

Chapter One

Introduction

In this chapter, the researcher examines several points. This chapter contains an explanation of several parts, namely research background, identification of problem, delimitation of the research, research questions, the objectives of the research, and the significance of the research. The research background explains why the researcher is interested in finding out the perceptions of hearing impairment students in using LMS during online learning. This chapter also includes the research questions that serve as a roadmap for the analysis. Furthermore, the purpose of the research describes the specific goals or objectives that need to be researched. The significances of the study highlight the benefits of this research to specific individuals. The chapter organization including a description of each chapter is presented at the end of the chapter.

Background of the Research

Online learning has become increasingly popular in recent years, especially due to the COVID-19 pandemic. This pandemic led to the implementation of various policies to avoid the spread of the covid-19 virus (Siahaan, 2020). Innovations in educational technology, such as online learning platforms and educational applications, continue to develop to facilitate remote learning. Teachers and students are encouraged to learn and use digital technology in the teaching and learning process. Online learning is learning that takes place remotely, without face-to-face meetings between teachers and students. Online learning offers many advantages, such as flexibility, accessibility, and affordability. The benefits of online learning include the ability to listen at home, the freedom from location restrictions, the ability to listen at any time, and the lack of time or space restrictions (Handayani, 2020). Additional

benefits of online education students may independently control their learning, including time management and learning materials, while they study online (Marbun, 2021).

Online learning is beneficial for many students, but it can also pose challenges for students with special needs such as hearing impairment, as they may face challenges in accessing and using learning materials. Hearing impairment are people who have significant hearing impairments, such that they cannot hear sounds clearly or at all. Their inability to hear well might affect how they interact with teachers and other students as well as how well they understand the material they are studying (Utami et al., 2024). In the learning shown in the video, hearing impaired students can only see the movements in the video without being able to hear (Muallifah, 2021). Online learning can be challenging for hearing impairment as they may struggle to understand learning materials that are delivered verbally, such as audio and video.

Learning Management Systems (LMS) is a widely used tool to support online learning. LMS provides various features that can help teachers to develop and deliver learning materials, as well as provide assignments and assessments to students. An LMS offers a number of capabilities, including, among others, course material management, learning process management, online testing and assessment, course administration, chat, and discussion (Leny Dhianti, 2021). The demands of students with special needs in higher education have not been adequately met by the deployment of the Learning Management System during the COVID-19 pandemi (Dewi et al., 2020). The purpose of this study is to explore hearing impairment perspectives on using a LMS for online learning. This research is motivated by the need to identify the barriers hearing impairment faced in accessing online education and the strategies use in their learning experience.

Karovska (2021) conducted a comprehensive study that explored the perceptions of students with disabilities regarding the use and accessibility of learning management systems and the benefits and/or barriers of using an LMS. Through a qualitative approach with semi-structured interviews, the research identified barriers faced by these students, including the lack of full accessibility to all content and services for students with disabilities. In addition, the research also found an appropriate solution to the challenges faced with a sign language support mode for hearing-impaired students.

Another study conducted by Dapa (2022), with the aim of this study to describe the use of assistive technology for online learning for students with special needs. In this research that uses the development method, the results found that difficulties for students with special needs in the form of network connections, internet costs, and facilities to access information as common obstacles faced by them. While the special obstacle is assistive technology that suits their learning needs.

While previous research that has been conducted provides valuable insight into the challenges and solution experienced by students with hearing impairments in using an LMS, there is still a gap in the literature regarding the specific obstacles faced. These studies mainly focus on the experiential aspects of accessibility and communication, but do not delve deeper into the technical functionalities of the LMS platform that may pose challenges for students with hearing loss. Therefore, there is a need for further research to explore the technical aspects of LMS accessibility for this student population, which can provide more comprehensive insights and inform the development of more inclusive educational technologies.

Recent contents are lacking in providing an in-depth analysis of hearing impairment interactions with learning management systems. To ensure that future educational technology

truly meets the needs of and can provide high-quality learning experiences, it is crucial to investigate hearing impairment perspectives on how to accommodate their needs. The hearing impairment learning methods are based on what they see and comprehend while describing things in order to infer meaning, with the goal of forming their understanding (Akbar Fauzan et al., 2023). Accessibility and quality of education for those with hearing loss can be improved by using educational technology created with their needs in mind. As a result, they can realize their full potential. The whole population may benefit from a more inclusive society thanks to inclusive educational technologies. It could reduce stigma and prejudice against those who have hearing loss.

This research is important because it can help create a more accommodating LMS for those who are hearing impairment and help us to better understand their needs and issues when it comes to online learning. This research can also help teachers in creating online programs that are more inclusive and accessible for hearing impairment. This research is expected to make a significant contribution to the understanding of the barriers and strategies that hearing impairment use in learning using LMS. By exploring the hearing impairment perspective, the researcher can create educational technology that truly meets their needs and can provide a quality learning experience.

Identification of the Problem

Individuals with hearing impairments encounter multifaceted challenges when engaging with Learning Management Systems (LMS) for online learning. One prominent issue, as pointed out by participants in the initial interview, revolves around accessibility and usability barriers inherent in many LMS platforms. These barriers include the absence of adequate accessibility features, such as captioning for audio and video content, and interfaces that are not designed with the needs of hearing-impaired users in mind. Consequently,

navigating course materials and participating in online activities can be significantly hindered, limiting access to educational resources and opportunities for engagement.

Communication poses another significant hurdle for hearing-impaired students within the online learning environment. Synchronous interactions, such as live lectures or group discussions, heavily rely on verbal communication, which can exclude individuals with hearing impairments from fully participating. This exclusion not only impacts their ability to engage with peers and instructors but also contributes to feelings of isolation and disconnection from the learning community.

The lack of accessible learning materials for hearing impaired users, including text and audio formats, can hinder their ability to follow the course material and complete assignments. In addition, the absence of transcripts or sign language translations for video and audio in the LMS can make them miss important information and hinder their participation in online discussions. Limited assistive technology, such as screen reader software and sign language translator software, can further hinder their access to content and communication.

Social isolation in online learning environments is another issue for deaf students. Students who are hearing impaired often feel isolated and lonely due to the lack of face-to-face interaction, difficulties in communication through online platforms such as text chat and video conferencing, and lack of access to online sign language interpretation services. These factors can lead to frustration, feelings of being left behind, and hinder their participation in online discussions and activities.

In conclusion, while hearing-impaired students demonstrate resilience and resourcefulness in navigating the challenges posed by LMS for online learning, addressing

the systemic barriers they encounter is paramount. Understanding the specific challenges, they face and the strategies they employ is crucial for fostering inclusive educational environments. Therefore, investigating the two research questions—namely, the challenges encountered by individuals with hearing impairments when learning using LMS, and the strategies employed to overcome these barriers—is imperative. By delving deeper into these inquiries, we can inform the development of more accessible and inclusive online learning platforms, ultimately enhancing the educational experiences and outcomes of hearing-impaired students.

Delimitation of the Research

This research will be conducted in Yogyakarta, specifically focusing on hearing students studying at university. The research will involve participants from a private university in Yogyakarta. The research will be conducted over one month. Two weeks are dedicated to data collection from participants, and the remaining two weeks are dedicated to data analysis and discussion of findings. The study will involve students with hearing loss who are currently using the LMS for online learning at the university level. Participants will be selected through purposive sampling to ensure that they have experience using the LMS. This research will primarily use qualitative methods, including interviews as a data collection method. Specifically, semi-structured interviews, which are included in the category of in-depth interviews, are utilized. Semi-structured interviews involve the use of both closed and open-ended questions. This research will explore themes related to accessibility challenges, communication barriers, technology proficiency, and adaptive strategies used by the participants.

The research will examine the LMS platforms used at several private universities in Yogyakarta, focusing on their features, accessibility options, and compatibility with assistive

technologies for the deaf. The research will consider societal attitudes towards disability and the availability of support systems for individuals with hearing loss. Contextual factors such as the digital literacy of the participants and the integration of the LMS within the university's educational framework will also be examined. By clearly defining these boundaries, this research aims to provide a focused and comprehensive understanding of the use of the LMS by students with hearing loss, leading to the development of a more accessible and inclusive online learning environment.

Research Question

This study aims to explore the perspectives of hearing impairment on the use of Learning Management Systems (LMS) for online learning. This research will focus on two research questions, namely:

1. What challenges do students with hearing impairments encounter when learning using LMS?
2. What strategies do students with hearing impairments employ to overcome common barriers?

The Objectives of the Research

The aims of the research the research questions serve as the foundation for the study's aims. There are two goals for the study.

1. To explore the challenges encountered by students with hearing impairments when learning using LMS.
2. To investigate the strategies employed by students with hearing impairments to overcome the common barriers encountered during learning using LMS.

The Significance of the Research

The results of this study can provide several benefits and can be useful for students with disabilities, educators, instructional designers and developers, and other researchers. The benefits of this study are as follows:

Hearing Impairment Individuals. This research is important for people with visual and hearing impairments because this research will develop an LMS that is friendly to people with disabilities, especially for people with hearing impairment.

Teachers. This research is important for educators because this research will show some important information in developing a disability-friendly Learning Management System.

Instructional Designers and Developers. This research is important for Learning Management System developers because this research will show some important information in developing a Learning Management System that is friendly to people with hearing impairment.

Upcoming Researcher. This research is expected to be useful for other researchers who are interested in the same issue. The findings from this research will be use to generate fresh ideas for research with the same or identical scope. The literature use in this research will be use as a reference by other researchers working on similar projects.

Organization of the Chapters

This research is composed of five chapters. The first chapter includes the background of the research, identification of the problem, delimitation of the research, research questions, the objectives of the research, the significance of the research, and the organization of the research. This chapter presents the topic's facts and the researcher's rationale. It also discusses the challenges and strategies related to the research problem.

In the second chapter, the researcher reviews various theories, citing books, journals, theses, and other formal publications. This chapter explores the understanding of learning management systems for disabilities, the definition of disabilities, the definition of hearing impairments, the definition of learning management systems, the challenges in using learning management systems, the strategies for using learning management systems, and the disable friendly learning management system.

The third chapter outlines the research methods. The researcher explains qualitative research and describes the study's location and timing. Further details about the study participants are provided, and interviews are discussed as the primary method for data collection. Finally, the data analysis process is covered in this chapter.

The fourth chapter presents the findings and discussion. The researcher documents the results related to the research questions, which focus on the challenges faced by hearing-impaired students when using learning management systems for online learning. The discussion is supported by other studies on similar topics.

The fifth chapter contains the conclusions and recommendations. The conclusion summarizes the findings and discussion. The recommendations include the benefits and advice for specific groups of people based on the research outcomes.