

Learners' Experiences in Using Moodle Lesson and H5P Interactive Content in Learning Public Speaking¹

Umi Kalsom Masrom², Universiti Malaysia Pahang Al-Sultan Abdullah, Pekan, Pahang, Malaysia

Zailani Jusoh³, Universiti Sultan Zainal Abidin, Kuala Terengganu, Terengganu, Malaysia

Kamran Mir⁴, Technological University Dublin, Ireland

Abstract

The digitalization of teaching continues to shape its future, demanding continuing adaptation to its growing needs. To meet the evolving expectations, many online learning modules have been produced. Nonetheless, many fail to capture learners' interest as they lack creativity since they contain lengthy texts and uninteresting explanatory videos. For these reasons, instructors utilize educational animation, which is widely available on platforms such as Moodle, to take advantage of the benefits of interactive content to keep learners interested. Despite the efforts taken by the instructors in including interactive content, it is uncertain what learners think of the content. This study aims to explore learners' experience on the use of interactivity in Public Speaking Skills course using Lesson Activity and H5P Interactive Content features on Moodle. Sixty-three students participated in the study and completed the online survey at the end of the lessons. Participants were asked to rate the interactive activities and share their experiences on the use of the features in their lessons. This study shows that the majority of the participants had a positive experience with both interactive activities. This study is important as it provides information on how Moodle Lesson and H5P Interactive Content can be better adapted in the future for blended learning, online learning, or hybrid classrooms.

Resumen

La digitalización de la enseñanza continúa moldeando su futuro, exigiendo una adaptación continua a sus crecientes necesidades. Para satisfacer las expectativas cambiantes, se han creado numerosos módulos de aprendizaje en línea. Sin embargo, muchos no logran captar el interés de los estudiantes debido a su falta de creatividad, ya que contienen textos extensos y videos explicativos poco interesantes. Por estas razones, los instructores utilizan animaciones educativas, ampliamente disponibles en plataformas como Moodle, para aprovechar las ventajas del contenido interactivo y mantener el interés de los estudiantes. A pesar de los esfuerzos de los instructores por incluir contenido interactivo, no se sabe con certeza qué opinan los estudiantes sobre él. Este estudio busca explorar la experiencia de los estudiantes en el uso de la interactividad en el curso de Habilidades para Hablar en Público mediante las funciones de Actividad Lectora y Contenido Interactivo H5P en Moodle. Sesenta y tres estudiantes participaron en el estudio y completaron la encuesta en línea al final de las lecciones. Se les pidió que calificaran las actividades interactivas y compartieran sus experiencias sobre el uso de las funciones en sus lecciones. Este estudio muestra que la mayoría de los participantes tuvieron una experiencia positiva con ambas actividades interactivas. Este estudio es importante porque proporciona información sobre cómo las lecciones Moodle y el contenido interactivo H5P pueden adaptarse mejor en el futuro para el aprendizaje combinado, el aprendizaje en línea o las aulas híbridas.

Introduction

During the COVID-19 pandemic, many learning institutions, especially at tertiary level around the globe placed increased importance on the use of information technologies in education so that an effective teaching and learning ecosystem could be offered in online environment (Karakose, 2021). This situation led to a greater and more extensive use of educational technology in various courses including public speaking.

Public Speaking is a skill-based course which requires learners to perform several speaking tasks confidently and in appropriate and structured manner. Course content includes both theoretical and practical elements of English language. In the class, although learners take an active role in the preparation and delivery of the presentations, the instruction component of the subject is more teacher-centred, making it less engaging and appealing to learners. In order to engage students in the lessons, instructors have to be creative in devising lessons that are captivating and engaging. To improve the current teaching approach, the instructor attempts to promote greater engagement and interest among learners by using interactive content in the theoretical part in the syllabus. As proposed by Bresnihan and MacAuley (2014), interactive activities, created through designing interactive content, are one of the most important elements in teaching English. Interactive content is a learning material that involves the active participation of the learners as opposed to

¹ Received: 16 February, 2023. Accepted: 16 May, 2023. Published: 26 March, 2025.

² umikalsom@ump.edu.my, 0000-0002-4071-7618

³ zailanijusoh@gmail.com, 0000-0001-5923-7641

⁴ kamran.mir@aiou.edu.pk, 0000-0001-7399-7807

just listening, reading, or watching. It involves the integration of elements such as online quizzes, assessments, graphs, infographics, and interactive white papers (Interactive Learning Content: How Effective is it in E-learning, 2023.). The common challenge in online learning is to maintain students' attention, engagement, and retention. As there are many different types of learners with different abilities and preferences, instructors need to find the most effective way to adapt to these differences and challenges. This study attempts to provide options for instructors so that learners can adapt to the learning situation more effectively. Options explored were *Moodle Lesson* and H5P Interactive Content on *Moodle*, which are believed to allow learners to manage their learning at their own pace.

The main aims of this study were to determine if *Moodle Lesson* and H5P can be used as teaching material for a public speaking course and to identify their benefits, if any, to the public speaking learners. This research was guided by the following research questions:

1. Can *Moodle Lesson* and H5P interactive content be utilized as teaching material to enhance and support public speaking learners meaningfully?
2. How do the *Moodle Lesson* and H5P, when utilized as a teaching material, contribute meaningfully to the public speaking learners' experiences?

Literature Review

Moodle as an educational tool

Moodle, an acronym for Modular Object-Oriented Dynamic Learning Environment, a learning platform or Course Management System (CMS), was developed by Martin Dougimas in 2002 and has been in continual evolution ever since (Cole & Foster, 2007). The latest edition is Moodle 4.0 and it offers two platforms for users: *Moodle Learning Management System* (LMS) and *Moodle Workplace*. *Moodle* was designed to assist educators to create and maintain effective online content for their courses. It has features that not only allow instructors to create online courses but also manage learning materials and assessments and monitor their learners' progress. Lastly, it also allows interaction between instructors and learners in discussions and forums.

One feature that is available on *Moodle* is *Moodle Lesson* which presents the content of a lesson that each student navigates individually according to their responses to the options displayed. The course material is presented in a flexible and branching flow that provides learners control of their own learning as the materials are self-accessed and self-paced. *Moodle Lesson* permits instructors to create different types of learning paths to measure students' understanding of key concepts. A particular lesson progresses through a series of linked pages that comprise a combination of written content, questions, or prompts. These pages can include text, images, audio, and video components thus allowing learners to build their own learning path. Studies have suggested that *Moodle Lesson* have various benefits to learners namely enhancing learners' understanding on the lessons/materials (Gillani, et al., 2021) and promoting self-directed learning and decision making (Wisniewski & Hortman, 2019). In the same vein, Jamaluddin et al. (2020) described *Moodle Lesson's* opportunity in directing self-learning experience among learners and demonstrated the steps in developing a lesson plan using *Moodle Lesson*.

Another useful feature on *Moodle* is H5P Interactive Content which allows instructors to create interactive content such as presentations, quizzes, games, and many other multimedia without the need of programming skills. H5P refers to HTML5 Package which can be integrated in any of these three ways: 1) direct link or embed from the website H5P.com, 2) H5P plugins, and 3) H5P via learning tools interoperability (LTI) (Sinnayah et al., 2021). After the integration, instructors can easily choose the interactive content they intend to use in their lessons since all content types are available on *Moodle*. H5P offers various features that are convenient for instructors to create a personalized learning environment for their courses. H5P can be easily accessed on any mobile device anytime and anywhere (Addhiny, 2021). H5P offers various content types such as Course Presentation, Memory Game, Branching Scenario and Image Hotspot (<https://h5p.org>).

Studies have highlighted the benefits of using H5P in aiding creating teaching materials. Some of the benefits include the use of H5P in developing authorship tools and educational resources (Pereira et al., 2019) and creating interactive video (MacFarlane & Ballantyne, 2018). Another benefit of using H5P was also discovered by Mir (2021) in a study that explored the use of interactive video on learners' engagement and satisfaction. The results indicated that the interactivity of the learning materials was important to determine

the effectiveness of learning. It was also found that learners have shown a higher degree of engagement and satisfaction when they use interactive video. Furthermore, H5P was also found to promote greater independency and student-centered learning (Hudson, 2019) and promote problem-solving skills (Homanova et al., 2019) and self-directed learning (Sinnayah, et al., 2021).

Moodle Lesson and H5P in language teaching and learning

Despite a number of studies being conducted on Moodle Lesson and H5P in various courses, studies exploring the use of H5P in language teaching and learning are rather limited. Among them is Wicaksono et al., (2021) who conducted a qualitative study to explore learners' perception of the use of H5P in the learning of English language course. The findings indicated that the use of H5P in the teaching of the course for six weeks had a relatively significant effect on learners' motivation and it influenced the development of learners' language skills. The study also mentioned poor internet connection as the greatest challenge in using H5P because all the activities in H5P rely on a reliable internet connection. The issue of poor internet connections remains one of the major challenges that instructors and learners have faced in an online learning environment (Noor et al., 2020). Hence, the internet connection must be sufficiently dependable so that successful teaching and learning can be accomplished.

Similarly, a study by Dhini and Ardiasih (2021) investigated learners' perception of the use of H5P in learning listening skills. The H5P content types used were Drag the Words, Drag and Drop, Fill in the Blanks, True and False, and Multiple Choice. The findings showed that learners felt that using H5P could promote greater listening skills and offer meaningful listening activities. Meanwhile, Muñoz Candela (2021) assessed the effects of using Dialog Cards, Memory Game and Interactive video on vocabulary acquisition of English language learners in a quasi-experimental study. The study found that H5P could promote greater vocabulary acquisition in a second language learning context.

In summary, Moodle has a great potential to enhance learning in any education system regardless of whether it is in blended learning mode or functions independently (Acar & Kayaoglu, 2020). Many studies have investigated its role in teaching and learning, however, studies that have explored Moodle Lesson and H5P are still limited, particularly in the context of language learning (Addhiny, 2021). Since there is little evidence on how Moodle Lesson and H5P could be used to facilitate learning, it is highly important to provide further insights into this matter.

Methodology

This study was conducted in one of the private universities in Malaysia used a mixed method research design to better understand how Moodle Lesson and H5P, when utilized as teaching materials, enhanced and supported meaningful learners' experiences. This type of research design allows the creation of a comprehensive picture of learners' experiences by identifying trends and making generalization based on the participants' viewpoints. (Creswell & Clark, 2007).

Participants

The study was designed to measure students' perception of one course, Public Speaking Skills. While this course is compulsory for all students majoring in Business and Management programs, only students who were enrolled in the course during the academic year of 2021/2022 were invited to participate. All were students at a private university in Malaysia and all 63 students who were enrolled in the course agreed to participate in the study. The students were majoring in Business Management and the majority (88.9%) were freshmen. Among the respondents, 44 (69.8%) were female while 19 (30.2%) were male. Their ages ranged from 20 to 22 years old. All the respondents were Malaysians and had received formal English language education for at least 13 years beginning in primary school. The following Table summarizes the demographic information of the participants.

Information		N	Frequency (%)
Level of Study	Year 1	56	88.9
	Year 2	5	7.9
	Year 3	2	3.2
Gender	Female	44	69.8
	Male	19	30.2

Table 1: Demographic information of the participants

Instrumentation

For the purpose of this study, data based on four online synchronous sessions were collected. The class met once a week and lasted for two hours. In each lesson, materials for the class were available on both Moodle Lesson and H5P. Thus, learners had to access both Moodle features to obtain information and do activities. At the end of the fourth lesson, participants were asked to complete an online survey in English.

The online questionnaire was self-developed and consisted of three Parts. Part A gathered demographic information of the participants. Parts B and C elicited participants' feedback on the use of Moodle Lesson and H5P in their public speaking class. Part B specifically contained two items to gauge feedback on the use of Moodle Lesson and H5P with a ten-point rating scale (1 being the lowest rating and 10 being the highest rating). Finally, Part C had two open-ended items which were designed to encourage participants to freely express their thoughts and opinions on their experience in using Moodle Lesson and H5P. The questionnaire (Appendix 1) was checked by two experts and piloted to 16 students who were enrolled in the same course to ensure its reliability and validity in measuring the intended outcomes.

Data collection procedures

At the beginning of the semester, a briefing session was held by the instructor to serve two purposes. The first purpose was to familiarize students who were mostly first-time users of Moodle about the various features of the Moodle Lesson and H5P. In addition, the instructor also took the opportunity to explain about the research that was being conducted, i.e., its nature and its potential significance and benefits. The students were later invited to participate and informed that this participation was on a voluntary basis. They were asked to sign a declaration of consent should they agree to participate in the survey. For the purpose of the study, they were requested to complete an online survey after the fourth time of using Moodle Lesson and H5P.

Moodle Lesson and H5P implementation

The procedure began with the organization and integration of the Moodle Lesson and H5P into the public speaking course, based on the ASSURE Instructional Design Model (Kim and Downey, 2016). which was used to create lesson plans that could effectively integrate the Moodle Lesson and H5P to improve students learning. Table 2 presents the stages in ASSURE instructional design model as used in this study.

No.	Stage	Items	Description
1	Analyze learners	Students' Characteristics Course/Level	63 business management students Public Speaking Course/ Undergraduate students
2	State Objectives	Learning Objectives (LO)	LO1: Identify the basic elements of the speech communication process. LO2: Identify several categories of topics that may be used in informative speaking. LO3: Differentiate the three types of persuasive speech topics. LO4: Recognize the functions of speech introduction and conclusion.
3	Select instructional methods, media and materials	Incorporation of Technology Content Types (H5P)	Moodle Lesson and H5P Fill in the Blanks Drag the Words Multiple Choice Course Presentation
4 & 5	Utilize media and materials and require learner participation	Before class In- Class After Class	Learners used Lesson before the class Learners used H5P during class session Learners used H5P after class session
6	Evaluate and Revise	Learners' Feedback	Rating scale and open-ended questions

Table 2: ASSURE instructional design model

The study was conducted based on several sets of lesson plans that had been planned and developed by the course instructors for the public speaking course. The preparation of the lesson plans was based on the standard curriculum of the course. Activities were carried out on Moodle using both the Moodle Lesson and

H5P. Figures 1 and 2 show samples of activities for the Moodle Lesson while Figures 3, 4, and 5 show the samples of different content types in H5P.

This is an open-access article distributed under the terms of a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) license.

For some speakers, deciding on a topic is one of the most difficult parts of informative speaking. The following subsections begin by discussing several categories of topics that you might use for an informative presentation.

[Preview](#) [Edit](#) [Reports](#) [Grade essays](#)

Objects

The term "objects" encompasses many topics we might not ordinarily consider to be "things." It's a category that includes people, institutions, places, substances, and inanimate things. The following are some of these topics:

- COVID-19
- toxic pollution
- Sharks

You will find it necessary to narrow your topic about an object because, like any topic, you can't say everything about it in a single speech. In most cases, there are choices about how to narrow the topic. Here are some specific purpose statements that reflect ways of narrowing a few of those topics:

- To inform the audience about the impacts of COVID-19 to education system globally
- To inform the audience about the causes of toxic pollution
- To inform the audience about the types of sharks

Figure 1: Sample 1 of Moodle Lesson

Types of Persuasive Speech Topics

There are 3 major types of persuasive topics; fact, value and policy.

[Preview](#) [Edit](#) [Reports](#) [Grade essays](#)

Types of Questions

It is often helpful for persuasive speakers to think in terms of reaching their target audience.

1. The target audience is the part of the whole audience a speaker most wants to reach with his or her message.
2. In most situations, the target audience consists of uncommitted listeners, listeners who are inclining toward agreement with the speaker, and listeners who disagree with the speaker but who are open to persuasion.
3. Once a speaker knows where the target audience stands, she or he can adapt the speech to fit the values and concerns of the target audience.

Figure 2: Sample 2 of Moodle Lesson

The Speech Communication Process

The **speech communication process** describes how people communicate.

Answer the following questions based on the video above.

Fill in the missing words based on the video you have watched on The Speech Communication Process.

There are elements in speech communication process.

A refers to the person who delivers the message while a is the person who receives the communicated messages.

The goal of a speaker is to deliver a correctly to the right person through the means by which the message is communicated or known as a .

is important so that a speaker can see how the audience is responding, whether there is any that impedes the communication of a message.

Finally, a refers to the time and place in which the communication takes place for example in online meeting, at a cafe etc.

Figure 3: Fill in the blanks (H5P)

Speaking to Persuade Quiz

Types of Persuasive Speech. There are 3 types; policy, value and fact.

Drag the words into the correct boxes

1. Every student should have a laptop for schoolwork. ()
2. It is just as important to fund the arts as it is to fund reading, math, and science. ()
3. Plastic water bottles should be banned. ()
4. Recycling is not as important as reducing consumption. ()
5. Processed food is bad for you. ()
6. Health care is [is not] a human right. ()
7. You can make yourself happier just by smiling. ()
8. Stress is good for you. ()
9. All police officers should be required to wear video cameras. ()
10. E-cigarettes (particularly flavored ones) pose a significant risk to children. ()

fact
value
policy
fact
value
policy
value
fact
value

Check

Figure 4: Drag the words (H5P)

Presenting a Speech Quiz

As described in the Lesson Activity, there are 4 basic methods of delivering a speech;

- verbatim from manuscript
- memory
- impromptu
- extemporaneous

Nonverbal communication is based on a person's use of voice and body, rather than on the use of words.

True False

Check

Question: 1 of 7 questions

Beginning and Ending a Speech Quiz

Answer the following questions.

Speakers should be long-winded in the conclusion.

True False

Check

Figure 5: Two examples of true and false (H5P)

Data analysis

Sixty-three respondents responded to the survey. The quantitative data obtained were then analyzed descriptively using Statistical Package for the Social Sciences (SPSS) Version 23. The qualitative data from the open-ended items were analyzed thematically. In order to guarantee a structured analysis and presentation of the participants' extracts, each respondent was assigned a specific codename ranging from P01 to P63 to differentiate their views and comments that were explicitly expressed in the extracts. For instance, P01 represented the first participant in the study who provided open-ended item data. Two researchers were involved in independent analysis to identify the emerging themes. To evaluate the level of concordance and consistency of the themes, Miles and Huberman's inter-rater reliability was employed.

The agreement reached was 82%, whereas the remaining 18% of the divergent viewpoints were resolved by choosing the words that were related to the theme.

Results and Discussion

General rating: Learners' experiences in using Moodle Lesson and H5P Interactive Content

Table 3 and Table 4 show the results of the rating (from one—the least to ten—the most) given by the learners. Two questions were asked for Lesson and H5P activities: (1) *How do you rate the Lesson/H5P activities in enhancing your understanding in learning this course?* and (2) *How do you rate the Lesson/H5P activities in increasing your motivation in learning this course?*

Frequency (Percentage)	Lesson	H5P
7	6 (9.5)	5 (7.9)
8	13 (20.6)	15 (23.9)
9	15 (23.9)	16 (25.4)
10	29 (46)	27 (42.3)
Mean	9.0635	9.0317
SD	1.0298	0.9995

(Item 1: Enhance Understanding)

Table 3: Descriptive statistics on feedback on Lessons and H5P

Frequency (Percentage)	Lesson	H5P
7	0 (0)	0 (0)
8	14 (22.2)	16 (25.4)
9	14 (22.2)	16 (25.4)
10	35 (55.6)	31 (49.2)
Mean	9.3226	9.2131
SD	0.8253	0.8389

(Item 2: Increase Motivation)

Table 4: Descriptive statistics on feedback on Lessons and H5P

Based on the findings summarized in Table 2 and Table 3, participants reported high mean for the first item in both Lesson and H5P Interactive content (M=9.06, SD=1.03) and (M= 9.03, SD=1.0) respectively. This is similar with the second question, where the means were also high for Lesson (M=9.32, SD=0.83) and H5P (M=9.21, SD=0.84). All of the responses are ranged from seven to ten. No one responded below seven for either activity. This indicates that participants gave positive feedback in terms of the use of Moodle Lesson and H5P Interactive Content in enhancing their understanding and increasing motivation.

Moodle Lesson and H5P as an interactive environment to learn English

The purpose of this open-ended question was to allow participants to express their thoughts freely on the use of Moodle Lesson and H5P in learning English. The findings were categorized into several themes with regard to learners' experience and the challenges they faced when using Moodle Lesson and H5P, which is described in Table 5.

Response Category	Number of learners (n=63)	Percentage (%)
Found Moodle Lesson to be good, interesting, fun and helpful for understanding	56	89
Expressed delight with the new experience	54	86
Developed positive feelings and willingness to share	59	94

Table 5: Learners' experience in using Moodle Lesson and H5P

In general, the data revealed that fifty-four learners (86%) expressed their delight with the new experience with Lesson and H5P despite facing some hindrances along the way. Fifty-nine learners (94%) were beginning to develop positive feelings that they were willing to share with each other. Fifty-six (89%)

respondents claimed that Moodle Lesson was good, great, interesting, fun and it offers greater understanding of the topic. The excerpts reported are the learners' actual words.

The following are some of the excerpts from the survey regarding Moodle Lesson in the students' own words:

In my opinion, the Lesson activity was interesting and using this kind of activity I am deliberately able to gain more knowledge on [sic] speech. (P12)

Rereading the notes in a [sic] form of lesson activity gives me a better understanding on [sic] the topic and doing the quiz helped me to test my understanding. I really enjoy doing the activity. (P07)

The lesson exercise allows me to remember what I have learned and give [sic] me deeper understanding of what I've read. (P24)

Makes me even more understand [sic] each content [sic] of the topic. (P51)

Some participants said that the activity could provide assistance during independent learning:

The lesson activity is fun because it is not boring, especially for students who study at home. The lesson activity can attract students to learn. (P58)

The lesson exercise allows me to remember what I've learned and have [sic] a deeper knowledge of what I've learned. This allows me to remember what I've done in class. (P60)

I learn [sic] something new and understand more deeply.

In the same vein, H5P had also got positive feedback from the participants:

Using H5P quiz gives me clear knowledge and the chance to know what is right and wrong based on the feedback that appears at the end of the quiz. Very good. (P37)

This is one of the exciting applications that I [sic] ever used so far. (P22)

Good for students to recall and stay focus [sic] in class. (P19)

Furthermore, the participants also mentioned that H5P is user-friendly and very helpful in understanding the topic taught:

Very simple, easy to complete, clear and not making me stress [sic]. (P41)

It helps me to test my understanding on [sic] the topic. (P62)

It's easy to answer and gives us a chance to correct our mistakes. (P06)

... I was able to answer questions. (P27)

Not hard but good enough to ensure if student [sic] understand [sic] or not with [sic] their lesson. (P36)

Using H5P quiz gives me clear knowledge and the chance to know what is right and wrong based on the feedback that appears at the end of the quiz. (P16)

Can recall what I had studied. (P39)

In addition to the positive feedback on the use of Moodle, another theme that emerged from the data concerned the challenges and recommendations from learners.

Some learners commented on the notes that were considered to be quite wordy:

I would prefer if the notes given in the activity is [sic] shorter so that I do not have to read a lot. (P52)

Give shorter notes, please. (P61)

Meanwhile P49 gave a recommendation for the use of H5P:

Make it more friendly user [sic], put a 'back button' where we don't need to scroll from the top again to the bottom.

With regards to H5P Interactive Content, some participants suggested justifications for the wrong answers to be provided by the instructor:

Please provide reasons for wrong answers. (P04)

Tell me why my answer is wrong. (P31)

Other suggestions included providing more flashcards and adding some notes to assist learners:

I would like to suggest having more flashcards. (P52)

Add some notes and highlight the questions. (P48)

In summary, based on the feedback expressed by the participants in the survey, Moodle Lesson and H5P could provide various learning opportunities. In terms of learning experiences, participants were satisfied

with activities on both features as they gained a lot from both activities. The benefits such as ease of use, a possibility of greater comprehension of the topic are frequently cited.

The excerpts from the respondents highlighted that although learners in higher education institutions in Malaysia are exposed to an array of technologies in their learning, some still encounter certain challenges particularly when the text is rather lengthy and has less interactive element (i.e., back and forward buttons) to direct learners to certain pages. This means that it is important to provide training in using H5P. The instructors, as much as the learners, need to be well equipped with relevant knowledge and skills in relation to the use of interactive content in teaching and learning so that learning experience can be optimized.

Conclusion

This study investigated the potential of Moodle Lesson and H5P interactive content in learning public speaking and in what way they could make a meaningful contribution to the learners' experiences. In general, the respondents showed positive experience in using Moodle Lesson and H5P in English learning during a public speaking course. Findings indicated that respondents felt that Moodle Lesson and H5P were able to enhance their understanding of the lessons. Moreover, they were motivated to use interactive content in learning public speaking as they found the experience to be interesting and easy to use. In addition, the respondents reported learning through their use of the interactive content. Hence, this research suggests that learning English in an interactive public speaking course can be aided by learners' awareness of the existence of interactive content to enhance understanding and increase their motivation.

Based on the findings, several pedagogical implications can be highlighted to strengthen our current knowledge of using interactive content for effective language learning experiences. For example, researchers and instructors using interactive content for learning purposes need to detect their learners' interest and behaviors in interactive environments and how they could use interactive content effectively before they make any plans or implement it in their teaching and learning activities. It is evident that learners perceive the use of the activities in their lessons in a very positive light. This study offers more in-depth understanding of the implementation of Moodle Lesson and H5P and this would be valuable for instructors to better improve their instruction in the future. Therefore, practitioners should constantly review, innovate, and improve their teaching practices for learners to reap the benefits.

In terms of future research, this study has opened the opportunity for other possible research questions to be further investigated. Investigating how instructors can utilize interactive content to promote learning among students in different countries can address the main concern of this study which is related to recognizing learning patterns and learners' needs and attitudes before using interactive content as a learning platform. Furthermore, exploring the implementation of interactive content in other contexts could provide more insights in understanding interactive content as one of the educational platforms for online, blended or hybrid classrooms. Another worthy topic for future research deals with constructive feedback given by students to improve the execution of online lessons. As a party who is directly involved in the lessons, students have certain expectations with regard to the way classes should be handled. Thus, their comments should be considered seriously to see how they can inform classroom implementation.

Limitations

The study has a number of limitations which should be considered when analyzing the results. Firstly, the scope of this study is limited to business and management undergraduate learners of a public speaking course. Therefore, the result of this study cannot be generalized to all public speaking learners, business management students, or any other contexts. In this regard, future researchers can extend the study by taking samples of learners in other programs or courses. Secondly, the methodology used in this study was an online survey, whereas future research could extend the collection of data by conducting interviews to allow respondents to share their deeper insights on this matter. Lastly, there could be other factors such as instructor roles and learner individual differences that influence the learners' perception on the use of Moodle Lesson and H5P that were not controlled upon the data collection procedures. As such, this study proposes future research to expand the study by controlling potential variables that may interfere and influence the findings.

Acknowledgement

This research is supported by Universiti Malaysia Pahang Al-Sultan Abdullah (Teaching and Learning Grant- PPU230103).

References

- Acar, A., & Kayaoglu, M. N. (2020). Moodle as a potential tool for language education under the shadow of COVID-19. *Eurasian Journal of Educational Research*, 9(0), 67-82. <https://files.eric.ed.gov/fulltext/EJ1284359.pdf>
- Addhiny, T. (2021). The use of H5P interactive content in English language learning. *Panrita: Journal of Science, Technology, and Arts*, 1(1). <https://www.journal.dedikasi.org/pjsta/article/view/16>
- Bresnihan, B. D., & MacAuley, M. (2014). An integrated approach: Four skills, not one and one content, not four. *MEXTESOL Journal*, 38(3). https://www.mextesol.net/journal/index.php?page=journal&id_article=560
- Interactive learning content: How effective is it in e-learning (2023, 8 June). *Blog CAE*. <https://www.cae.net/interactive-learning-content-elearning>
- Cole, J., & Foster, H. (2007). *Using Moodle: Teaching with the popular open source course management system* (2nd ed.). O'Reilly Media.
- Creswell, J., & Clark, V. (2007). *Designing and conducting mixed methods research*. Sage.
- Dhini, B. F., & Ardiasih, L. S. (2021). Enhancing learners' listening skills with H5P: A Moodle-based online learning platform. In G. W. A. R. Fernando, S. P. Karunanayaka, D. T. Abeyasinghe, & T. S. P. Fernando (Eds.), *34th Annual Conference of the Asian Association of Open Universities, Opening minds for a sustainable future: Reorienting ODL to surmount challenges*, Colombo, Sri Lanka (pp. 427-439).
- Gillani, S. W., Gulam, S. M., Al-Salloum, J., & Assadi, R. A. (2021). Assessment of outcomes associated with a Moodle-based lesson design for a research course in pharmacy education: An experimental pilot process validation study. *Pharmacy Education*, 21, 642-650. <https://doi.org/10.46542/pe.2021.211.642650>
- Homanova, Z., Prextova, T., Tran, D., & Kostolanyova, K. (2019). Using H5P interactive teaching aids to solve problems. In R. Ørngreen, M. Buhl, & B. Meyer (Eds.), *Proceedings of the 18th European Conference on e-Learning, Aalborg University, Copenhagen, Denmark* (p. 214). Academic Conferences and Publishing.
- Hudson, J. (2019). *Flipping lessons with Moodle: Using the H5P Moodle plugin to deliver online sessions*. 12th Annual University of Glasgow Learning and Teaching Conference, Glasgow.
- Jamaluddin, J. E., Abidin, I. Z., Idris, M. A., & Masrom, U. K. (2020). Designing lesson plans for adaptive learning using Moodle LMS platform. *International Journal of Creative Multimedia*, 1(SI1), 208-217. <https://doi.org/10.33093/ijcm.2020.1.X1.16>
- Karakose, T. (2021). The impact of the COVID-19 epidemic on higher education: Opportunities and implications for policy and practice. *Educational Process International Journal*, 10(1), 7-12. <http://dx.doi.org/10.22521/edupij.2021.101.1>
- Kim, D., & Downey, S. (2016). Examining the use of the ASSURE model by K–12 teachers. *Computers in the Schools*, 33(3), 153–168. <https://doi.org/10.1080/07380569.2016.1203208>
- MacFarlane, L.-A. & Ballantyne, E. (2018). Bringing videos to life with H5P: Expanding experiential learning online. *Proceedings of the Atlantic Universities' Teaching Showcase*, 22, 28-33. <https://ojs.library.dal.ca/auts/article/view/10186>
- Mir, K. (2021). H5P interactive video content in Moodle to improve learners' engagement in online learning. In G. W. A. R. Fernando, S. P. Karunanayaka, D. T. Abeyasinghe, & T. S. P. Fernando (Eds.), *34th Annual Conference of the Asian Association of Open Universities, Opening minds for a sustainable future: Reorienting ODL to surmount challenges*, Colombo, Sri Lanka (pp. 403-415).
- Muñoz Candela, M. (2021). *Teaching vocabulary in the ESL classroom with H5P interactive activities* [Unpublished master's thesis], University of Valencia.
- Noor, S., Isa, F. M., & Mazhar, F. F. (2020). Online teaching practices during the COVID-19 pandemic. *Educational Process International Journal*, 9(3), 169-184, https://www.edupij.com/index/makale_indir/205
- Pereira, D. S., de Lima, J. V., Jardim, R. R., Rocha, P. S., Euder, F. d., & Tarouco, L. M. R. (2019). HTML5 authoring tool to support the teaching-learning process: A case study with H5P framework. *International Journal for Innovation Education and Research*, 7(2). <https://doi.org/10.31686/ijier.vol7.iss2.1325>
- Sinnayah, P., Salcedo, A., & Rekhari, S. (2021). Reimagining physiology education with interactive content developed in H5P. *Advances in Physiology Education*, 45(1), 71-76. <https://doi.org/10.1152/advan.00021.2020>
- Wicaksono, J. A., Setiarini, R. B., Ikeda, O., & Novawan, A. (2021). *The use of H5P in teaching English*. *Advances in Social Science, Education and Humanities Research, Proceedings of the First International Conference on Social Science, Humanity, and Public Health (ICOSHIP 2020)* 514, 227-230. <https://doi.org/10.2991/assehr.k.210101.049>
- Wisniewski, C. S., & Hortman, M. B. (2019). Comparison of pharmacy students randomized to receive drug information reference education via recording or interactive Moodle lesson. *International Journal of Educational Technology in Higher Education*, 16(1). <https://link.springer.com/article/10.1186/s41239-019-0138-1>

Appendix 1

The Questionnaire

This is a survey to gain learners' feedback on the application of Moodle Lesson and H5P into the course. The responses given in the survey will be completely confidential. Please give your responses as honestly and truthfully as possible. There is no right or wrong answer. We are simply interested in your opinions.

Thank you for your cooperation.

Part A: Background information

Instruction: Please tick (√) and fill in where appropriate.

1. Name : _____
2. Gender: Male Female
3. Year of study:

Year 1	
Year 2	
Year 3	

Part B: Feedback on Moodle Lesson and H5P

Instruction: Please rate each question on a scale of 1 to 10, where 1 represents the least impact and 10 represents the highest impact.

1. How do you rate the Lesson/H5P activities in enhancing your understanding in learning this course?
2. How do you rate the Lesson/H5P activities in increasing your motivation in learning this course?

Part C: Experience in Using Moodle Lesson and H5P

Instruction: Kindly provide response for the questions.

1. How has the use of Moodle Lesson and H5P influenced your learning experience in this course?
2. What are the challenges you have faced when using Moodle Lesson and H5P in learning this course?

Thank you for your response.