibly forces both highly- and less-proficient learners to rely on a similar set of test-taking strategies. As such, this result does not strongly reflect earlier findings that higher proficiency learners inherently employ more or better metacognitive strategies (An & Shi, 2013; Cao & Lin, 2020; Chero, 2023; Cross, 2010; Goh, 1998; 2002; Hsieh, 2023; Lotfi et al., 2012; Vandergrift, 1997; 2003). It suggests that students with higher and lower language proficiency levels tended to engage in metacognitive strategies at somewhat similar levels as found in a few studies where both groups of less- and more-proficient students tended to have the same levels of perceived metacognitive listening awareness and there was no significant difference in metacognitive strategy use for both the less- and more-skilled learners (Seyedehsima et al., 2022; Tuan et al., 2025; Zeng & Goh, 2018). As such, perceived metacognitive listening strategy use may not depend on proficiency alone but on other factors such as listening and instructional context or individual characteristics and learning experience based on Goh and Vandergrift's (2022) systems model of second language listening. As such, given that the students were at the beginning of their first semester of year-one English course and had not undergone any metacognitive listening instruction during data collection, the research outcomes may be the result of the students' previous learning experience, existing cognitive knowledge and processing and affective states. Additionally, self-reported frequency based on a self-report questionnaire such as the MALQ does not necessarily equate to actual strategy deployment during listening tasks.

6. Conclusion

The findings suggest that although ESL pre-university students are generally perceived as active and strategic listeners, their metacognitive awareness and perceived strategy-use remain largely moderate and uneven across strategy domains. Thus, this study highlights a few pedagogical implications. Generally, listening instruction at the pre-university level should move beyond exposure and individual practice to include peer support during listening, strategy modelling and structured reflection. This may be possible by

considering listening instruction that is more learner-oriented which include collaborative listening activities that potentially promote peer support, strategy modelling and reflective learning through learner interaction, particularly in large mixed-proficiency classes. For instance, instructors may consider and adapt Vandergrift's (2004) Metacognitive Pedagogical Sequence listening instruction which focuses on teaching listening processes and has been widely used in many listening classrooms. Additionally, the tendency for listeners to use problem-solving strategies independently rather than as a cohesive system highlights the need for instructors to do more than just introduce the strategies but also teach students how to orchestrate them simultaneously during listening instruction. In the same vein, the underutilisation of person-knowledge strategy and the lack of differentiation by proficiency levels point to the need for explicit metacognitive instruction, particularly in helping learners reflect on their listening processes, manage anxiety, and integrate strategies more coherently.

Finally, this study has several limitations that constrain the generalisability of findings. First, the self-report nature of the MALQ focuses on perceived awareness and strategy use instead of actual strategy use and deployment. Hence, the results obtained from the self-report questionnaire could partially be attributed to a response set in terms of participants' view of the most socially acceptable responses, or responses believed to be socially desirable by the researcher which are not characteristics of the participants themselves, apart from the potential presence of self-assessment bias (Gay et al., 2012). Other means of data collection such as using observations or interviews might yield a more accurate actual strategy-use and its relationship to language proficiency levels. Hence, future research may benefit from triangulating self-report data with observational or performance-based measures to better capture how metacognitive strategies are enacted during authentic listening tasks. Additionally, the proficiency classification based on SPM grades provided a gross rather than precise measure of language proficiency. Thus, proficiency classification in future research may consider specific language proficiency tests such as the IELTS or Oxford Placement Test (OPT) to reflect participants' language proficiency levels more precisely. Samples from a single post-secondary institution may also limit the generalisability of findings. Drawing samples from a larger population across different institutions may further illuminate the contextual factors mediating metacognitive awareness and strategy-use among Malaysian ESL pre-university students. Despite these limitations, this study provides insight into the existing perceived metacognitive listening strategy-use and its relationship with language proficiency among ESL pre-university students which may guide instructors in making informed decisions when conducting listening instruction, particularly in large mixed-ability classrooms.

Acknowledgments

The authors would like to extend their sincere gratitude to Universiti Teknologi MARA Sabah branch for providing the facilities and support for this research.

Funding Details

This study received no specific grant from any funding agency.

Authors Contributions

All authors have significantly contributed to the content of this study.

Conflict of Interest

The authors declare that this research was carried out in the absence of any self-benefits, commercial or financial conflicts, as well as no conflicting interests with any funders.

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eISSN: : 2682-7840