A Case Study on Multimodality Perception in the Higher Education Classroom

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Article Info

ABSTRACT

The image and audiovisual have been applied to create an innovative strategy in the English language instructional, whereas the combination of this instrument which is known as 'multimodality', the internet, and smaller devise technology has not been explored widely. This study gauges higher education students' perception of multimodality on the smartphone with internet integration in English instructional. Performance expectancy (PE) and effort expectancy (EE) from *the unified theory of acceptance and use of technology* (UTAUT) model were applied to measure the students' argument on the multimodality use. There were 87 of Bali State Polytechnic and 41 of I Gusti Bagus Sugriwa State Hindu University students involved in this research. Digital questionnaires were employed, and the descriptive quantitative method was used to calculate the data collection, which then described to elaborate on the result. The result indicated that there is a positive trend to use multimodality, for example, the combination of audio, video, image, and technology such as a smartphone in the classroom. Learners have a desire to use the combination of image, audiovisual, internet, and smaller device technology. This study extends our understanding of what the learners need from digital technology and a significant chance to develop on the combination of multimodality and technology which fit for the higher education level.

INTRODUCTION

The establishment of digital technology towards the different education levels' ability enhancement has been conducted for more than a decade (Tedre et al., 2010). The role of digital tools assisting the learners is used in teaching and learning process to enrich the learning material during the language instructional. The traditional learning material utilization, such as image and audio emerged students' eagerness in attending the learning process. The teacher uses images to lead students to understand the topic given. In contrast, audio is mostly used to measure the learners' competence to receive the main meaning of a discussion or speech. Since the

introduction of the internet in the classroom as a learning instrument, the image and audio are easily accessed and prepared by the teacher. With the advancement of technology nowadays, multimodality plays a vital role in learning English as a foreign language.

Some researchers involved multimodality in the past, which indicated and assisted the learners' eagerness and capability in learning the language. The study conducted by Winiharti and Herlina found that visual mode has resulted in better scores than the audio mode. Based on this result, it means that by watching a video with the audio (audiovisual), students can understand better rather than listening to the audio-only. Through the videos, they can perceive other kinds of information – pictures, moves, gestures, and writings (Winiharti & Herlina, 2017). In gaining the learning goal, the audiovisual was used as a "nutrition" during the learning activities. However, not only exerting video but also audio and image have a significant role in escalating the students' urge to study. These instruments must be combined to create an excellent methodology in the classroom. Language skill can be obtained kindly by applying these three instruments, although further research must be conducted to prove the combination of the tools which may fit the students' demand.

In delivering the materials in the classroom, many instructors pursued the learning aim through technology. Culture pursues education to apply internet technology to assist teachers in preparing the learning materials and enhance students' urge in following the instructional in the classroom. Kebritchi, Lipschuetz, and Santiague (2017) defined the three major categories of findings related to the multimodality exertion: issues related to online learners, instructors, and content development. Learners' issues included learners' expectations, readiness, identity, and participation in online courses (Kebritchi et al., 2017). Besides, instructors' issues included changing faculty roles, transitioning from face-to-face to online, time management, and teaching styles, while content involved the learning material and curriculum (Kebritchi et al., 2017). Many aspects can be found in delivering the lesson to the students who should be prepared and solved by the tutors or teachers. Running the classroom using multimodality can not be separated by several issues faced by the teachers and learners. In terms of internet problems, users may not be ready for issue consideration. In solving this problem, the tutors' readiness must be supported to avoid and minimize misleading information.

Today's classroom requires higher effectiveness for both teachers and students to deal with new knowledge boosts, and technology has a vast pedagogical potential of achieving that. Also, the ever-evolving quality of technology would continue to push researchers and educators to create and use new tools in supporting teaching and learning material in the classroom. Several methodologies have already assisted learning, for example, blended learning to distance learning, online learning, and place-based learning. The demand for new technologies to participate in learning would only continue to grow. Research indicates that teachers' conceptions of and approaches to teaching with technology are central to the successful implementation of educational technologies in higher education (Englund et al., 2017). This means technology supports the teachers in distributing the lesson to the learners. The measurement of the different components of the cognitive load remains an important area in instructional design. The multimodal methodology proposed in this article is intended to provide a framework for the measurement of cognitive load in the presence of educational video and other multimedia environments. It could also provide instructional designers with robust data on the impact of

redundancy (such as verbal redundancy when the words of a teacher are subtitled) or other qualities of multimodal texts on cognitive load. In order to refine such a methodology, it is essential first to validate the multimodal measurement of cognitive. All of these areas of application, and indeed many others not detailed in this paper, stand to benefit from the accuracy and precision offered by the multidimensional measurement of cognitive load in multimodal contexts. Such measurement can then realize benefits in terms of managing cognitive load while viewing videos to improve educational and student outcomes and even the adaptation of educational content to the learner's cognitive load in real-time (Kruger & Doherty, 2016).

Higher education has delivered the foreign language as the general subject which has introduced the familiar concept of the language, for example, English. General English lesson is usually introduced as the beginner comprehension for the first semester of university or polytechnic. Polytechnic and university which are not using English as the main language through the instructional tend to obtain the English only at the beginning of the semester. As the improvement of the digital network has gradually affected education, it has laid a certain solid foundation for promoting autonomous English learning. How to develop students' English autonomous studying ability has become a topic of concern for scholars. Based on multimodal and self-learning theory, the previous paper constructed a multimodal autonomous learning model of college English that adapts to the national conditions of foreign language education. Based on classroom English teaching, this model is student-centred, teacher-led, and multimedia-assisted, aiming at cultivating students' comprehensive ability of college English, which complements each other and combines both within and outside the classroom. This enables college English communication ability to transform from knowledge to skills as well as promotes interaction between teachers and students in college English classrooms and beyond. This indicates that the construction of a multimodal autonomous learning mode of college English has excellent benefits for improving students' comprehensive ability (Shih et al., 2015). This also necessary for the improvement of the English curriculum which usually does not include the production of multimodal texts, and it seems high time that students were qualified to do more than consume: also to produce multimodal texts to realize their full potential for meaning-making in the classroom (Jakobsen & Tønnessen, 2018). Video, audio, and the image had an important role in instructional improvement that can be put into the curriculum. In other words, deploying technology can enhance learners' language skills and comprehension. Multimodality has a leading role in assisting the students' instructional in the classroom. Besides, the improvement of the digital device might be discovered to reach the learning aim effectively. The concept of multimodality emerges some strategies or methodologies to gain the instructional goal.

In Bali State Polytechnic specifically, using computer technology has introduced kindly in the learning process. Indeed, the audiovisual room is frequently used to assist the process of teaching and learning the English language. Similarly, the utilization of technology, LCD projector, and audio system while learning the English language, for instance, are used often in I Gusti Bagus Sugriwa State Hindu University. However, the improvement of multimodality combined with smaller device and internet technology were not explored significantly in Bali State Polytechnic and I Gusti Bagus Sugriwa State Hindu University. From the background statements above, this study aims to investigate the higher education level students' perception of the use of multimodality on smartphones with internet integration in English instructional.

METHODS

In calculating the data, the *unified theory of acceptance and use of technology* (UTAUT) was the parameter to collect the data process. The UTAUT consists of performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), behavioural intension (BI) and user behaviour (UB). Performance expectancy (PE) measures the positive impact and the usefulness of the device. This also means the degree to which an individual believes that technology will assist learners or users in the learning process. At the same time, effort expectancy (EE) evaluates the ease of technology use, stress-free interaction, and importance of use. Social influence (SI) involves the usefulness for the users whereas facilitating conditions, whereas (FC) evaluates the availability of the system and knowledge to operate the system (Venkatesh et al., 2016). This study focused on the measurement of performance expectancy (PE) on the positive impact and the usefulness of the device and effort expectancy (EE) on ease of technology use and importance of use towards 87 Bali State Polytechnic and 41 of I Gusti Bagus Sugriwa State Hindu University students who learn English as a foreign language.
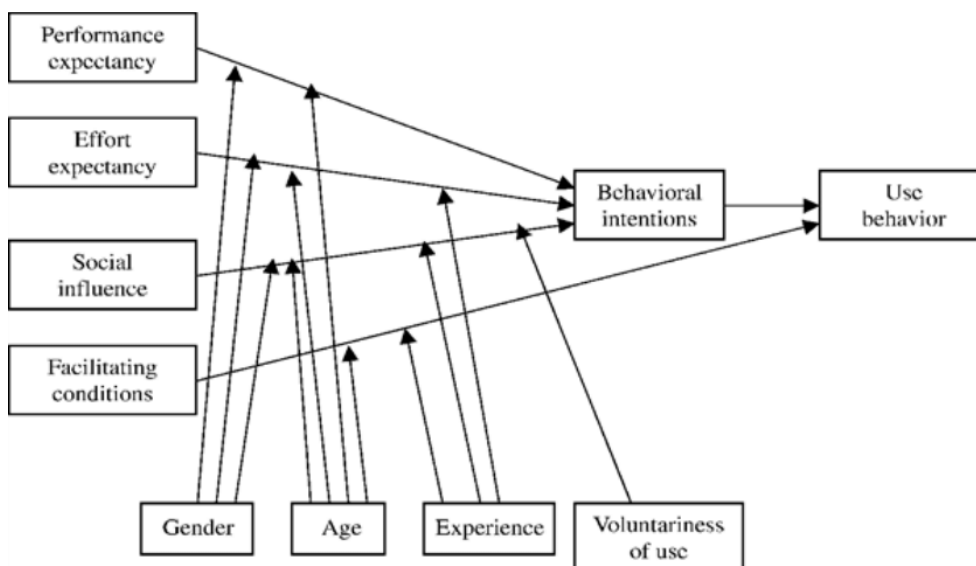

Figure 1. UTAUT (Venkatesh, 2003)

The digital questionnaire was deployed as the instrument to receive the participants' data based on 5-point Likert Scale, scales ranging from 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree. The items of the questionnaire consisted of five topics that were concerned with the trend of multimodality in the English instructional. A qualitative descriptive method was used to calculate the data collection, which then described to elaborate on the result.

RESULTS

A slight distinguish data can be seen from Bali State Polytechnic and I Gusti Bagus Sugriwa State Hindu University participants respond. The vivid differentiation based on the students' arguments showed that none of the mean score of the questionnaire items under 3.0. It means that there are

some positive changes for the teacher to improve the digital technology, smartphone for instance, during teaching and learning activities in the classroom.

Items	Questionnaire
X1	Internet contributes to students' English learning in the classroom (PE)
X2	Smartphone is an appropriate tool used in the classroom (EE)
X3	It is possible to use Smartphone in a particular meeting in the classroom after the covid-19 circumstance is solved (EE)
X4	Learning English using Smartphone as a tool ought to be improved in the future (PE)

Table 1:   Questionnaire items

		X1	X2	X3	X4
N	Valid	87	87	87	87
	Missing	0	0	0	0
Mean		4.28	3.70	3.83	4.15
Median		4.00	4.00	4.00	4.00
Mode		5	4	4	4
Std. Deviation		.758	.701	.735	.620

Table 2:   Bali State Polytechnic students' urge towards the use of multimodality and technology in learning the English language

The Bali State Polytechnic learners demanded the digital network in studying the English language in the classroom. The tendency of using the internet was high which can be seen from the mean score of the first item (X1), it was 4.28 which means most of the students thought that the internet provides some advantages through the learning English language. Besides, the modus score in the first item was five, which means most of the learners strongly agreed with the internet role provide a positive impact on the classroom. The data also mentioned the students' support on the exertion of the smartphone. According to the median of the second question (X2), the figure mentions 3.70, which means more than 50% of the total participants will enjoy using a smartphone through the learning and teaching process. The third item of the questionnaire (X3) described the chance of smartphone utilization in synchronous and asynchronous learning. According to this, the mean of this item was 3.83 which explains students' argument on the sustainability of the smaller device, while the mean score of the fourth item (X4) was 4.15 which elaborates the demand for the improvement of the smartphone. The mean score showed that most of the learners support the development of the smaller device which can be applied in the English language instructional. The data also elaborated that the mode score of the (X2), (X3), and (X4) was 4, this figure represents students' opinion in applying the digital tools in learning the English language.
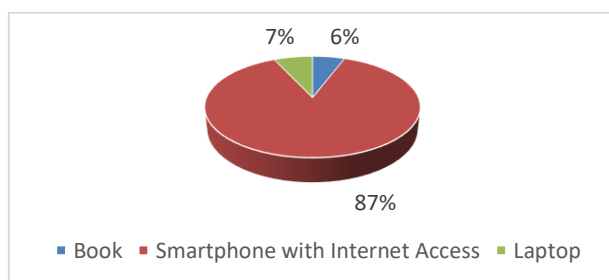

Figure 2: Bali State Polytechnic students' urgency on a specific media use during the learning activities

According to the pie chart, the tendency of using a smartphone with internet access was massive, which is chosen by more than half of the participants. The proportion experienced 87% of participants wanting to use smaller digital technology through the English language instructional. There were less than 10% of learners thought that books or laptops might assist during the learning process. Only 6% of students argued that books may still contribute to the teaching and learning process. Whereas the figure of the laptop role in the curriculum will be not significant, there were only 7% of learners argued that laptops could conduce the classroom activities.

		X1	X2	X3	X4
N	Valid	41	41	41	41
	Missing	0	0	0	0
Mean		4.68	4.10	4.15	4.15
Median		5.00	4.00	4.00	4.00
Mode		5	5	4	4
Std. Deviation		.610	.970	.823	.882

Table 3:   I Gusti Bagus Sugriwa State Hindu University students' urge towards the use of multimodality and technology in learning the English language

The significant arguments were also revealed from the I Gusti Bagus Sugriwa State Hindu University students' perception on the smaller device technology utilization through the English language instructional. The data experienced that a digital device is chosen by most of the learners. Almost all of the students' mean scores in each questionnaire item were more than four, which means that over 50% of participants want to use a smart device in learning instructional in the classroom. In terms of the internet contribution in learning English (X1), the mean score was 4.68 and was the highest mean score among the rest of the items. The mode on this item was 5, which means most participants agreed on the internet role during the English language learning in the classroom. On the second item (X2), the figure of the mean score mentioned 4.10, which was slightly under the third and fourth items. On the first and second mode scores, the students agreed mostly on these items, which give a positive impact on smartphone utilization. Similar to the first and second items, the rest items of the questionnaire showed a positive trend about the students' eagerness for smartphone sustainable and the purpose of digital device improvements in the future. The mean score of the third and fourth was 4.15, while the mode sore mentioned four which means most of the participants agreed on digital device development in the future.
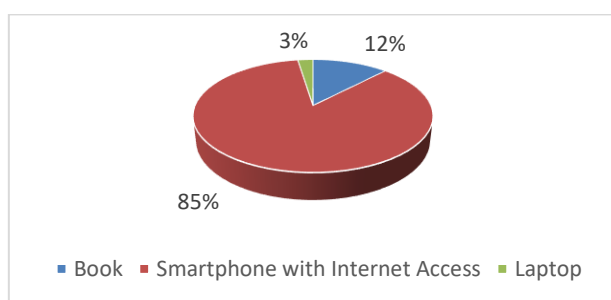

Figure 3: I Gusti Bagus Sugriwa State Hindu University students' urgency on a specific media use during the learning activities

Regarding the students' desire for the use of the media, the smartphone is the most medium chosen by the learners to assist them in learning the English language. The figure showed that 85% of participants believe that a smaller device will support their activities in the classroom. Less than

20% of participants choose the book and laptop for the learning media. Specifically, the laptop was the least tool preferred by the university students, which was 3%, compared to the proportion of the book was quadruple, accounted for 12%.

According to the university and polytechnic students' responses, the combination of digital technology and teaching methodology would appeal to the learners through the English language instructional. Learners thought that multimodality would increase the learners' understanding of language comprehension. The distinguish is vividly seen between polytechnic and university students' opinions. In the internet necessity (X1), the total amount of participants choosing agrees dominant, which means the digital network has a significant role in English language learning. In terms of the second item (X2), most of the polytechnic students agreed that a smartphone is an appropriate tool applied in the classroom.

In contrast, the agree university students mostly took option. According to the rest items (X3 and X4), most learners from two different higher levels of education agreed to operate smartphones in any circumstances, remote or face to face learning system. The participants mostly agreed to the smaller device improvement and development in the future to enhance the learning tools and material during the teaching and learning process.

DISCUSSION

According to the result, both the Bali State Polytechnic and I Gusti Bagus Sugriwa State Hindu University students urge to use the combination of multimodality and technology through the teaching and learning process. All of the participants argue that the internet will contribute towards the students' English learning. Furthermore, a smartphone is a tool which will be appropriately applied in the classroom and can be applied in several meeting after the covid-19 circumstance is solved. This is thought that the sustainability of the smaller device utilization must be improved kindly in the future. Besides, the combination of multimodal, smartphone and internet technology also have a significant role as the learning instrument, especially in learning the English language. The proclivity of multimodal in a higher level of education indicates a high demand; this means that teachers and researchers must build appropriate programs and methodology using multimodality, internet and a smaller device which fit for the students' need. There is no significant difference between both higher levels of education data; the tendency to support digital devices creates an opinion that the era of digital technology brings a positive impact on the education field. In other words, multimodality will be favoured by the learners, for instance, internet and smartphone. Many positive impacts can be obtained by learners using the digital network; this will be a chance for the teachers or researchers to invent and develop the multimodal towards the English language learning materials. Inventing teaching materials can be solved by the combination of many sources on the internet. Application and program related to education are easily found on the internet that may assist learners' necessity. The accessibility in searching the material through the digital network will ease the tutor to expand the various applications or websites.

The trend of the tools utilized by the teachers in enhancement of the students' urge to learn in the classroom has changed from bigger hardware, computer, for instance, to the smaller device for example smartphones. Last decade, CALL (*Computer Assisted Language Learning*), was popular

to assist learners in gaining knowledge. Many programs and websites on the computer had been emerged and improved by the previous developers and researchers which enriched and supported the system of education. The implication of CALL is not merely for higher education students but also for young learners who were involved in the use of this technology. The computer technology was applied to enhance language acquisition of bilingual and multilingual preschool children (Kayumova & Sadykova, 2019). In other words, this technology covers children, and adult learners can operate all levels of educational backgrounds as this device.

Furthermore, the use of CALL in the learning process aims is to create more references for pupils to enrich their idea, familiarize many types of tasks, and increase their critical thinking. However, smaller devices, smartphone, for instance, have been preferred by the sophomore in enhancing their references in learning the lesson. The smartphone's portability leads the users to apply this smaller device in many activities and aspects, including in the education field. The data in this study clearly explain that learners have a desire to apply smartphones in the classroom. All participants from polytechnic and university students agree that smartphones must be used in the learning process. This data also espouses the recent study explained the benefit of MALL (*Mobile Assisted Language Learning*), which has the latest technology innovations in various fields, including education. During the learning activities, the smaller device can be utilized in or outside of the classroom anytime and anywhere, another advantage of this technology is user friendly, which means learners are easy to search the information through this digital technology (Rao, 2019). These advantages must be explored to provide the learning material variety. By obtaining the convenience of smaller hardware, teachers and learners must optimize the positive impact of this media to boost learners' eager learning. Maximizing the use of smartphone application was conducted by the previous researchers, the result was proven that significant progress shown in the overall achievement and the ability in learning English had improved (Shih et al., 2015). This means that a promising future in applying application on the smaller device is a wide range of tool must be explored to bring good enhancement while absorbing the knowledge. The development of students' motivation through smartphones was also focused on the recent study. The researcher found that positive effects are shown in learning English as a foreign language (Klímová, 2018). The smartphone had proved to emerge students' keen to learn as this device had much application which could be used based on the learners' necessity.

Both CALL and MALL technology have contributed to nutrition in English acquisition. The improvement of these technology assists teachers or lecturers to have some references in terms of learning materials which then delivering it to the learners during the teaching and learning process. Based on multimodality, the design of CALL and MALL provide a combination of many important aspects, for example, image, video, audio, and internet. The image had been employed as a traditional material in the education field, which was designed by the teacher to increase learner ability in using language. The researchers claim that visual modes are simply afforded to students by digital word software. Some of the students produce texts in which the researchers discern a slightly different take on the multimodal ensemble of verbal language and images, seen in their production of texts in which the total meaning would not emerge if words and images were separated. English teaching and learning have multimodal qualities that are mostly silent and untapped to literacy (Blikstad-Balas, 2016). The multimodal exploration must be more conducted to enrich the learning material towards improving learners' ability in the English language. Optimizing the images, audio, and the internet provides sophisticated learning

instruments that tend to be accepted by the young learners as technology is familiar applied in the teaching-learning process. The suggestion from the previous research to develop a significant methodology in English instructional had been elaborated vividly. It is accepted that learning English is not only about speaking and writing but also about reading and listening comprehension, hence a deeper understanding of the structure of English is needed. All English skills require structure in facilitating clear meaning to the hearer in communications. The findings of the current study may also be used to inform further study in developing more effective methods in teaching subject-verb agreement and simple past tense in particular, and English grammar in general (Rahmanu et al., 2020). Introducing the technology in learning the English language must be run from the easy strategy, using games on the website; for instance, this technique builds the learner's desire in studying English in the classroom.

The result of this study reflected that smaller devices favoured by the learners, especially in the Bali State Polytechnic and I Gusti Bagus Sugriwa State Hindu University students. The smartphone can be considered by the teachers or researchers as an instrument to deliver the material, tasks, and test to the learners. Delivering the English lesson involved listening, reading, writing, and speaking ability through smartphone devices will be a significant effort to increase these comprehensions. An innovative classroom environment can be reached through the combination of images, videos, and the internet. Besides, the use of multimodality, for example, teachers may develop a wide range of good options in teaching and learning 21st-century skills (Julinar, 2019). In the modern era, multimodality must be explored deeply by the lecturers and learners as nutrition during the learning and teaching process. Smartphone technology will be a great medium to ease learners in accessing the information while learning English language activity; furthermore smaller devices have many applications that support the students to study the language. So, the digital application on the smartphone delivers an important role in driving learners to complete each exercise (Shih et al., 2015). The accessibility and ease to use are the advantages of the smaller digital device. These learning instruments are also must be selected to obtain the fit strategy in enhancing learners' desire in learning the English language. Besides, this can be supplementary for the students to improve students' language skills. In light of students' proposed strategies to implement mobile learning, the study suggests guidelines to integrate mobile learning in the EFL context (Dashtestani, 2016). More longitudinal randomized controlled studies are needed to confirm the efficacy of the use of mobile phone and smartphone apps on specific language skills and knowledge (Klímová, 2018).

CONCLUSION

The demand for the use of technology and multimodality in Bali State Polytechnic and I Gusti Bagus Sugriwa State Hindu University can be seen clearly. The multimodality development must be conducted in smaller devices, smartphones, for instance, the component of multimodality has consisted of this recent smaller technology which can be utilized by the learners in absorbing the knowledge. Further action must be emerged by future researchers in improving learners' urges through digital technology. The benefit of technology in the smaller device can be investigated further to assist the variety of learning materials, for example, learning applications. By choosing many applications on the smartphone, teachers can filter the platform which fits the learners' necessity. The smaller digital device's role is vividly seen in terms of the curriculum quality enhancement. The multimodality utilized from the smartphone is essential to enrich the English

curriculum, for example, preparing the lesson plan, daily task, and test. In the process of preparing the planning, it will be more efficient if the accessibility of the material can be accessed from the smartphone. Using digital learning instruments can lead the students to have an urge to gain a variety of knowledge. Similarly, providing daily tasks and tests through multimodality will ease the teacher to deliver the comprehension to the students.

On the other hand, the support between the learning strategy or methodology and digital technology must be combined kindly as the digital device can not stand alone to increase the learners' ability and urge in learning the language. The rules and patterns of using digital technology should be explained clearly to decrease students' mislead in the classroom. Preparing the guidelines and choosing the fit media must be proposed by the teachers or researchers before deploying them to the learners. These must be adapted to reduce students' misunderstanding in the use of technology. Technology will be less significant if the users can not apply it in the appropriate circumstances. Besides, the need for students on the use of technology must be mastered; otherwise, the unsuccessful goal of the learning process will not be gained at the end of the learning instructional.

This research espouses the previous study in this time of multimedia and the internet. The learners will still feel less understanding of the knowledge if the teachers do not put such plenty of materials. Teaching and learning could be more efficient and exciting to increase the students' desire to study in the classroom. The combination of multimodality and internet technology are suitable for students of all backgrounds, no matter they are English majors or non-English majors, no matter they are in the medium level or high level. Maximizing technology is the tutors' and teachers' homework to assisting the learners in learning more about the English language. Even though the researchers must prepare some considerations, for example, the platform which fits the higher level of students demand and the use of other previous learning methodology, the technology utilization can not stand alone. This means that the combination of multimodality, smaller device, and internet technology suitable for higher education are necessary suggested in delivering the learning material for further study.

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