METACOGNITIVE AWARENESS IN LEXICAL LEARNING AMONG MALAYSIAN STUDENTS

Naginder Kaur

Academy of Language Studies, Universiti Teknologi MARA, Malaysia.
Email: naginder.kaur@gmail.com Tel: +6049882796

ABSTRACT

Lexical knowledge forms a firm foundation in the second language (L2) learners’ efforts to cope with academic tasks and manage the four language skills. At pre university level, many Malaysian learners struggle with the complexity of content and language. Hence, this study, guided by the theoretical paradigm of cognitivism was undertaken to explore learners’ metacognitive awareness of declarative knowledge, procedural knowledge and conditional knowledge in learning lexical items when preparing for the Malaysian University English Test (MUET). A case study involving participants of varying language ability was carried out to explore how metacognitive awareness is embraced by these learners. Research data was obtained through in-depth interviews and journal records. The results indicate that these Malaysian learners have commendable degree of awareness, particularly in the domain of declarative and procedural knowledge and conditional knowledge in learning lexical items when preparing for the Malaysian University English Test (MUET). A case study involving participants of varying language ability was carried out to explore how metacognitive awareness is embraced by these learners. Research data was obtained through in-depth interviews and journal records. The results indicate that these Malaysian learners have commendable degree of awareness, particularly in the domain of declarative and procedural knowledge and conditional knowledge. However, conditional knowledge is seen to be somewhat lacking, particularly from the instructor’s perspective. In order to harness metacognitive awareness and enable learners to become self-directed, instructors need to make conscious decisions to cut back at the right time and let learners be at the forefront in the learning process. It is also vital that instructors know the basic roots and then focus on the advanced concepts, subsequently, making informed decisions on the type of vocabulary and structural items to be imparted, so as to enhance metacognitive awareness of lexical items.

Contribution/ Originality: This qualitative study contributes to the literature on Malaysian university students’ metacognition in vocabulary learning. The study provides rich insights into the three types of metacognitive awareness, to enable instructors to make informed decisions on the type of vocabulary and viable methods to harness metacognitive awareness among learners.

1. INTRODUCTION

Words are the “basic building blocks of language” (Brown, 2001) therefore, lexical knowledge forms a firm foundation of language competence for both native and non-native learners of English language. In view of this, vocabulary enrichment is seen as the moderating variable in the four language skills, namely, listening, speaking, reading and writing (Afzal, 2019; Harkio & Pietilä, 2016). This is so as sufficient lexis facilitates a learner’s daily oral communication (Afzal, 2019) and assists various types of reading (Harkio & Pietilä, 2016; Li & Kirby, 2015; Masrai, 2019). In reading authentic texts, comprehension of a minimum of 3,000 written word families is required of a non-native user of English (Schmitt & Schmitt, 2014). This is also stressed by Masrai (2019) who affirms the
bilateral relationship between word knowledge and extensive reading: “Extensive reading allows learners to engage with words in a contextualized and authentic environment, giving a rich meaningful input” (p. 11). As for comprehension and computing ability of challenging academic texts, 10,000-word knowledge is deemed necessary. For speaking, vocabulary is a necessary requisite (Uchiha, 2019) and a reliable predictor (Kaur, 2013) for which, hence, it is imperative that non-native speakers consistently acquire word families to catch up with the level of a native speaker. Hence, all these demands of lexical knowledge make L2 (second language) learners conceive vocabulary as their greatest single source of problems (Meara, 1980, cited in Alqahtani (2015)). therefore, lack of lexical competence is often regarded as one of the major hindrances in L2 or foreign language learning (Afzal, 2019; Kaur, 2013; Kaur & Abdullah, 2007; Naginder, 2013; Viera, 2017) as lexical errors are the most serious problem among second language learners (Segler, Pain, & Sorace, 2002).

With this precept, this study provides insights into how pre-university (diploma level) L2 learners at a public university in Malaysia, embrace the learning of lexical items by tapping on their metacognitive awareness or metacognition. Flavell (1979) first defined it in terms of beliefs, that is, the individual’s beliefs about oneself and about others as learners and of the needs of the learning process. Subsequently, the definition offered by Meichenbaum, Burland, L., and Cameron (1985) included learners’ “awareness of their own cognitive machinery and how the machinery works” (p. 5). Woolfolk (2001) further described it as cognition about cognition or having the knowledge about knowing something. Probably, the most widely known definition of metacognition is provided by Anderson (2002) as "thinking about thinking" (p. 1), and echoed by Matlin (2002, cited in Lian and Abdul Aziz (2020) as “the awareness and ability to control one’s thinking.” In brief, being in possession of metacognitive strategies stimulates thinking, results in higher learning and yields better performance.

2. PROBLEM STATEMENT

At pre university level, Malaysian learners are required to sit for the Malaysian University English Test (MUET) to benchmark their English proficiency before embarking on tertiary education. For many, the transition from school to university is seen as a difficult experience. Cullip and Carol (2002) note, “for the first time in their passage through formal education they are required to engage, as apprentices, with the meanings of specialised disciplines in ways for which few are prepared.” Learners are required to construct new knowledge from and in text and critique this knowledge. For example, in analysing the Reading Test (Paper 3) of the MUET in comparison to the SPM (Sijil Pelajaran Malaysia) 1119 paper (the equivalent of O level English examination), Lee (2004) explains that in terms of the types of text, text length and range of topics, the MUET candidate is expected to make “great strides from Form 5” (p. 132). She reports that in terms of the scope of the topics presented, the progression is seen from mundane topics related to daily life, travel, food and historical incidents to sophisticated and challenging issues such as education, the environment and economics. Lee (2004) further argues that, “learners are expected to progress from reading newspapers and popular magazines in Form 5 to more serious, non-specialist journals such as the “Far Eastern Economic Review”, “Fortune”, “The Malayan Naturalist” or newspaper writing on weighty issues.” Thus, it is imperative that learners be able to cope with the variety of input, and comprehend the sophistication of the language presented in the course materials.

These demands, in turn, impose pressure on learners preparing for the MUET, which is perceived as laborious and heavy in content (Kaur, 2012) due to learners’ limited vocabulary (Kaur, 2013) grammar and language sub-skills. Many learners are daunted by the examination without the confidence to speak, write or read in English (Kaur, 2012). Being an EAP (English for Academic Purpose) course, the MUET texts are more abstract and complex (since the examination drives the curriculum). Furthermore, the total examination time of four hours is rigorous and challenging in handling the four papers (listening, speaking, reading, writing). As such, learners need to prepare themselves adequately as different language skills require mastery of different variety of sub-skills.
3. OBJECTIVE OF THE STUDY

Bennet (2006) says:

Some learners are capable of autonomous study at the beginning of a course, while others require
inculcation on the part of the teacher. In order to successfully transfer this behaviour into
unstructured learners, the factors which affect it should be understood. (p. 17)

In response to Bennet’s postulation, the inter-relatedness of these attributes warrants an insightful
investigation, so we know what learners know and what they do not know, what they want to know and what they
do not want to know, why they want to know or do not want to know and how they want to know. In other words,
their metacognitive awareness is explored to gauge how they embrace the learning of lexical items in their quest to
prepare for the MUET. According to Victori (2004) cited in Kaur (2013) “there seems to be a natural resistance on
the part of many learners to become autonomous” owing to “learners’ educational backgrounds which are usually
grounded on very traditional teaching methodologies, in which the whole curriculum is determined by the teacher
or the school.” A study conducted by Hamzah and Abdullah (2009) identified lack of metacognitive learning
strategies as the main cause for Malaysian ESL learners shying away from using English language. In order to
become autonomous, Malaysian students need to be responsible for their own learning” (Kaur & Yusuf, 2004;
Naginder, 2013). This can be achieved through intrinsic motivation, which in turn must be galvanised into tangible
and measurable levels of awareness and achievements in handling the learning of lexical items. Therefore, following
the advice of King of Hearts to White Rabbit in “Alice in Wonderland” to “begin at the beginning” this study
proposes to seek answers to questions of what pre-university learners learn, how they learn, when they learn, why
they learn or do not learn vocabulary items. This study looks at metacognitive awareness as the possession of
metacognitive awareness, which takes the form of three types of knowledge about oneself and of one’s ability as a
learner, that is, declarative, procedural and conditional knowledge.

4. RESEARCH QUESTIONS

The research sought to answer the following questions:

1. How far do learners use their metacognitive awareness of declarative knowledge in learning lexical items?
2. How far do learners use their metacognitive awareness of procedural knowledge in learning lexical items?
3. How far do learners use their metacognitive awareness of conditional knowledge in learning lexical items?

5. THEORETICAL PERSPECTIVE AND REVIEW OF LITERATURE

This study is guided by the theory of cognitivism which explains the cognitive structures through which we
process and store formation. These are known as sites of learning and are not mere observable, quantifiable
behavioural responses. Cognitive psychology posits the view that learning occurs through processes in the mind
when new cognitive structures are formed, combined, altered or extended. Thus, it focuses on the formation of
concepts, processing, organisation, storing and retrieval of knowledge. Cognitivism requires learners to think
rather than simply repeat and presents the backdrop for more learner-centred instruction such as one-to-one
instruction, modular courses, small group interaction, collaborative learning, peer-tutoring and experiential
learning. The cognitive learning pattern also highlights the learning process to be on a continuum, whereby
conceptual information is stored as declarative knowledge (what we know) and as procedural knowledge (what we
know about how to do something).

Declarative knowledge can be in the form of schemata (a mental model of a person, object or situation),
framework or meaningful information such as facts about language functions or forms, or knowing a lexical item.
Procedural knowledge, as the term suggests, is knowledge of a set of systematic procedures and rules of how to do
something, for example, how to use dictionary to find meaning of words and how to find meaning in context. In
this way, procedural knowledge or tacit knowledge transforms meaning and serves as an information processor by
linking information in the environment to previous knowledge. The cognitive processes which create knowledge and learning in a spiral form are illustrated in Figure 1. Vocabulary learning occurs with the complementary role of both these forms of knowledge in integration and distinction to reinforce learners’ awareness in the learning process, consequently creating autonomous learning behaviours. The possession of declarative knowledge and procedural knowledge is in accordance with the hierarchy of vocabulary skills, which has four levels. The levels are from the easiest to the most difficult to acquire - (1) passive recognition or ability to recognise the meaning of a target word given meaning options (easiest), (2) active recognition (ability to recognise the target word when given its meaning), (3) passive recall (ability to supply the meaning of a target word), and (4) active recall (ability to supply the target word (hardest)). Laufer and Goldstein (2004) found that learners faced difficulties in producing vocabulary and showed results in accordance with the hierarchy of difficulty, thus, confirming the important role of mental processes in assuring retrieval and recall of lexical items. Therefore, building learners’ language systems enables recall and retrieval in activities of various language skills, such as learning of lexical items. Language systems can be built if learners have the ability to select appropriate vocabulary, grammatical rules and pragmatic conventions, hence the development of autonomy in the learning process.

![Figure 1. The knowledge creation spiral](source: Clark (2005)).

There are various taxonomies to describe awareness of metacognition. The term can be traced back to Flavell (1979) who also used the concept cognitive enterprise to distinguish three types of knowledge, which are person, task and strategic knowledge. Person knowledge relates to beliefs learners hold about themselves (self-beliefs) and of other learners / peers as cognitive processors. This knowledge is in two dimensions - intra individual differences and inter individual differences (knowledge of personal and preferred styles of learning, abilities) and universals of cognition (knowledge of human attributes influencing learning such as roles of motivation and intelligence), for example, beliefs that one can learn better by memorising and that one’s peers are better language learners than oneself.

The second knowledge, task knowledge refers to the knowledge that learners have about the information or resources needed for undertaking certain tasks and about the degree of effort required as well as difficulty involved in learning. This knowledge encompasses four aspects (Wenden, 1991). These aspects are knowledge about (a) the purpose of a task (what is the objective in performing a given task), (b) the task demands (what resources and steps are necessary and what is the degree of difficulty involved), (c) the nature of the task (what kind of learning is it), and (d) awareness of the need for deliberate learning (whether it involves the use of self-regulatory or metacognitive strategies). Examples of the sub categories include beliefs that it is easier to recognise than to recall,
that reading comprehension is stimulated with familiar and organised content, and that in listening comprehension, it is not necessary to understand every single word. Hence, task knowledge also encompasses metalinguistic awareness.

Thirdly, strategic knowledge is knowledge pertaining to the choice of strategies in achieving certain goals and in performing certain tasks. This category is further developed and expanded by Wenden (1987, cited in Victori (2004)) to include knowledge about strategy and task, knowledge about the effectiveness of certain strategies and knowledge about the principles underlying the choice of strategy. This knowledge is also known as conditional knowledge (further discussion below). This awareness pertains to the knowledge dimension, per se, and does not refer to the ways this knowledge is further operationalised.

Flavell’s taxonomy of metacognition was further developed by Paris, Lipson, and Wixson (1983) who expanded it as three forms of knowledge - declarative knowledge, procedural knowledge and conditional knowledge. Declarative knowledge is knowledge about what to do about oneself, about the factors that influence one’s knowledge and memory as well as knowledge of the skills, strategies and resources required to perform a task. Procedural knowledge is termed as knowledge about the “how” of learning. Conditional knowledge is knowing the conditions under which the strategies of learning are employed, that is, knowledge of the “when” and “why” of learning, for example, the best way to memorise lists of unrelated words is by forming mental associations of the word or that one does not have to read through the whole reading passage when looking for specific information. Hence, metacognition is the strategic application of these knowledge forms to accomplish learning goals and solve problems.

The next form of awareness is executive knowledge, in which the three forms of knowledge discussed above are translated into observable behaviours, via skills and stages of metacognition. In explaining this, Woolfolk (2001) states that the three forms of knowledge are tapped on by using the skills of planning, monitoring and evaluation and provides a clear account of what these three relate to. She says that planning involves decision-making about the amount of time that should be given to a task, which strategies to use, how to start, what are the resources to gather, the order that needs to be followed, what to skim, and what should be given intense attention. Monitoring is the on-the-task or on-line cognitive awareness of self-questioning or posing introspective questions such as: “How am I doing?”, “Is this making sense?”, “Am I going too fast at this?”, “Have I studied enough?” As for evaluation, these are the asynchronous thoughts about how the learning went on and entails making deductions about the learning outcomes as well as having reflections such as: “Should I change the strategies that I use?”; “Should I seek help?”, “Should I give up for now?”, “Have I completed my task adequately?” (Woolfolk, 2001).

6. SCOPE AND METHODOLOGY

The study was a case study of nine participants from a Malaysian public university, pursuing a diploma course. There were four males and five females, all of whom were in their third semester of study. They were of varying language proficiency, that is, of high, average and low language ability. The participants’ language ability was determined based on the results of the English courses they had pursued in the previous two semesters at the university. High language proficiency learners were those who had scored A+, A and A-; average ability learners were in the range of B+, B and B- while low language ability learners were those who had managed C+ and C. Participants A, B and C were high ability learners while Participants D, E and F were average language learners. Participants G, H and I were low language proficiency learners. All the nine participants were Muslims of Malay origin, and were 20 years old. Hence, they were homogenous in terms of religion, culture, age and the course being pursued.

Four rounds of in-depth interviews were conducted with the nine participants. The interviews were aimed at obtaining insights into their vocabulary experiences, with regard to metacognitive awareness of declarative knowledge, procedural knowledge and conditional knowledge. The interviews were of informal conversational
nature as the questions and dialogue emerged from the immediate context and ensued in the natural course of things. Question topics or wordings were left unstructured and were not predetermined by use of an interview guide. Weekly interviews were also conducted with their instructor, the key informant in the study. These interviews served to corroborate and triangulate the input obtained from the participants. The participants’ insights were also analysed from the daily journals which they wrote for the researcher pertaining to their learning experiences for four weeks.

7. FINDINGS AND DISCUSSION

7.1. How Far do Learners use their Metacognitive Awareness of Declarative Knowledge in Learning Lexical Items?

In terms of declarative knowledge, that is, knowing the ‘what’ of learning, admissions of knowing the meaning of words is indication of declarative knowledge, for example, "I try to understand the words and focus all the exercise that she [the lecturer] gave me". The lecturer shared that when having to fill in the blanks with the right word, ninety percent of the class and the case study participants can actually do it correctly. This is because they are really focusing on the word. They already have in their mind “what kind of word” to locate. Looking for the word in the text that has been read is not too difficult a task to accomplish.

When the researcher asked the participants to recall the words learnt off the cuff (within the same week week), their response was quite encouraging. All the participants were able to recall several words each, to prove they had sufficient declarative knowledge on lexical learning. Examples of the many words recalled during in-depth interviews are such as “so that”, “so”, “compel”, “tranquil”, “rebel” (Participant A), “reassess”, “toppled”, “ordeal”, “solace”, “netiquette”, “so”, “so that” (Participant B), “ultimatum”, “delinquent acts”, “recapitulate” “vice cycle”, “topple”, “coffers” (Participant C), “abandon”, “sober”, “topple” “ordeal” “lucrative”, “amiable”, “superb”, “filthy”, “solace” (Participant D), “cornet”, “highland”, “forging” (Participant E), “rebel”, “anonymity”, “matrimony” (Participant F), “ordeal” (Participant G), “topple” “sober” (Participant H), “rebellious” “amenities”, “ordeal” (Participant I). The nine participants’ journal records also showed that all of them learnt new vocabularies every lesson. It was seen that high language proficiency learners could retrieve more words than average ability learners, who in turn, demonstrated better retrieval of vocabulary than low ability learners.

When probed by the researcher, the participants were able to provide accurate meanings to the words learnt in class. For example, in order to prove they really knew the meaning of “rebel”, Participant A and F willingly gave a sentence respectively, when solicited. For example, Participant A explained that: “The students will become more rebel if they cannot achieve what they want.” Although the word form was incorrect, the first step in knowing the meaning was successfully achieved. In-keeping with cognitivism, they could successfully encode the meanings. Another example is when learning discourse markers in week one, Participant B displayed declarative awareness in the use of discourse markers through statements like “Now I know the function and I know to differentiate them. I try to do the exercise about the discourse markers by myself.” The ‘what’ aspect of learning, that is, declarative knowledge was also evident when Participant A and B were able to explain the difference in the meanings and use of “so” and “so that” in their journal to further illustrate possession of declarative knowledge among the participants. Participant C was also noted to use the word “introvert” to describe herself and wished she could be more of an “extrovert”.

7.2. How Far do Learners use their Metacognitive Awareness of Procedural Knowledge in Learning Lexical Items?

Presence of procedural knowledge or tacit knowledge was also observed among some learners. They were aware that in order to become successful learners, it has to start with the individual. Therefore, procedural awareness, which is awareness of the learner’s pivotal role and of teacher-learner co-operation is evident. They iterated during the personal interviews the proactive role they need to play in learning vocabulary. For example, in his journal, Participant E clearly stated that “as a student, we must improve and enhance vocabulary by ourself, not
only depend to the lecturer.” He asserted the importance of the equal role played by the lecturer as well as the learner in being in control of his / her vocabulary learning experience by maintaining self-discipline, self-confidence and self-reliance “in order to tear out the fear in ourselves.”

Procedural awareness of how to learn a word, showed that on the whole, the participants (good, average and weak learners) were aware that revision of the article(s) as well as further practice of work done in class was necessary in order to cope with the different language skills, similar to the awareness levels demonstrated in Moir and Nation (2002) study. In comparison, Teng (2015) found Thai learners with higher levels of depth and breadth of lexical repertoire employed more indirect strategies (e.g., self-planning, self-monitoring, and self-evaluating). This study demonstrated that awareness is prevalent among good, average and weak participants of the case study. For example, Participant F, an average learner stated, “I must learn to understand the article … If I find that words again, I know what’s the meaning.”

In seeing how well a word has been learned and used, Participant B related in his journal that, “… when I do a lot of exercise I can see the shape of sentences that always use in writing and the new words.” Participant B and E explained further in the interview that during speaking, words are learnt and remembered, so when doing writing, these words can be better retained and used. Procedural awareness can be seen as the learners know how to employ procedures to help them remember words that have been learnt. Other examples of procedural awareness is knowing that learning takes place by making sentences of the words (Participant I), or by simply memorising the words (Participant E). Further, Participant B’s narration in his journal is evidence of procedural knowledge in learning “so” and “so that”, that is, by paying attention in class: “To make me clear about the using of these two words I try to focus about what my lecturer has said. The best moment is when I can make the right sentences to differentiate these words.”

7.3. How Far do Learners use their Metacognitive Awareness of Conditional Knowledge in Learning Lexical Items?

The participants showed reasonable awareness of the reasons or rationale for them to learn vocabulary. To illustrate this, Participant F, displayed awareness by stating, “In this tertiary level, I became more realized that we must master in vocabulary, since I need to understand the meaning in the subject or material I have learnt.” Awareness of the importance of vocabulary, as a requisite to relate to his field of study is experienced. The participants were also able to explain why they could remember particular word(s), by drawing connections to the lessons or to their own needs for learning that word, hence evidence of conditional knowledge in vocabulary learning. For example, the word “rebel” was remembered due to its relevance to the participants’ lives as teenagers, who are often rebellious, as explained by Participant A. Further, Participant C deliberately chooses to use common words in writing, in spite of her awareness of the uncommon synonyms due to her preference for using “very simple and straight-forward sentences”, showing deliberate conditional decisions in learning.

When probed, Participant C, D and F had positive opinions to share - they stressed being aware of which / what words to learn and how to learn them. The participants did share that not all the words highlighted in class (by the lecturer) are learnt wholesale, as they would make certain degree of choices, based on number of encounters or repeated exposures to the word, interest (in the word) and personal needs. Participant F narrated:

I will choose when that's the word that I always see in other article or always listen the word, but until the third time or fourth time, I also don’t know, so when I saw it again or when I read, so, I will find that word - when the word is always repeated.

If learners are unable to use contextual clues to sufficiently derive the meaning of the word, repeated encounters would evoke a sense of curiosity and interest, prompting them to learn it explicitly. No matter what the required number of word repetition is for each learner, one thing is certain that the relationship between word frequency and word acquisition is in positive correlation and complementary. Therefore, the more one manipulates, thinks about, and uses mental information to analyse, the more likely it is that one will retain that information,
making learning of a particular word more engaging and meaningful. For example, in week three, the expressions, “to save the day” and “godsend” were self-selected based on interest. Participant C also related in her journal that “I could learn it because I really want to know the meaning of these words in order to understand the meaning of these sentences.” This also shows that some level of intrinsic motivation exists among the participants in learning vocabulary, particularly among the high and average language ability participants. This supports Giang (2010) findings of the majority of learners (72/156) claiming to learn “when the words were considered vital for communication” or when “there is something special about the word” (p. 63). However, Giang further found through interview with the learners that they were rarely triggered by such motivation, thus concluding that the learners were at a preliminary degree of autonomy. Similarly, Moir and Nation (2002) also found selection of vocabulary items as the aspect in which the informants demonstrated the least ability to personalise the task, often selecting words that were of limited use or of little personal interest, that is, low frequency words or very difficult words and hence, developed limited metacognitive awareness in learning.

The majority of learners, however, concurred to only learn vocabulary items based on the word(s) highlighted or pointed out by their lecturer. From the list of words highlighted, they would then make further choices to learn, based on preference or interest. They said that words emphasised by the lecturer were better remembered compared to other expressions. When asked why they did not pay attention to other words in the text, Participant A mused: “What we want, actually the lecturer give. The lecturer like know what we want … Madam (lecturer’s name) can expect what her students want, actually.”

The lecturer, on the other hand, lamented that learners usually have to be directed to notice certain words. Dependence on lecturer shows inadequate initiative in learning words of own initial choice and preference. This could be due to lack of awareness of frequency of word level (e.g. 1,000 Word Level, 5,000 Word Level, University Word List). Learners do not have sufficient awareness of the relevance or frequency of use of a particular word, hence were unable to decide which words to focus on and which words to ignore when encountering unknown vocabulary. Thus, they prefer to leave it entirely to the lecturer to decide. In this regard, we can see that these learners shunned being in control of their own learning processes, and preferred a teacher-led class. Over-dependence on lecturer on teaching and learning matters also concurs with Nordin and Naginder (2004), Kaur.. (2017) and Kaur (2013) insights into Malaysian learners’ lack of self-control in learning. Several studies have shown positive orientations of awareness among learners and their realisation of the importance of linguistic competence for today’s borderless world (Kaur & Sharma, 2006; Teng, 2015). Hence, there is some lacking in metacognitive awareness, as the words learnt are the words which were highlighted by the lecturer (in the handout(s)). Another lacking in conditional knowledge discerned by the researcher is a few learners’ (particularly the female participants) insistence on the importance of knowing all (or most of) the lexis in a text. Regrettably, these learners do not seem to place importance on the holistic picture, but insist on knowing the details (peripheral lexical items) as a prerequisite to satisfactory comprehension of the text. Their lack of awareness of which words to focus on and which to ignore shows a lack of conditional knowledge in learning lexical items.

8. CONCLUSIONS AND RECOMMENDATIONS

The findings of the study show that these pre-university learners have sufficient levels of metacognitive awareness of lexical learning, in their preparation for the MUET. Learners possessed high levels of declarative knowledge, reasonable degree of procedural knowledge, and fair degree of conditional knowledge. The results suggest that although teachers can play a bigger and effective role in helping learners, ultimately, it is learners who learn. Thus, learners need to take a more central role in embracing autonomy. In order to germinate the seed of metacognitive awareness, instructors need to facilitate learning to be self-directed. Instructors need to know when to cut back in their zeal to provide input, and must ensure that learners are able to take to the forefront in steering the learning process. Some of the items could not be retained due to minimal cognitive efforts and engagement with
lexical input when learning. This made learners unable to transfer learning successfully beyond classroom. Thus, the type and extent of cognitive processes involved should also be considered and reviewed in order to ensure successful word acquisition. Complex exercises such as writing original sentences are preferred over simplistic activities like matching or cloze exercises as writing original sentences are supposed to tap on deeper level processing. On the other hand, gap fills do not provide adequate stimulus to the mind for these words to be retained in long-term memory trace. With regard to developing metacognitive awareness in vocabulary acquisition, the pertinent question is: "What vocabulary do the students need to know?" The question that begs answers is do teachers know how to? Teaching vocabulary explicitly (beyond the 2,000 words) from isolated lists of words can be counterproductive because learners fail to draw connections between these words to their personal word use and their own reading and it is probable that learners will rapidly forget words memorised from these lists. Therefore, vocabulary instruction that promotes word awareness, word analysis, and extensive reading is preferred (Alqahtani, 2015). In doing so, teachers need to prioritise words that students need to know and how this can be learned meaningfully. In selecting words to teach and presenting on the form and meaning, several pre teaching considerations are pertinent, for example, the type of the vocabulary, the students’ level and characteristics, the value of the techniques for learners (Alqahtani, 2015) learners’ communicative needs, frequency in communication, and the range of scope of communicative needs, frequency in communication, and the range or scope of the word being used widely (Babu, 2010). That is why in preparing for the MUET, learners need to be taught and know how to prioritise words that are pertinent to the scope of the common issues dealt with in the four test papers. In this regard, Babu (2010) makes a lucid point that vocabulary cannot be acquired within one or two days and is instead, a lifelong process. Babu (2010) explains that when teaching vocabulary, word selection (input) and grading effort will bear a lot of influence on the teaching as well as learners’ post learning efforts of revision. Thus, instructors too need to have a sound foundation, and know the fundamentals of vocabulary teaching and learning. It is vital for instructors to learn all the basic roots and then focus on the advanced concepts, subsequently, make accurate decisions on the type of vocabulary and structural items he / she wishes to impart to the learners, so as to enhance metacognitive awareness of lexical items in learning.

Funding: This study received no specific financial support.
Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

REFERENCES
Afzal, N. (2019). A study on vocabulary-learning problems encountered by BA English majors at the university level of education. Arab World English Journal, 10(3), 81-98.
Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. International Journal of Teaching and Education, 3(3), 21-34.Available at: https://doi.org/10.20472/te.2015.3.3.002.
Anderson, N. J. (2002). The role of metacognition in second language teaching and learning; ERIC Digest. Retrieved from: https://files.eric.ed.gov/fulltext/ED463659.pdf.
Babu, A. R. (2010). Plain levels of strategy in vocabulary studies, ELT Weekly 54. Retrieved from: http://eltweekly.com/2010/03/54-research-paper-plain-levels-of-strategy-in-vocabulary-studies-by-a-ramesh-babu/#more-128. [Accessed February 28, 2011].
Bennet, P. (2006). An evaluation of vocabulary teaching in an intensive study programme. M. A. Dissertation, University of Birmingham.
Brown, H. D. (2001). Teaching by principles: An interactive approach to language pedagogy (2nd ed.). Longman: Pearson Education Company.
Clark, D. (2005). Learning with artifacts. Retrieved from http://www.nwlink.com/~donclark/learning/artifacts.html. [Accessed February 1, 2007]
Cullip, P. F., & Carol, D. (2002). Tailoring an EAP course to disciplinary needs: The UNIMAS effort. *The English Teacher, 31*, 45-59.

Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist, 34*(10), 906-911. Available at: https://doi.org/10.1037/0003-066x.34.10.906.

Giang, T. (2010). Developing learner autonomy in vocabulary learning for first-year mainstream students at ED, ULIS, VNU. Retrieved from: https://www.scribd.com/document/32025854/Developing-Learner-Autonomy-in-Vocabulary-Learning-for-First-year-Mainstream-Students-at-ED-ULIS-VNU-Tran-Thi-Huong-Giang-QH-1-E. [Accessed Jan, 31, 2020].

Hamzah, M. S. G., & Abdullah, S. K. (2009). Analysis on metacognitive strategies in reading and writing among Malaysian ESL learners in four education institutions. *European Journal of Social Sciences, 11*(4), 676-683.

Harkio, N., & Pietilä, P. (2016). The role of vocabulary breadth and depth in reading comprehension: A quantitative study of finnish EFL learners. *Journal of Language teaching and research, 7*(6), 1079-1088. Available at: https://doi.org/10.17507/jltr.0706.03.

Kaur, N. (2013). The need for autonomous vocabulary learners in the Malaysian ESL classroom. *GEMA Online® Journal of Language Studies, 18*(3), 7-16.

Kaur, N., & Abdullah, M. K. R. (2007). *Autonomy in ESL: To what extent?* Paper presented at the Literary Conference (LITCON) 2007, Penang, Malaysia.

Kaur, N., & Sharma, R. (2006). *Transition to the English language: Student perceptions in a Malaysian university.* Paper presented at the 6th SEAAR Annual Conference, Langkawi, Malaysia.

Kaur, N., & Yusuf, M. A. (2004). Vocabulary: Let the means justify the end. In M. E. Vethamani (General Ed.) & B. Wijasuriya & F. Hashim (Eds.), *Reading connections* (pp. 38-52). Petaling Jaya: Sashadi Sdn. Bhd.

Kaur, N. (2012). *Learner autonomy in second language lexical development amongst pre Malaysian University English test learners at MHTA University of technology.* Unpublished Ph.D. Thesis. School of Educational Studies, Universiti Sains Malaysia, Penang, Malaysia.

Kaur, N. (2017). The role of peers and cultural tools in supporting autonomous learning behaviour among Malay tertiary learners. *Pertanika Journal of Social Sciences and Humanities, 25*(1), 61-80.

Kilic, M. (2019). Vocabulary knowledge as a predictor of performance in writing and speaking: A case of Turkish EFL learners. *PASAA: Journal of Language Teaching and Learning in Thailand, 57*, 135-164.

Laufer, B., & Goldstein, Z. (2004). Testing vocabulary knowledge: Size, strength, and computer adaptiveness. *Language Learning, 54*(3), 399-440. Available at: https://doi.org/10.1111/j.0023-8333.2004.00260.x.

Lee, K. S. (2004). Reading into our reading test. In M. E. Vethamani (General Ed.) & Basil Wijasuriya & Fatimah Hashim (Vol. Eds.), *Reading Connections* (pp. 128-140). Petaling Jaya: Sashadi Sdn. Bhd.

Li, M., & Kirby, J. R. (2015). The effects of vocabulary breadth and depth on English reading. *Applied Linguistics, 36*(5), 611-634.

Lian, Y. K., & Abdul Aziz, A. (2020). An action research on metacognitive reading strategies instruction to improve reading comprehension. *International Journal of English Language and Literature Studies, 9*(2), 86-94. Available at: 10.18488/journal.23.2020.92.86.94.

Masrai, A. (2019). Vocabulary and reading comprehension revisited: Evidence for high-, mid-, and low-frequency vocabulary knowledge. *SAGE Journal, 1*-13. Available at: https://doi.org/10.1177/2158244019845182.

Meichenbaum, D., Burland, S., L., G., & Cameron, R. (1985). Metacognitive assessment. In S Y+ussen (Ed.), *The growth of reflection in children* (pp. 1-30). Orlando, Florida: Academic Press.

Moir, J., & Nation, I. S. P. (2002). An investigation of learners’ success in personalising vocabulary learning. *Prospect, 17*(1), 15-35.

Naginder, K. (2013). The need for autonomous vocabulary learners in the Malaysian ESL classroom. *GEMA Online® Journal of Language Studies, 18*(3), 7-16.
Nordin, R., & Naginder, K. (2004). *Process vs product: Where should the focus be?* Paper presented at the 39th RELC International Seminar: Innovative Approaches to Reading & Writing Instruction. SEAMEO Regional Language Centre, Singapore.

Paris, S. G., Lipson, M. Y., & Wixson, K. K. (1983). Becoming a strategic reader. In I. R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (4th ed., pp. 789-810). Newark, Del: International Reading Association.

Schmitt, N., & Schmitt, D. (2014). A reassessment of frequency and vocabulary size in L2 vocabulary teaching. *Language Teaching, 47*(4), 484-503. Available at: https://doi.org/10.1017/S0261444812000018.

Segler, T. M., Pain, H., & Sorace, A. (2002). Second language vocabulary acquisition and learning strategies in ICALL environments. *Computer Assisted Language Learning, 15*(4), 409-422. Available at: https://doi.org/10.1076/call.15.4.409.8272.

Teng, F. (2015). Assessing the relationship between vocabulary learning strategy use and vocabulary knowledge. *PASIA: Journal of Language Teaching and Learning in Thailand, 49*, 39-65.

Uchihara, T., & Saito, K. (2019). Exploring the relationship between productive vocabulary knowledge and second language oral ability. *The Language Learning Journal, 47*(1), 64-75. Available at: https://doi.org/10.1080/09571736.2016.1191527.

Victori, M. (2004). Eliciting and fostering learners’ metacognitive knowledge about language learning in self-directed learning programs: A review of data collection methods and procedures. Retrieved from: https://pdfs.semanticscholar.org/b1b7/f5fd24da93c0357a9a31f5d8abffbd0f205c.pdf?_ga=2.92834589.1845970194.1587275529-487288318.1565696864.

Viera, R. T. (2017). Vocabulary knowledge in the production of written texts: A case study on EFL language learners. *Technological Magazine-ESPOL, 30*(3), 89-105.

Wenden, A. (1991). *Learner strategy for learner autonomy: Planning and implementing learner training for language learners*. New York: Prentice Hall.

Woolfolk, A. (2001). *Educational psychology* (8th ed.). Needham Heights, MA: Allyn and Bacon.

*Views and opinions expressed in this article are the views and opinions of the author(s), International Journal of English Language and Literature Studies shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.*