

Effective Teaching Resources in Online Distance Learning Environments: Insights from the Covid-19 Pandemic

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Abstract- Amidst the challenges presented by the COVID-19 pandemic, a notable silver lining emerged in the rapid integration of information and communication technology into education. With the closure of many educational institutions, online distance learning became a vital means of maintaining academic operations. However, this shift posed challenges for teachers and students, particularly in sustaining engagement compared to traditional face-to-face learning. This paper aims to evaluate the effectiveness of teaching resources in online distance learning, focusing on student perspectives. The study draws from students' responses at Silliman University, one of the pioneering institutions that adopted online distance learning in the early stages of the pandemic. Data was collected from the university's evaluation surveys conducted during the Summer of 2020 and the first semester of the 2020-2021 academic year, encompassing 902 responses. The findings consistently indicate that learning resources in PDF or PowerPoint formats were perceived as the most useful. Tools such as chat features, announcements with automatic notifications, and reused videos from platforms like YouTube were highly valued. Live video sessions, link sharing in web formats, private messaging, open forums, and pre-recorded video sessions were moderately helpful. These findings suggest that the effectiveness of teaching resources varies based on delivery mode and format, with a preference among students for resources supporting asynchronous teaching methods. In conclusion, this research demonstrates the varying degrees of usefulness of different teaching resources. Students showed a preference for resources that facilitate asynchronous learning approaches.

Keywords: *Teaching resources, Flexible Learning, Instructional Design*

Introduction

During the challenging COVID-19 pandemic, educational methodologies shifted to compensate for the limitations of traditional face-to-face teaching. Among the most prevalent alternatives is online distance learning (ODL). Nevertheless, what exactly constitutes online distance learning? This approach comprises two key components: distance learning (correspondence education or home study), with minimal or no physical interaction between students and instructors. Distance learning predominantly involves students studying from home, as opposed to attending in-person classes (IGI Global, n.d., as cited in Silliman Online University Learning, 2021). Notably, distance learning does not exclusively rely on electronic means. Conversely, online learning, often termed electronic learning, encompasses knowledge acquisition facilitated through electronic technologies and media. This manifests in online courses, degrees, or programs (IGI Global,

n.d., as cited in Silliman Online University Learning, 2021).

At Silliman University, the ODL approach is entirely online, featuring predominantly asynchronous activities. This methodology is structured with a pace set by the class, aiming to reduce screentime for learners and educators. The university utilizes mySOUL as its official learning management system to deliver these online courses.

Silliman University implements three core principles within its ODL framework to maintain a student-centered approach to teaching and learning. Firstly, it incorporates digital tools supporting flexible learning, emphasizing the use of computers, the Internet, the Learning Management System (LMS), and mobile learning devices. Secondly, it employs the flipped classroom model, emphasizing both asynchronous and synchronous learning and the tools tailored to each mode. Lastly, the university adopts micro-

learning, breaking digital tools and resources into smaller, easily manageable units, simplifying the

upload and download processes. Refer to Figure 1 for a visual representation of this structure.

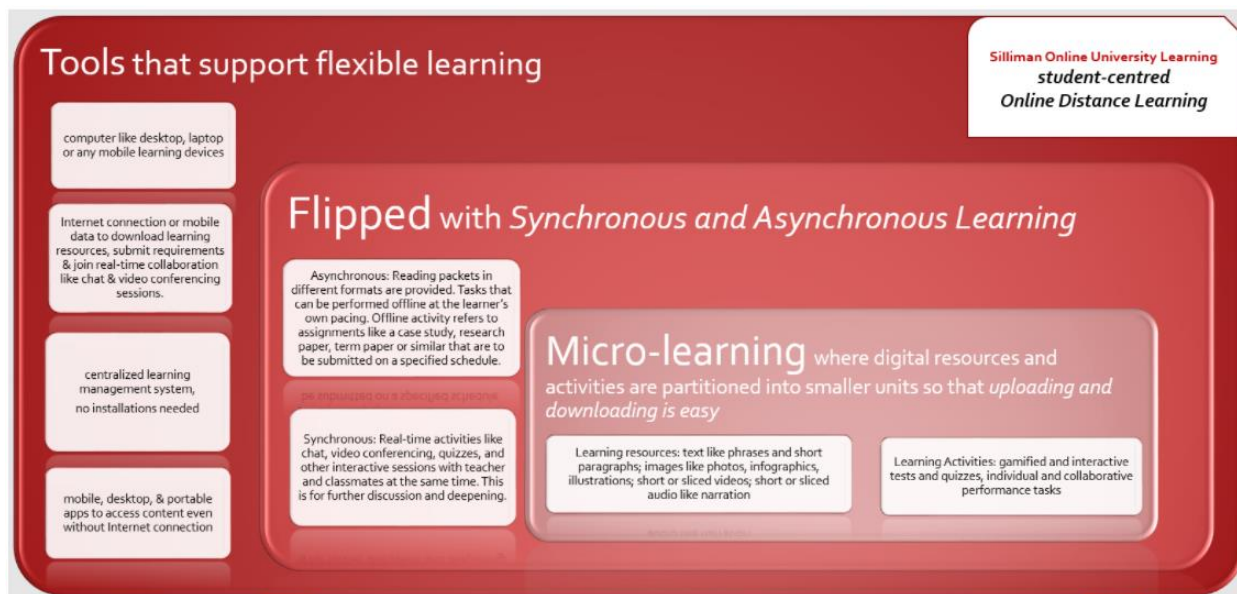


Figure 1. Silliman University applies the three principles in online distance learning to maintain student-centeredness in teaching and learning.

Within the framework of these three fundamental principles, the critical inquiry emerges: how are these principles delivered, and through what means? The pivotal answer lies in digital teaching and learning resources. In Online Distance Learning (ODL), these resources are tools for creating technology-enhanced tasks, activities, and materials to enrich the teaching and learning experiences. These resources encompass various forms, including media sources like audio, video, and images, which contribute to a more comprehensive educational approach. Moreover, supplementary resources expand the possibilities for teachers to innovate and experiment, ultimately fostering enhanced student engagement[1].

These teaching and learning tools are pivotal in driving student engagement. Student interactions play a crucial role in sustaining student engagement in learner-to-learner engagement. Facilitating activities and using digital tools that promote peer connections and foster a sense of community among learners is essential. Utilizing specific tools, such as discussion boards for asynchronous sessions, chat and video-conferencing for synchronous sessions, Google apps for collaborative tasks, peer assessment, and

social media and blogs, significantly increase learner interaction. According to Martin and Bolliger (2018), online applications and social media tools enhance engagement in online courses and promote learner-to-learner interaction.

Moreover, learner-to-teacher engagement significantly influences higher levels of online learner engagement, particularly when employing effective "student-instructor communication channels." Establishing rapport and collaboration between teachers and learners in online interactive environments is facilitated using online tools that encourage group work and provide instructive feedback. Instructors' active presence in online courses is crucial for student involvement. However, they should strategically step back during live discussions to promote increased learner interaction[2].

Learner-to-content engagement is equally crucial, emphasizing creating a learning environment comprising interactive instructional materials. This mode encourages intellectual interaction with content, fostering a deeper understanding and perspective shift among learners. Teaching and learning resources such as interactive instructional materials, real-world application projects,

information search tools, and Learning Management System (LMS) features perceived as engaging by students effectively promote this form of student engagement. Notably, learner-to-content interaction occurs even in well-planned assessments, contributing to critical thinking skills and mastery of the subject or performance task[2]. The closure of numerous educational institutions due to the pandemic compelled schools to sustain operations through online distance learning. However, the transition, as seen in the case of Silliman University's ODL, found both teachers and students unprepared and thrust into ODL with minimal training and orientation. Simultaneously, students grappled with maintaining course engagement akin to their experiences in face-to-face learning environments. Introducing synchronous and asynchronous delivery modes exposed teachers and students to various teaching and learning modalities and formats.

The primary objective of this paper is to assess the perceived usefulness of the teaching and learning resources in Silliman University's Online Distance Learning, as reported by students who have utilized these resources within the SOUL platform.

REVIEW OF RELATED LITERATURE

In education, teaching resources refer to a wide array of tools, materials, and aids educators employ to facilitate and enhance the teaching and learning processes[3]. These resources serve as crucial components in the educational ecosystem, supporting instructors in conveying knowledge and engaging learners effectively. Teaching resources can encompass physical materials such as textbooks, visual aids, manipulatives, and digital resources, including e-books, multimedia presentations, and online learning platforms[4]. Understanding the fundamental concept of teaching resources is essential before delving into their diverse types and applications.

Many types and forms exist in teaching resources, catering to the varied needs of educators and learners. These resources span traditional materials like textbooks and classroom supplies to cutting-edge digital tools and virtual environments[5]. Selecting the most appropriate teaching resources is a critical decision, as it directly impacts the effectiveness of instruction. Educators must consider factors such as

curriculum alignment, student needs, technological compatibility, and resource accessibility when choosing from the extensive array of options available[6].

Successfully integrating teaching resources into the educational process necessitates specialized skills and competencies for educators. These skills go beyond subject matter expertise and encompass technological proficiency, instructional design acumen, adaptability, and creativity[7]. Educators must be adept at navigating digital platforms, designing engaging learning materials, and tailoring their teaching strategies to leverage the potential of the selected resources. Effective use of teaching resources depends on seamlessly integrating them into the instructional approach, promoting active and meaningful learning experiences.

The production of teaching resources involves a multifaceted process that can vary widely based on the type and format of the resource[8]. Whether it is the creation of textbooks, e-learning modules, or interactive simulations, various models and development approaches come into play. Instructional designers, content experts, and technologists collaborate to craft resources that align with educational objectives and pedagogical principles. These resources may follow traditional publishing models, open educational resource (OER) development, or custom content creation, each with unique considerations and methodologies[9]. The efficiency and efficacy of the production process directly influence the quality of the teaching resources available to educators.

While teaching resources offer valuable support to educators, they are not without challenges. Problems can arise in their accessibility, appropriateness, and effective utilization. Challenges may include issues related to resource cost, compatibility with diverse learning needs, accessibility for students with disabilities, and regular updates to keep materials current (Bušljeta, 2013; Alboruto, Tremedal, & Micayas, 2021). Furthermore, the rapidly evolving technological landscape can pose challenges regarding resource obsolescence and the need for continuous professional development to keep educators updated on the latest tools and

methods for resource integration. Understanding and addressing these challenges is essential to harness the full potential of teaching resources in education.

Methods

The study's data was sourced from the university's online evaluation survey, distributed via Google Form during the summer term of 2020 and the initial semester of the academic year 2020-2021. The survey was universally sent to all university students, and a detailed analysis was conducted on a dataset consisting of 902 responses.

Results

The results, illustrated in Figure 2, highlight that during the Summer of 2020, students highly valued

file attachments in PDF and PPT formats as a learning resource, receiving a mean rating of 2.30. Following closely, announcement posts made by teachers, generating notifications for students, were also deemed highly useful, with a mean rating of 2.28. These findings suggest a strong inclination among students towards instructional materials akin to those traditionally provided in face-to-face settings, particularly emphasizing teacher announcements directly shared within the classroom. However, the remaining resources were rated moderately useful, with pre-recorded discussion videos receiving the lowest mean rating of 1.79. Notably, the chatting feature was not rated, as it was unavailable then, implying teachers' limited use of various teaching and learning tools with students.

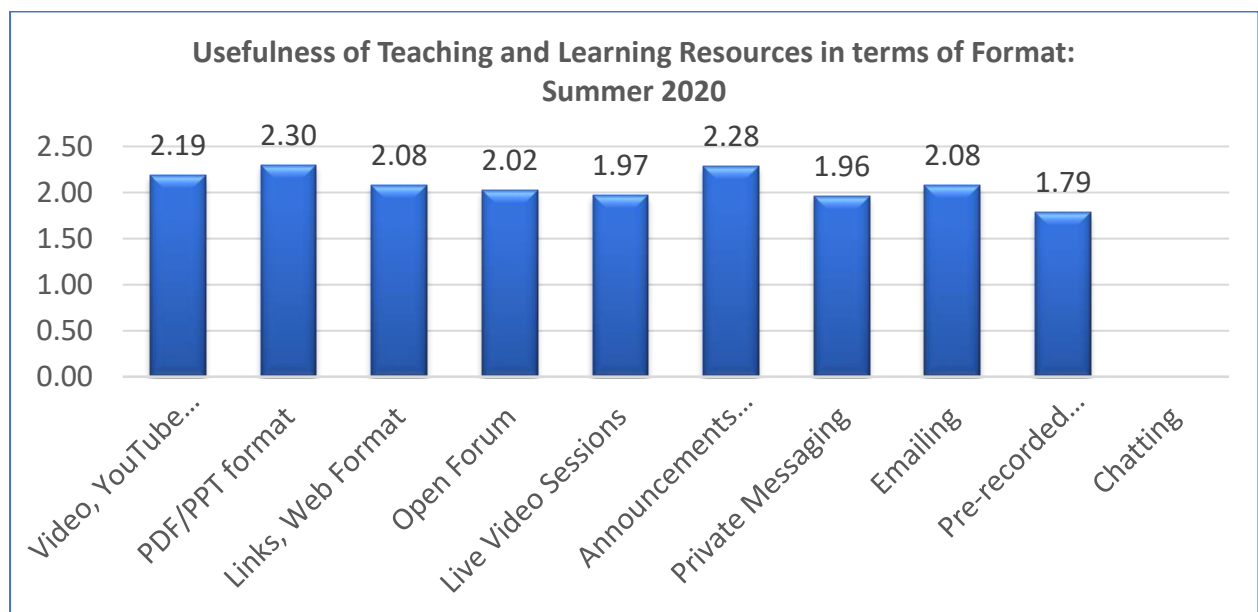


Figure 2. The Usefulness of Teaching and Learning Resources in Terms of Format During Summer 2020

The graph (Figure 3) illustrates the findings from the first semester of SY 2020-21. Notably, PDF and PPT attachments retained high ratings, with a mean of 2.56. However, in this period, students rated eight teaching and learning resources as highly useful, demonstrating a broader spectrum of favored tools. These included the emailing system (mean: 2.53), announcement and notifications (mean: 2.48), live video sessions

(mean: 2.47), video in YouTube format (mean: 2.44), chatting feature (mean: 2.40), pre-recorded discussions (mean: 2.39), and private messaging (mean: 2.32). Among the highly rated resources, four encompass modes of communication between students and teachers. This implies sustained student engagement in teacher-student interaction, even without face-to-face classes.

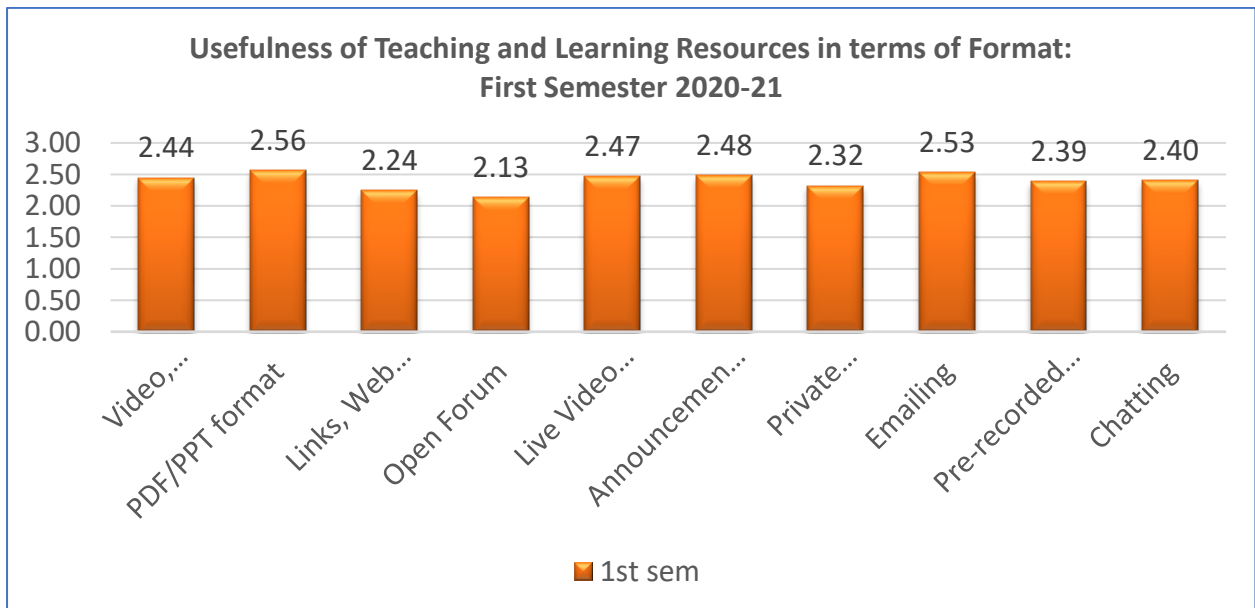


Figure 3. The Usefulness of Teaching and Learning Resources in Terms of Format During the First Semester SY 2020-2021

Figure 4 depicts students' perceptions of the Teaching-Learning resources utilized during the Summer of 2020 and the first semester of the academic year 2020-21. Comparatively, the ratings denoted by the blue bars, representing their initial

encounter with these resources during the summer classes, reflect lower perceived usefulness than the ratings depicted by the red bars, symbolizing their assessment of the tools during the first semester

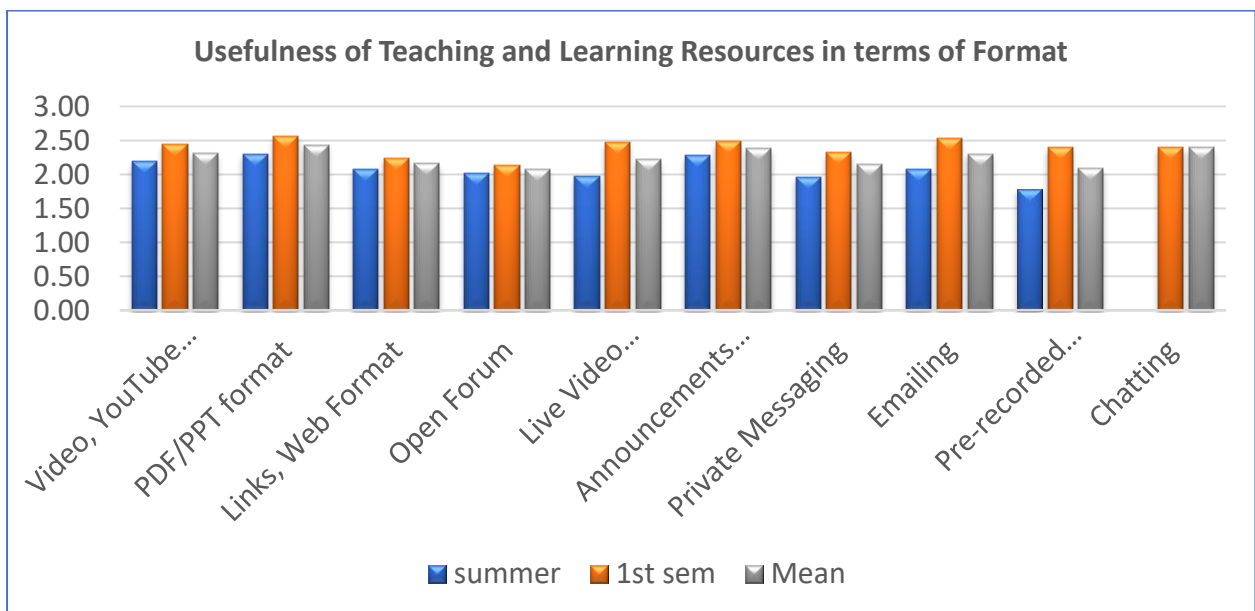


Figure 4. Mean Level of Usefulness of Teaching and Learning Resources in Terms

Table 1 outlines the perceived usefulness of various Teaching and Learning (TL) resources assessed by students. The mean ratings provide a hierarchical order indicating students' preferences

and experiences with these resources. Topping the list is utilizing resources in PDF/PPT format with the highest mean rating of 2.43, positioning it as the most highly valued and very useful according

to the students. Following closely is the Chatting feature, with a mean rating of 2.40, securing the second position as another highly regarded and very useful resource. Announcements and Notifications are deemed the third most useful resource, with a mean rating of 2.38, denoting their significance in aiding learning. Furthermore, videos in YouTube format rank fourth with a mean rating of 2.32, showcasing their perceived importance in the student's learning experiences. Emailing holds the fifth position with a mean rating of 2.30, indicating its substantial usefulness. Notably, resources such as

Live Video Sessions, Links in Web Format, Private Messaging, Pre-recorded discussion videos, and Open Forum are rated as moderately useful, suggesting a lower level of overall student preference and perceived value than the resources rated as very useful. These findings highlight specific preferences and emphasize the significance of certain tools, potentially guiding educators in better tailoring their teaching resources to match student needs and preferences, enhancing the overall teaching and learning experience.

Table 1. The usefulness of Teaching and Learning Resources

Formats	Mean	Usefulness	Rank
PDF/PPT format	2.43	Very useful	1
Chatting	2.40	Very useful	2
Announcements and Notifications	2.38	Very useful	3
Video, YouTube format	2.32	Very useful	4
Emailing	2.30	Very useful	5
Live Video Sessions	2.22	Moderately useful	6
Links, Web Format	2.16	Moderately useful	7
Private Messaging	2.14	Moderately useful	8
Pre-recorded discussion videos	2.09	Moderately useful	9
Open Forum	2.08	Moderately useful	10

Discussion

The data unveils distinct trends in the perception of teaching and learning resources among students during the specified periods. In the Summer of 2020, students strongly preferred resources to traditional face-to-face educational methods. Notably, file attachments in PDF and PPT formats were highly valued, along with teacher announcements generating notifications. This preference indicates comfort and reliance on familiar, easily accessible resources[10]. However, pre-recorded discussion videos received the lowest rating, implying a lesser inclination towards this learning resource during that period[11]. The absence of a rating for the chatting feature indicates its unavailability, potentially hinting at the limited integration of diverse teaching tools at that time[12]. Transitioning to the first semester of SY 2020-21, the students' perceptions evolved, highlighting a

broader appreciation for various teaching and learning resources. While PDF and PPT formats retained their significance, several other resources were highly rated, including email systems, live video sessions, video in YouTube format, and various communication modes such as chatting and private messaging. These diverse preferences indicated increased acceptance and utilization of a more comprehensive array of teaching tools, particularly those fostering teacher-student interaction, even within a remote learning environment[13]. Moreover, comparing the ratings from the Summer classes and the first semester emphasizes an evident increase in perceived usefulness. The transition from the lower-rated blue bars (representing the Summer of 2020) to the higher-rated red bars (indicating the first semester of SY 2020-21) signifies a significant enhancement in the perceived value of these resources over time. This

upward trend underscores students' adaptability and evolving preferences toward these resources as they acclimate to online learning over consecutive periods[14].

Additionally, Table 1 corroborates these findings by offering a detailed breakdown of students' perceived usefulness of different resources. The resources topping the list—PDF/PPT format, Chatting, Announcements, Notifications, Video in YouTube format, and Emailing—are useful, demonstrating the students' high reliance on these particular tools. Conversely, the moderately useful resources, including Live Video Sessions, Links in Web Format, Private Messaging, Pre-recorded discussion videos, and Open Forum, reflect a lower overall preference among students.

The implications drawn from these findings emphasize the need for educators to diversify and strategically integrate a range of teaching and learning resources to cater to students' evolving preferences and needs in an online learning environment[15]. It suggests that various resources, especially those facilitating interaction and asynchronous learning, are vital in enhancing student engagement and learning experiences[16]. These insights contribute to the continuous adaptation and optimization of teaching methods in online distance education, fostering an environment that aligns more closely with student preferences and supports their academic success[17].

Conclusion And Recommendations

The study illustrates the diverse perceptions of students regarding these resources. The results showcase the variability in usefulness based on their usage's mode, format, and temporal context[18]. It is evident from the ranking that students preferred learning resources that strongly support asynchronous teaching and learning methods. The higher rankings and perceived value of resources such as PDF/PPT format, Chatting, Announcements and Notifications, Video in YouTube format, and Emailing emphasize the inclination towards tools facilitating self-paced and independent learning. These findings underscore the significance of tailoring educational resources to align with the asynchronous learning approach, indicating the crucial role of such resources in

supporting effective online distance education during the specified periods[19]. Therefore, educators and institutions could utilize these insights to better cater to student needs by emphasizing and prioritizing resources that align with asynchronous learning, thereby fostering enhanced student engagement and learning outcomes in online distance learning environments.

A more comprehensive study on the preparatory aspects of teaching and learning resources is recommended[20]. Additionally, in subsequent research, it would be beneficial to incorporate additional variables that might influence the perceived usefulness of these resources. This could involve investigating factors such as ease of access, user interface design, adaptability across various devices, and the effectiveness of resource integration within the learning management system. Moreover, exploring the impact of student familiarity and comfort with different resource formats and modes of interaction could provide valuable insights[21]. Such in-depth analysis and inclusion of diverse variables will offer a more nuanced understanding of how teaching and learning resources can be optimized to better serve students' dynamic needs in online distance learning environments.

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