FOSTERING CRITICAL THINKING SKILLS IN EFL UNIVERSITY STUDENTS DURING LISTENING COMPREHENSION USING DIGITAL TEACHING-MATERIALS: A CASE STUDY

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Abstracts: Understanding listening materials is perceived as the most challenging aspect of language learning by many EFL University students. They face difficulties in recognizing English words, phrases, pronunciation, vocabulary, and sentence complexity, compounded by the rapid speech rate of native speakers. Addressing these challenges, this study explores the use of digital materials that require students to analyse, evaluate and make informed judgments based on listening content, thereby nurturing higher order thinking skills. A qualitative case study was conducted, involving the collection of comprehensive data from course syllabi, lecturers and students. A total of sixty-one university students enrolled intermediate listening course, along with two listening lecturers, were actively engaged to enrich the data. The results shows that the use of digital materials, particularly the e-module, has proven to be effective. Students' responses indicate that the e-module effectively facilitates critical thinking, improves reflective ability, and encourages motivation. Moreover, the e-module features, including well-defined learning outcomes, authentic materials, scaffolded learning activities, engaging multimedia elements, collaborative features, and opportunities for reflection and self-assessment, collectively contribute to foster critical thinking skills and motivation among students.
Keywords: *case study; critical thinking; digital teaching materials; e-module; EFL University students; listening comprehension.*

INTRODUCTION

In the context of English as a Foreign Language (EFL) instruction, listening skills hold significant urgency and importance compared to other language skills (Lantos, 2016; Zhang et al., 2020). Listening skills become the foundation of effective communication. It is due to the fact that when someone listens, here is a process of grasping information from speaker to the listener. Students' listening skills in English will also affect their speaking and communication skills (Harmer, 2015; Maulina et al., 2022).

While all language skills (listening, speaking, reading, and writing) are interconnected and important, the urgency of developing listening skills in the EFL context stems from its foundational role in communication, real-time interactions, exposure to authentic language, comprehension and learning, language production, and cultural understanding (Choi et al., 2021; Deroey, 2018). Emphasizing listening skills consistently in EFL instruction helps learners build a strong language foundation and equips them to engage effectively in various language contexts.

Listening as a fundamental skill closely related to understanding, but it may not inherently involve critical thinking. There is significant difference of listening to hearing (Leonard, 2019; Zhang et al., 2020). Hearing refers to ears-receiving to the sound of words and it is a physical process that might occur as long as a

person does not have a hearing problem. Rather listening requires more focus and effort, both mentally and physically. Thus, listening does not only involve physical hearing but also encourages students to go beyond surface level comprehension and get deeper into the meaning and implications of what they hear (Dwee et al., 2016; Santos Meneses, 2020). Therefore, appropriate teaching materials are needed to facilitate lecturers in listening courses that put more emphasis on students' critical thinking skills.

Highlighting on the importance of developing teaching materials which not only focus on improving listening comprehension but also foster critical thinking skills among students, this study shed lights on the use of digital listening materials on facilitating students' critical thinking.

Digital materials, in this case refers to electronic course module (e-module) for listening skills. It is designed to include prompts and activities that encourage students to think critically, analyse different perspectives and apply their knowledge in meaningful ways. These materials can play a significant role in addressing students' challenges of 21st century skill learning needs and more interactive as well as dynamic learning experience (DiBenedetto, 2019; Haug & Mork, 2021). Various multimedia elements, such as videos, audio recordings and interactive exercises can be integrated to provide learners with authentic and engaging listening materials (Hughes-Roberts et al., 2020).

Another factor that encourages the need to develop digital teaching-materials for listening courses is a number of research studies which state that 43% of language learners thought that understanding listening material is the most difficult when compared to other language skills (Egamnazarova & Mukhamedova, 2021; Ma'fiyah, I; Sitoresmi, U; Yulianto, 2021; Yeldham & Gao, 2021). Most students find it difficult to recognize English words, phrases or sentences, limitations in pronunciation, lack of vocabulary, complexity of sentences and coupled with the native speakers' speech rate which is too fast which then results in a lack of understanding regarding the material presented by the lecturer. By incorporating materials that require students to analyze, evaluate and make informed judgements based on the listening content, it enables to promote higher-order thinking skills and enhance their overall language proficiency (Saeedakhtar et al., 2021). Further, it can encourage students to think critically about the information presented, draw connections, infer meaning and engage in

deeper levels of comprehension (Din, 2020; Tan, 2019).

In order to stimulate students' critical thinking, a listening e-module was designed for case-based collaborative activities within a mobile application with its strong emphasize on meticulously structuring topics, sequencing content, elaborating on tasks and provide scaffolding support. The primary objective is to enhance students' comprehension and effective processing real-life information. The focus of this article therefore, to describe the e-module's key features and to examine the response of students toward this innovative learning materials.

METHOD

This study used a qualitative case study design to thoroughly explore a phenomenon within a real life context (Alison & Susan, 2021; Lazaraton, 2016; Yin, 2018). The study focused on the use of digital materials in the context of listening classes. Specifically, it seeks to understand how the use of e-module stimulates critical thinking among students.

The study involved sixty one students, particularly those in the third semester who are enrolled in intermediate listening classes. The students' opinion and perception regarding the use of e-module are central to the research findings. The research utilized multiple data collection methods, including interviews with two out of six lecturers, classroom observation and pro-long engagement. Additionally, an open-ended questionnaire was shared with students to gather their views on their needs and interests in listening materials.

To enhance validity and reliability of the findings, data triangulation is carried out. This involves member checks, multiple investigators, and long-term observations in order to strengthen the validity and reliability of the findings (Lentillon-kaestner et al., 2018; Naong et al., 2018; Yin, 2018).

Ensuring for research ethical standards, The researcher has adopted the following procedures: (1) obtaining approval from the research site; (2) securing approval from the colleagues and institution, where classroom observation will take place; (3) ensuring students' privacy, anonymity and confidentiality during the study; and (4) conducting participatory observation in the classroom, to create a comfortable and natural environment for the students.

RESULTS AND DISCUSSSION

Students' responses to the use of -module
A semi-structured interview and an open-ended questionnaire were conducted to get further information about students' experiences. This findings were used as a research instrument to collect qualitative information on how well the e-module stimulates students' critical thinking in listening class.

The three major components as students' positive responds explained in the following sections.

Effective to facilitate critical thinking
One advantage obtained by the students participated in this study is that e-module can facilitate them in exercising their critical thinking. A significant proportion of participants (77%) agreed that the exercises and question types in the e-module helped to guide them in analysing, interpreting, and stimulating critical thinking. This suggest that e-module played a role in promoting critical thinking skills among the students.

Some students thought that the task that allowed them to carefully analyse and evaluate a speaker's intention and arguments encouraged them to think a little bit more deeply about particular topics. The following statements were quoted from recorded interview.

> "The task helps me to not only understand the meaning of word, or sentences by the speaker, but also grasping the speaker's idea, intention and feeling." (1)
> "It helps me improve my mind to think more about what actually meant by the speakers" (2)

> "The questions in the task, when we are watching or listening video from an inspiring person, is not only about translating meaning or vocab, but relating our understanding and opinion, summarizing and giving conclusion." (3)

Critical thinking is indeed an attribute that encompasses a range of skills and involves a combination of attitudes (Domínguez Romero & Bobkina, 2021; Dwee et al., 2016). The students responses shown above clearly indicate several point that represent critical thinking, i.e. thinking reasonably to evaluate arguments, draw conclusion and presenting a new information (Santos Meneses, 2020).

9. Do the exercises and types of questions presented in the listening materials guide you towards analytical, interpretive, and problem-solving skills?
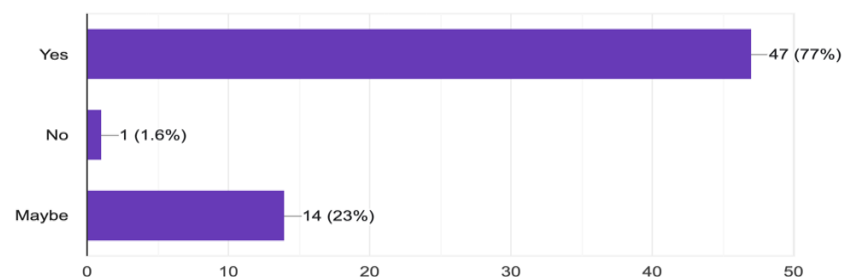61 responses

Figure 1. *Students' response regarding tasks-promoted critical thinking*

Improve reflective ability and curiosity
One of critical thinking indicators is the ability of look at certain topics reflectively or able to think reflectively to raise curiosity (Din, 2020; Hughes et al., 2018; Santos Meneses, 2020). In line with this, student's responses about the use of picture and guided questions helps her to improve ability to reflect on issues being discussed. Besides, it was also observed through this study that listening activities challenged the students' curiosity.

> "..picture, interesting colour, and questions given in the beginning, makes me understand the content of what I listen, and how I reflect it on my life." (4)

> "Lecturer's presentation about the content and how the questions relates to our lives, make me curious of what next to be listened." (5)

The perceived importance of understanding obtained through 'deep' processing of knowledge raises curiosity in learning more (Harman et al., 2016; Mahdi et al., 2020). This findings on students' curiosity and ability to reflect indicate that their curiosity arose as a result of deep processing information that occurred during their reflective practices in doing the listening task.

Scaffold critical thinking abilities

The online exercises and multimedia content encouraged students to actively analyse and synthesize information from the listening tasks. Some students responses, "I am happy when the materials are colourful and interactive, because it is not boring and motivates me to understand each sentences from the speakers".

While other student was appreciating on lecturer's thought-provoking questions in the beginning of the lesson, she says, "lecturer always gives questions in the beginning, so we are paying attention and think to answer that questions". From the students' feedback, the lecturers' thought provoking questions at every transition of materials engage students' attention and encourage them to think about and respond to the task given. Figure 2 indicates that 41% of the participants agreed that it was helpful in enhancing their understanding. Incorporating thought-provoking questions at the outset of a lesson is a pedagogical technique often used to stimulate critical thinking and best prepare students to learn the material (Lincoln & Kearney, 2019; Umam & Fauziah, 2022)

Furthermore, this finding on students motivation also highlighted how crucial it is to

scaffold their critical thinking abilities. When students were asking of how the listening materials impact their motivation to learn and improve their listening skills, the majority of students, approximately 54.1% expressed that listening materials were highly motivating for them. Another substantial portion of students, around 36.1% found that listening material be somewhat motivating. While their motivation may not have been as strong as the first group, they still acknowledged that the materials had a positive impact on their motivation and skill improvement. Further, none of the students choose the option "not motivating at all", indicating that all respondents in the study found some level of motivation from the listening materials. These responses suggest that the design and content of the listening materials, along with the instructional approaches, are successful in fostering motivation among students. Such motivation is essential for effective learning and skill enhancement, as it encourages active participation and a positive learning experience (Osman & Warner, 2020; Zhang et al., 2020)

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19. The lecturer always provide guided questions at every transition of materials or tasks for improving students' understanding and their ability ...ct on issues being discussed in listening exercises
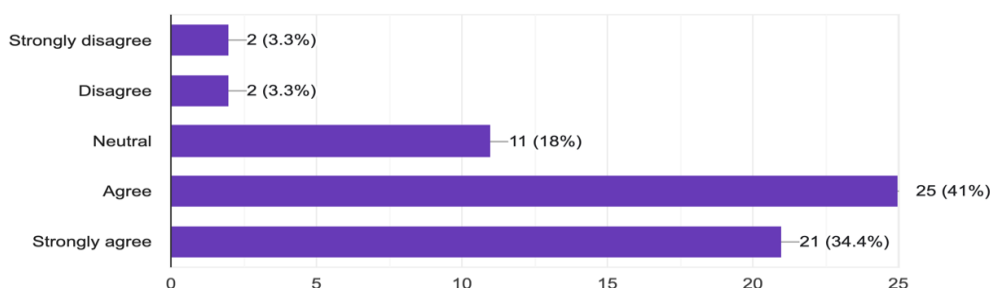61 responses

Figure 2. *Students' response to lecturers' guided questions*

The key features of the e-module

Here are some characteristics of the e-module for listening that is designed to promote students critical thinking.

First, the e-module clearly states the intended learning outcomes (Table 1). It is divided into four Course Learning Objectives. Those are at the end of the course, students are expected to (1) be able to understand spoken text from various topics, search main ideas and detailed information from spoken text, paraphrase, interpret the

expression according to the context, explain the relationship between the parts of information, analyse, synthesize, summarize, evaluate and listen critically; (2) be able to listen to sentences actively which contains sound confusion, multi-meaning words, questions and responses; (3) be able to interpret sentences containing Idioms, certain functional expressions and exercises, taking notes, as well as (4) be able to listen positively through the use of interesting and varied teaching materials.

Table 1. *Intended course learning objectives*

Learning Outcomes	1. Understanding lectures in various topics/fields of study, and taking notes for the key information and important detail.
	2. Enabling students to do active listening related with sentences with sound confusions, multiple- meaning words, questions and responses.
Goals	Hard Skills:
	Enabling students in listening to idiomatic expressions, specific functional expressions.
	Soft Skills:
	This course also aims to enhance students' listening habits and positive attitude towards listening through the use of varied and interesting learning materials and activities.
Objectives	Hard Skills:
	Understanding longer conversations and talks, getting the gist of information, selecting the important information
	Soft skills:
	Students are also expected to nurture good behaviour and skills in learning individually and/or in pairs/small groups.

Second, e-module incorporates authentic listening materials that reflects real-life contexts, situation and source. These reflected either on the topics, speech styles or the variety of accents. These following are the topics adjusted to students' needs and interest (Table 2).

The choice of topics in the e-module was designed to match the students' needs and interests. A significant portion of students, around 54.1% found the use of interesting topics to be highly motivating. This motivation (as shown in Figure 3) likely contributes to their improved listening skills.

6. How do interesting listening materials and topics impact your motivation to learn and improve your listening skills?
61 responses
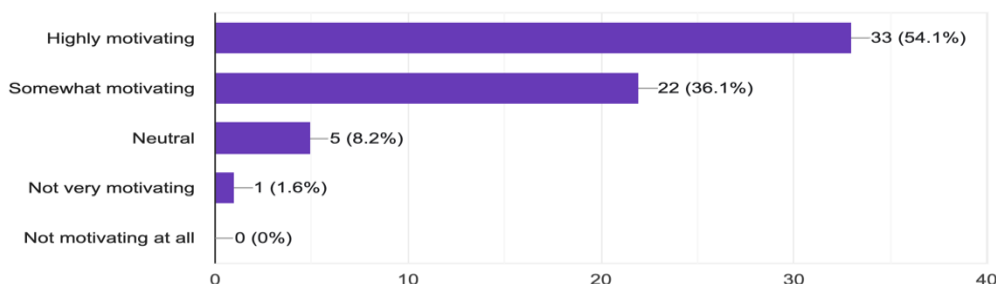
Figure 3. *Students' responds on how interesting topics impact students' motivation*

Third characteristics is scaffolded learning activities. This e-module includes a series of scaffolded learning activities that progressively build students' critical thinking. These activities are structured into three stages, including a presentation or pre-listening task to activate prior knowledge, a during listening or task delivery phase, and a post listening or reflection and evaluation (as presented in Picture 1). In terms of students' feedback on these task and activities,

majority students, specifically 52.5% expressed high satisfaction by selecting "very satisfied", while remaining 47.5% choose "satisfied". Notably, none of students reported dissatisfaction with the materials' task and activities. This positive response suggests that the topic and content of the materials were engaging and effectively promoted students' motivation and critical thinking skills.

Figure 4. E-*module table of content*

Fourth, *engaging multimedia elements.* The e-module utilizes some multimedia elements such as audio, interactive exercise and visuals to enhance students' engagement and understanding. These provide multiple modes of information presentation, accommodate different learning style and stimulate critical thinking. Moreover, students found using digital material to be highly convenient. Based on various students' responses, it is apparent that a significant majority of students express a preference for using digital sources as their primary teaching materials over traditional textbooks. It due to the ease of accessibility, the ability to access these materials at any time and from any location, and the flexibility.

Figure 5. *Sample of multimedia engagement, collaborative-case task, reflection and self-assessment*

Fifth, the e-module facilitate collaboration and communication among students. One notable feature is the "Think and Pairs" Session, where students' critical thinking are stimulated as they engage in discussions, exchange ideas, negotiate the meaning of concepts and provide constructive feedback on their classmates' viewpoints. It's worth noting that a majority of students, approximately 52.5%, agreed that the overall exercises effectively promoted collaboration and teamwork among them. This reflects the success of e-module in fostering these important skills and encouraging interaction among students.

Sixth characteristics is, reflection and self-assessment. The e-module includes the opportunities for students to reflect on their learning, self-assess their critical thinking, and set goals for improvement. This reflection practice as encourage students to monitor their learning progress, and make adjustment.

10. Are the listening exercises designed to promote collaboration and teamwork?
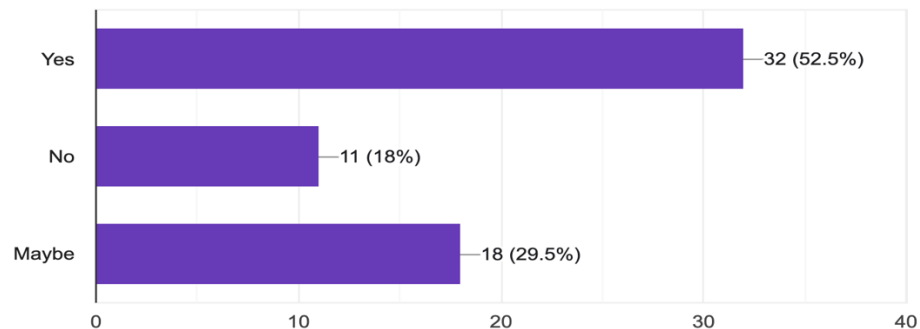61 responses

Figure 6. *Students' responds on how the task-promoted collaboration and team work*

CONCLUSION

This study highlights the crucial role of listening skills in EFL instruction and the necessity of materials that foster critical thinking among students. The use of digital listening materials, particularly the e-module designed to stimulate critical thinking, has proven to be effective. Students' responses indicate that the e-module effectively facilitates critical thinking, improves reflective ability, and encourages motivation. Moreover, the e-module's key features, including clear learning outcomes, authentic listening materials, scaffolded learning activities, engaging multimedia elements, collaborative features, and opportunities for reflection and self-assessment, collectively contribute to enhanced critical thinking skills and motivation among students.

As English language proficiency is a key asset in the 21st century, such innovative materials play a central role in equipping learners to excel in various language contexts.

The study concludes that the development of digital teaching materials for listening courses with a focus on critical thinking skills is highly beneficial for students' language learning. It is not only addresses the challenges associated with listening but also encourages deeper comprehension and engagement with the language. This research paves the way for a more comprehensive integration of digital materials in EFL instruction to enhance students' critical thinking skills, ultimately fostering more effective language communication.

REFERENCES

Alison, M., & Susan, M. G. (2021). *Second language research: Methodology and design* (Third Edition).

Choi, J. Y., Ryu, D., Van Pay, C. K., Meacham, S., & Beecher, C. C. (2021). Listening to Head Start teachers: Teacher beliefs, practices, and needs for educating dual language learners. *Early Childhood Research Quarterly*, *54*, 110–124.

Deroey, K. L. B. (2018). The representativeness of lecture listening coursebooks: Language, lecture authenticity, research-informedness. *Journal of English for Academic Purposes*, *34*, 57–67.

DiBenedetto, C. A. (2019). Twenty-first century skills. In *Handbook of vocational education and training*.

Din, M. (2020). Evaluating university students' critical thinking ability as reflected in their critical reading skill: A study at bachelor level in Pakistan. *Thinking Skills and Creativity*, *35*, 100627.

Domínguez Romero, E., & Bobkina, J. (2021). Exploring critical and visual literacy needs in digital learning environments: The use of memes in the EFL/ESL university classroom. *Thinking Skills and Creativity*, *40*(September 2020), 100783.

Dwee, C. Y., Anthony, E. M., Salleh, B. M., Kamarulzaman, R., & Kadir, Z. A. (2016). Creating thinking classrooms: Perceptions and teaching practices of ESP practitioners. *Procedia - Social and Behavioral Sciences*, *232*(April), 631–639.

Egamnazarova, F. A., & Mukhamedova, M. S. (2021). Improving English language listening skill. *Scientific Journal Impact Factor*, *2*(Special Issue1), 28–32.

Harman, R. M., Ahn, S., & Bogue, B. (2016). Reflective language teacher education : Fostering discourse awareness through critical performative pedagogy. *Teaching and Teacher Education*, *59*, 228–238.

Harmer, J. (2015). *The practice of English language teaching* (Fifth Edition). Pearson Education Ltd.

Haug, B. S., & Mork, S. M. (2021). Taking 21st century skills from vision to classroom: What teachers highlight as supportive professional development in the light of new demands from educational reforms. *Teaching and Teacher*

Education, *100*, 103286. ht

Hughes-Roberts, T., Brown, D., Boulton, H., Burton, A., Shopland, N., & Martinovs, D. (2020). Examining the potential impact of digital game making in curricula based teaching: Initial observations. *Computers and Education*, *158*, 103988.

Hughes, E. S., Bradford, J., & Likens, C. (2018). Facilitating collaboration, communication, and critical thinking skills in physical therapy education through technology-enhanced instruction: A case study. *TechTrends*, *62*(3), 296–302.

Lantos, J. D. (2016). Learning to listen, listening to learn. In *Hastings Center Report* (Vol. 46, Issue 1).

Lazaraton, A. (2016). Qualitative methods of validation. In *Language Testing and Assessment*.

Lentillon-kaestner, V., Guillet-descas, E., Martinent, G., & Cece, V. (2018). Studies in Educational Evaluation Validity and reliability of questionnaire on perceived professional identity among teachers (QIPPE) scores. *Studies in Educational Evaluation*, *59*(September), 235–243.

Leonard, K. R. (2019). Examining the relationship between decoding and comprehension in L2 listening. *System*, *87*, 102150.

Lincoln, D., & Kearney, M. L. (2019). Promoting critical thinking in higher education. *Studies in Higher Education*, *44*(5), 799–800.

Ma'fiyah, I; Sitoresmi, U; Yulianto, I. (2021). EFL students' perception of virtual learning in listening class: A classroom implementation. *English Review Journal*, *10*(1).

Mahdi, O. R., Nassar, I. A., & Almuslamani, H. A. I. (2020). The role of using case studies method in improving students' critical thinking skills in higher education. *International Journal of Higher Education*, *9*(2), 297–308.

Maulina, M., Ignacio, J. F., Bersabe, L. A. C., Serrano, A. J. D., Carpio, N. G., & Santos, E. G. D.

(2022). Technology-based media used in teaching listening skills. *Exposure : Jurnal Pendidikan Bahasa Inggris*, *11*(1), 85–99.

Naong, T., Gaskew, A. N., Lee-Johnson, J., Winkle-Wagner, R., & Yin, R. K. (2018). Case study research and applications: Design and methods. In *Journal of Hospitality & Tourism Research* (Vol. 53, Issue 5).

Osman, D. J., & Warner, J. R. (2020). Measuring teacher motivation : The missing link between professional development and practice. *Teaching and Teacher Education*, *92*, 103064.

Saeedakhtar, A., Haqju, R., & Rouhi, A. (2021). The impact of collaborative listening to podcasts on high school learners' listening comprehension and vocabulary learning. *System*, *101*(July), 102588. h

Santos Meneses, L. F. (2020). Critical thinking perspectives across contexts and curricula: Dominant, neglected, and complementing dimensions. *Thinking Skills and Creativity*, *35*, 100610.

Tan, H. C. (2019). Using a structured collaborative learning approach in a case-based management accounting course. *Journal of Accounting Education*, *49*(xxxx), 100638. ht

Fauziah, Z. N. (2022). Promoting students' critical thinking skills through project-based learning in Indonesian higher education. *JEES (Journal of English Educators Society)*, *7*(1), 110–117.

Yeldham, M., & Gao, Y. J. (2021). Examining whether learning outcomes are enhanced when L2 learners' cognitive styles match listening instruction methods. *System*, *97*, 102435. h

Yin, R. K. (2018). Case study research and applications: Design and methods. In *Journal of Hospitality & Tourism Research* (Vol. 53, Issue 5).

Zhang, X., Dai, S., & Ardasheva, Y. (2020). Contributions of (de)motivation, engagement, and anxiety to English listening and speaking. *Learning and Individual Differences*, *79*(March), 101856.