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Breaking Language Barriers: How E-Learning Enhances Metacognitive Awareness and Self-Efficacy in Foreign Language Acquisition

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ABSTRACT

With its plethora of advantages, learning foreign language brings out a lot of benefits to students. Acquiring the foreign language has the potential to attract students to uplift the educational environment to be more productive and more strategised. Unfortunately, acquiring the foreign language can be troublesome since students were unaware of the skills and strategies needed. This paper explains the pilot test approach to a proposed framework model based on metacognitive awareness and self-efficacy before embarking on the extensive research necessary to develop best practices in foreign language learning. The content validity index and a pilot study were used to determine the usability and reliability of a survey questionnaire. Based on a simple random sampling plan, an online survey method was used to gather data from 163 respondents at the Universiti Malaya, Malaysia. The results indicate that the instrument's content validity index value is 0.9. The Cronbach alpha values for most of the constructs in the proposed framework model ranged between 0.9 and 0.7, indicating that the constructs are highly reliable. To contribute to the body of knowledge, the researchers provide an overview of the pilot test procedures as well as the methodology that was utilized. Based on the integration of the unified theory of acceptance and use of technology and the strategies needed to acquiring foreign language, a proposed framework model is presented to provide a more comprehensive framework model. It is concluded that the questionnaire items are deemed suitable and acceptable for further examination on a larger scale. As a result, the instrument can be investigated further in other contexts.

1. Introduction

E-learning has emerged as a feasible choice for language learners as the usage of technology in education has grown in recent years [1,2]. Online learning is pertaining to the educational process conducted through the internet, either synchronously or asynchronously, and excludes the traditional classroom setting [3]. As mentioned by Ghafar and Mohamedamin [4], there are many

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advantages to using the internet for learning a foreign language. While the value of online courses for language study has been established, further research is needed to determine how these courses affect the development of particular competencies, such as listening comprehension [5]. It is undeniable that the acquisition of foreign language listening skill has become a major concern among university students as it is one of the essential skills for mastering a foreign language [6].

According to Vandergrift and Goh [7], listening is one of the most important abilities for learning a new language. Metacognitive methods and high self-efficacy have been found to help students learn a new language, and that includes improving their listening comprehension [8]. Students' confidence in their own abilities to complete a task successfully (self-efficacy) and their use of metacognitive methods to monitor, manage and evaluate their own learning processes go hand in hand [9]. As a result, research into the impact of e-learning on the development of university students' listening skills in the context of foreign language acquisition through the application of metacognitive strategies and self-efficacy is crucial.

Most of the studies have examined the effect of listening proficiency while they study a foreign language, especially in light of metacognitive approaches and beliefs about their own abilities [10-14]. However, there would probably be only a few studies focusing on the benefits and effects of using e-learning in acquiring the listening skill in foreign language especially in relation to metacognitive and self-efficacy. Therefore, the purpose of this research is to examine the impact of e-learning on the development of university students' listening skills in the context of foreign language study through the application of metacognitive methods and self-efficacy [15]. Experts in the field of second language acquisition will confirm the content validity of the questionnaire used in the study to assess university students' levels of metacognitive awareness, self-efficacy, and listening skill in studying the foreign language. Figure 1 illustrates the proposed framework for this research.

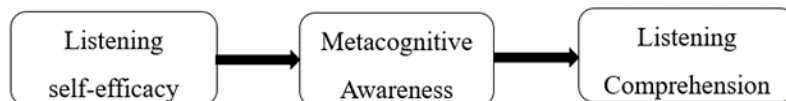


Fig. 1. Proposed Conceptual Framework

Apart from that, from an Islamic perspective, listening is a religious requirement. Attentive listening is the first step in gaining knowledge as well as guidance. The Prophet Muhammad (pbuh) always made time to interact with others, especially young people, and listen carefully to what they had to say. In addition, he would eagerly listen to what others had to say [16]. Allowing them to express themselves by allowing them to talk about how they are feeling, what they are thinking, and the experiences they have had. Considering that he was well aware of how the scenario made others feel. As a result of this, we now have an example of respect and attentiveness that we should strive to emulate.

إِنَّ فِي ذَٰلِكَ لَذِكْرًا لِمَن كَانَ لَهُ قَلْبٌ أَوْ أَلْقَى السَّمْعَ وَهُوَ

شَهِيدٌ ﴿٣٧﴾

"Indeed in that is a reminder for whoever has a heart or who listens while he is present [in mind]"
(Qur'an, 50:37)

To conclude, this study will contribute to the overall understanding of the effectiveness of e-learning in the learning of foreign languages and how it can be utilised to ease the acquisition of

listening skill among university students by applying metacognitive techniques and self-efficacy. In addition, this study will contribute to the understanding of the effectiveness of e-learning in the learning of foreign languages.

2. Methodology

A cross-sectional survey research design was employed to collect data for this study. The target population consisted of undergraduate students from Universiti Malaya. The participants included 163 male and female students from the academy of Islamic studies, Universiti Malaya. A simple random sampling technique was used to select participants from the target population. This sampling method ensured that each student had an equal chance of being included in the study. The sample size of 163 participants was determined based on the feasibility of data collection within the available resources and time constraints.

Before conducting the survey, a pilot test was conducted to evaluate the questionnaire's validity and reliability. The questionnaire was reviewed by experts in the field of foreign language learning and e-learning to ensure content validity. Their feedback was incorporated into the final version of the questionnaire. The data collection process involved distributing the questionnaire to the selected participants. The questionnaire was administered online using a secure survey platform. Participants were provided with a link to access the questionnaire and were instructed to complete it within a specified time frame.

Ethical considerations were taken into account throughout the study. Informed consent was obtained from each participant, and they were assured of the confidentiality and anonymity of their responses. The participants were informed about the purpose of the study and the voluntary nature of their participation. They were also informed that their participation would have no bearing on their academic standing or any other factors.

Data analysis was conducted using appropriate statistical techniques to examine the relationships between e-learning, metacognitive strategies, self-efficacy and the acquisition of listening skill in foreign language learning among university students. Descriptive statistics, such as means and frequencies, were used to summarize the data, while inferential statistics, such as correlation analysis and regression analysis, were employed to examine the relationships between variables.

In conclusion, this study utilized a cross-sectional survey design to investigate the impact of e-learning on the acquisition of listening skill in foreign language learning among Universiti Malaya students. The sample consisted of 163 male and female undergraduate students. The questionnaire was validated for content validity, and the data collection process adhered to ethical considerations.

3. Results

3.1 The Expert Verification

In order to determine whether or not the instrument was successfully created to measure the intended concept and whether or not all relevant content domains were included in the assessment, experts in the area should be engaged throughout the evaluation phase of the study [17]. Any research that hopes to establish its findings' credibility must employ a selective panel of specialists. According to Grant and Davis [18], content specialists should evaluate and study the instrument's content using their knowledge, which includes elements like experience, qualification, and appropriate training. This research project's goal was to validate the questionnaire's content before sending it out, hence a Google Form Survey was created from the original document.

The bare minimum is agreed upon to be three experts [19]. The instrument should be tested by anything from three to twenty different panels of experts, as suggested by Gable and Wolf [20]. Grant and Davis [18] note that the number of specialists needed is dependent on both the depth and breadth of expertise needed. As a result, ten experts were consulted for the purpose of this research. Table 1 displays the information of experts for this research. The study collects and examines quantitative viewpoints on the relevance or representatives of the expert panels once the panel has been selected. These items provide operational definitions for the items used to assess the concept, verifying the content validity of the instrument. In order to get feedback from experts, the employment of an online content validity assessment was formed. The layout of the assessment form influences the information quality [21]. Expert responses were examined quantitatively for the study. According to Chen *et al.*, [21], there is no established quantitative method for determining how content validity instruments should be determined. But Yaghmaie [22] recommends using quantitative indices to evaluate instrument quality. The most often used technique for quantifying content validity is the content validity index (CVI) [21,23]. In this investigation, the CVI was used to quantify a tool. The CVI is established based on professional assessments of the significance or representatives of the instrument's contents. For this study, an Ave-CVI of 0.90 or above indicated extremely high content validity of the instrument.

Table 1
 Information on Expert Verification

Experts	Designation of Experts	Area of Expertise	Organization	Years of Experience
Expert 1	Associate Professor	TEFL, Meaning-Focused Input, Vocabulary Acquisition	Tamagawa University	20
Expert 2	Senior Lecturer	Applied Linguistics	UNISZA	5
Expert 3	Professor Emeritus	Developmental Psychology	University of Nebraska--Lincoln	51
Expert 4	Professor of Language and Education	Second Language Education	University of Reading Institute of Education	30
Expert 5	Associate Professor	Metacognition	Georgia Southern University	12
Expert 6	Deputy Director (Academic and Internationalisation)	Listening Comprehension, Metacognitive Strategies, Second Language Acquisition	IIUM	15
Expert 7	Lecturer	Education; Curriculum and Pedagogy	Universiti Malaysia Kelantan	10
Expert 8	Senior Lecturer	English Language Studies; Language and Technology	UPM	8
Expert 9	Senior Lecturer	Applied Linguistics & ESL	UMK	25
Expert 10	Full Professor	Second Language Learning (Listening and Speaking; Teacher Cognition)	National Institute of Education NTU	Over 30

3.2 The Findings

The findings of this study indicate that the content validity of the questionnaire used in the research was high. The Content Validity Index (CVI) value for the instrument was 0.97, which is significantly higher than the recommended cut-off value of 0.8 [3]. This demonstrates that the questionnaire adequately preserved all 27 recommended items after experts judgment. Data from 163 respondents were analyzed using the Statistical Package for Social Sciences (SPSS) software version 26. To assess the reliability of the questionnaire, Cronbach's alpha coefficient was utilized. According to Hair *et al.*, [24], reliability is crucial in assessing the consistency of variables and determining the value and relevance of an instrument. Cronbach's alpha values greater than 0.7 are considered acceptable [25]. In this study, most of the constructs achieved alpha coefficients ranging from 0.7 to 0.9, indicating excellent internal consistency. The reliability analysis demonstrated that the questionnaire exhibited strong internal consistency across all constructs. Cronbach's alpha was utilised in this research as a rough estimate of reliability, as shown in Table 2. Table 2 is adopted from Taber [26].

Table 2
The Rule of Thumb for Cronbach's Alpha Coefficient [26]

Cronbach's Alpha Coefficient Range	Strength of Association
0.9 and above	Very high
0.70 ≤ to < 0.90	High
0.50 ≤ to < 0.70	Moderate
0.30 ≤ to < 0.50	Low
< 0.30	Very low

The reliability of the questionnaire is closely related to its validity. It is important to note that an instrument cannot be valid unless it is reliable. Wong [3] stated that a reliability coefficient exceeding 0.70 is perfectly adequate. In this study, the questionnaire demonstrated acceptable reliability, as all Cronbach's alpha coefficients exceeded 0.7 (Table 3 and Table 4). These findings support the reliability and suitability of the questionnaire for measuring the constructs of interest [27].

Table 3
CVI Analysis of Self Efficacy

Self-Efficacy	Number of Approvals	CVR
SE1	7	0.09
SE2	10	0.7
SE3	10	0.8
SE4	6	0.3
SE5	5	0.05
SE6	6	0.3
SE7	6	0.3
SE8	7	0.3
SE9	10	0.7
SE10	10	0.9

Table 4
CVI Analysis of Metacognitive Awareness

Metacognitive Awareness	Number of Approvals	CVR
MA1	7	0.4
MA2	10	0.7
MA3	10	0.8
MA4	6	0.2
MA5	10	0.9
MA6	10	0.7
MA7	10	0.7
MA8	7	0.3
MA9	7	0.4
MA10	9	0.8
MA11	10	0.8
MA12	10	0.7
MA13	10	0.9
MA14	10	0.9
MA15	10	0.9
MA16	10	0.8
MA17	10	0.9

In summary, the results of the study indicate that the questionnaire used in this research demonstrated high content validity, as evidenced by the CVI value. Furthermore, the reliability analysis showed that the questionnaire exhibited excellent internal consistency, with Cronbach's alpha coefficients exceeding 0.7 for all constructs. These findings affirm the questionnaire's reliability and suitability for future use in assessing the relationship between e-learning, metacognitive strategies, self-efficacy, and the acquisition of listening skill in foreign language learning among university students as shown in Table 3 and Table 4.

4. Conclusions

In conclusion, the purpose of this study was to examine the impact of e-learning on the development of university students' listening skills in the context of second-language acquisition through the application of metacognitive methods and self-efficacy. Experts in the field of second language acquisition assessed the questionnaire's content validity, ensuring that it accurately measured concepts such as metacognitive awareness, self-efficacy, and listening proficiency. The content validity study confirmed that the questionnaire was valid and useful for both the current study and future studies of the same nature.

The findings of this study imply that e-learning can have a favourable impact on the acquisition of listening skill in the process of learning a foreign language by applying metacognitive methods and self-efficacy among university students. With the help of e-learning, students can improve their listening abilities outside of class, at their own pace and when it is most convenient for them. The connection with teachers and classmates is equally important in language learning, thus e-learning shouldn't replace traditional classroom-based learning totally.

Research in the future can look into the possibilities of combining various forms of technology in the process of learning a foreign language, as well as the efficacy of e-learning on other language abilities like speaking, reading, and writing. Studying the effect of cultural differences and different learning styles on the efficacy of e-learning in foreign language learning is a worthwhile avenue for future research.

Finally, this study contributes to the growing body of literature on the use of e-learning in foreign language learning by shedding light on how metacognitive strategies and self-efficacy can be used to improve the development of listening competence during the process of learning a foreign language.

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