University Students' Perception of Learning Listening Comprehension with Interactive Multimedia Platforms: Moodle and Thinglink-Based Approach

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Abstract. This research aims to investigate students' satisfaction with the interactive multimedia approach and their perceptions of its effectiveness in improving listening comprehension skills, and students' preferences for specific interactive features within the Moodle and Thinglink platforms, aiming to identify which elements contribute most significantly to enhanced learning experiences. Listening comprehension as the most critical component of language proficiency, necessitates engaging and interactive resources to foster effective learning experiences. Participants from 40 university students from various English language backgrounds and proficiency levels provided a representative sample for identifying patterns and trends in their perceptions through quantitative data analysis. The findings from this study have implications for language educators seeking to integrate technology into their classrooms and foster a more dynamic and engaging language learning environment. By understanding students' perspectives, educators can optimize the use of Moodle and Thinglink-based interactive multimedia to better cater to their learners' needs and preferences.

Keywords: Listening comprehension, Interactive multimedia, Moodle, Thinglink

1 Introduction

The new era of globalization has emerged rapidly with the widespread use of information and communication technologies. It is crucial for students in higher education institutions, such as universities, to acquire new information and develop practical skills and knowledge, including problem-solving, collaborative thinking, and creativity, so they can implement what they have learned and experienced in actual life. These skills and knowledge will assist them in adapting to modern society and increase their competitiveness [1]. Educators need to establish to their students a comprehensive conceptual framework and supply 21st-century skills, in particular, digital literacy, critical thinking, collaboration, communication, problem-solving, and creativity; as well as initiative, self-direction, social interaction, productivity, and accountability as they pertain to one's professional or personal life. The student must have these abilities for success in their future social and professional lives. Furthermore, these

competencies reinforce the capability of students to implement and share knowledge, as well as confront barriers in complicated conditions, in order to get to significant levels of personal development and lifelong learning. [2]. Technology has made a great contribution to educators to teach in an interesting way as a media learning tool. Early research identified the most studied categories of technology as multimedia learning and socialization, voice-to-text recognition, text-to-speech recognition, mobile learning, and digital game-based learning.. Their primary use included promoting practice, fostering interaction, presenting instructional content, and rearranging teaching methods. Academics assert that technologies have positive effects on language acquisition. [3]. One of the technologies employed to facilitate learning in the field of education is Learning Management System (LMS). A LMS is a software program specifically developed to facilitate the administration, tracking, reporting, and delivery of courses and instructional content within an academic setting.

During the pandemic, LMS has become an aid to the accomplishment of learning. A LMS's features complement efforts to maximize learning and teaching activities. Many features offer flexibility and have the necessary functions to support education. It is impossible to separate learning at the university level from the impact of a pandemic that needs the adoption of technology-based learning [4]. As a result of the rate of recovery from the pandemic, integrated learning has been implemented in Indonesia. This means that offline learning activities may occur, but not entirely. Blended learning is frequently interpreted in a variety of ways. In Indonesia, this occurs by modifying the situation with various theoretical meanings [5].

There are numerous learning management systems (LMSs) available that can create, manage, and distribute digital resources for both offline and online instruction. An LMS offers students personalized e-learning opportunities while facilitating interaction between conventional teaching methods and digital learning resources [6]. Several educational institutions have utilized LMSs effectively and continue exploring the efficacy of using various LMSs. Recent studies on education suggest that various LMSs associated tools increase student engagement, motivation, and collaboration. [7][8]. Furthermore, the effects of integrating listening and speaking skills into Moodle-based activities found that this approach can improve learners' listening and speaking skills [9].

Moodle is one of the most popular LMSs. MOODLE consists of a management system and the course's principal components: a database of questionnaires, an external tool, a glossary, a task, a lecture, feedback, a survey, a SCORM package, a seminar, a test, a forum, and a conversation room. The resources were identified: hyperlinks, book, IMS content package, explanations, page, and file. Applying the specified course components of the MOODLE learning management system enables the full implementation of online learning and effective student-teacher interaction[10]. Under the conditions of a higher education institution for online learning administration, the course structure includes the required structural elements, such as laboratory work, autonomous study, lectures, and knowledge assessment [8].

ThingLink is a tool that allows educators to create interactive images and videos and embed text, audio, and video content into them. ThingLink offers flexibility and the opportunity to assess students' understanding through embedded tools and conditional progression settings. Some studies have suggested that ThingLink can help improve students' interest and enthusiasm among students and teachers [11]; the user-friendly platform gives flexibility in design [12].

Listening comprehension is the ability to understand and interpret meaning from spoken words during communication. This is a language skill which aids other language skills, such as reading, writing, and speaking, to acquire proficiency. Important listening skills allow students to experience authentic communication situations. Without effective listening skills, communication is impossible because no message can be transmitted [13][14].

2 Method

This research uses quantitative data analysis with a survey method. The data is collected by questionnaire from forty participants from students in the English Literature Study Program, Universitas Negeri Medan. Participants were instructed to engage in a learning activity utilizing the Moodle and Thinglink platforms, organized earlier by researchers. After the completion of the instructional activity, participants had to complete questionnaires. The questionnaire consists of fifteen questions identifying how they experience using Moodle and Thinglink in acquiring their listening comprehension learning experiences. The researcher used Google Forms to distribute the Likert scale questionnaire to the participants. Simultaneously, the interview facilitated more specific information and the collection of data through questionnaires.. The interview focuses on the advantages, obstacles, materials, and frequency of repetition of using Moodle and Thinglink to teach listening comprehension. The result was given a score for each student. The data from this research use the analysis by Likert scale procedure shown in Table 1. To calculate data from the questionnaire using the percentage technique.

Table 1. Likert scale Score [15]

Score	Description
1	Strongly Disagree (SD)
2	Disagree (D)
3	Moderate (M)
4	Agree (A)
5	Strongly Agree (SA)

3 Result and Discussion

The data shown in Table 2 are the result of an analysis of the responses from the students to the components of the questionnaire's statement. The data showed that the percentage of participants signifies an apparent trend in their perception pertaining to the subject of study. The information gathered through interviews with a selected number of participants is used as

supplementary data in the analysis of the results. The discussion of the results in this research paper refers to the research's focus on the benefits associated with the implementation of Moodle and Thinglink to teach listening comprehension, learning obstacles, materials, and frequency of repetition to use Moodle and Thinglink.

Table 2. Students' perception of using Moodle and Thinglink in Learning Listening Comprehension

No	Statement Items	Students response				
		1	2	3	4	5
1	Listening comprehension learning using Moodle and Thinglink with interactive multimedia presents more interesting and engaging English learning	72.5% (29)	27.5% (11)	0%	0%	0%
2	The students gain additional vocabulary or expressions in their context, as displayed in Moodle and Thinglink learning media.	80% (32)	17.5% (7)	2.5% (1)	0%	0%
3	The students learn new knowledge about pronunciation, as displayed in Moodle and Thinglink learning media.	67.5% (27)	17.5% (7)	15% (6)	0%	0%
4	The students learn grammar more comprehensively, as displayed in Moodle and Thinglink learning media.	75% (30)	20% (8)	5% (2)	0%	0%
5	Learning listening skill using Moodle and Thinglink encourage the students to learn more.	87.5% (35)	12.5% (5)	0%	0%	0%
6	The students can easily use the listening comprehension material using Moodle and Thinglink	82.5% (33)	15% (6)	2.5% (1)	0%	0%
7	Moodle and Thinglink use interactive media that contain interesting listening comprehension materials	82.5% (35)	10% (4)	2.5% (1)	0%	0%
8	The students like just audio as materials in listening comprehension learning in Moodle and Thinglink	87.5% (35)	12.5% (5)	0%	0%	0%
9	The students can access more efficient the listening comprehension materials using video in Moodle and Thinglink	67.5% (27)	15% (6)	17,5% (7)	0%	0%
10	The students can access more efficient the listening comprehension materials using audio in Moodle and Thinglink	75% (30)	25% (10)	0%	0%	0%
11	Moodle and Thinglink provide listening comprehension assessments automatically; students may receive feedback upon assignment completion.	60% (24)	25% (10)	12.5% (5)	2.5% (1)	0%
12	Students feel difficult to recognize and follow the speed of pronunciation of spoken discourse presented in audio or video materials.	0%	0%	5% (2)	50% (20)	45% (18)

13	The students have difficulties when trying to recognize spoken English from multimedia contents play in Moodle and Thinglink.	0%	37.5% (15)	5% (5)	50% (20)	0%
14	The students encounter problems when accessing the materials on Moodle and Thinglink due to technical issues.	0%	25% (10)	5% (2)	20% (8)	50% (20)
15	The students think they need to playback twice or more to recognize the materials in Moodle and Thinglink	60% (24)	32.5% (13)	5% (2)	2.5% (1)	0%

Using Moodle and Thinglink with interactive multimedia to acquire interesting and engaging English learning becomes the primary goal of this research. Through this learning, students can learn the materials that involve audio recordings, podcasts, or videos from native speakers to improve their English proficiency, especially in listening. The statement one showed that most of the students admitted that using Moodle and Thinglink with interactive multimedia made their learning more interesting and engaging, with results *Strongly Agree* (72.5%) and *Agree* (27.5%) and also related to the results statements five, six and seven.

Students get advantages by acquiring additional vocabulary and knowledge about grammar and pronunciation materials after finishing all the materials in Moodle and Thinglink with interactive media as a result of statements two, three, and four. Thus, as shown in statement fifteen, most of them need a replay or repetition to complete their comprehension. Related to the use of interactive media, students almost did not have any inhibition in accessing contents organized in Moodle and Thinglink, as shown from the results in statement six. Furthermore, there were some problems in accessing the materials because of the conditions of the internet connection of each student.

4 Results and Discussion

This research investigated students' perceptions of listening comprehension at Universitas Negeri Medan, North Sumatra, using Moodle and Thinglink with interactive multimedia. Based on its findings, this research can conclude that Moodle and Thinglink are the LMSs that can provide interactive multimedia to improve student's language proficiency, especially their listening comprehension, and create a more interesting and engaging learning environment. The obstacles to learning need to be considered, such as the video and audio quality provided to students must be easily accessible and clear to achieve learning objectives, and the Internet connection must be properly connected.

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