



USE OF ASYNCHRONOUS VIDEOS FOR TEACHING DISTANCE LEARNING STUDENTS IN THE DISTANCE LEARNING CENTRE, AHMADU BELLO UNIVERSITY, ZARIA

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Abstract

The rise of online and distance learning programs has presented both new opportunities and challenges to educators. One of the most significant challenges in distance learning is creating an engaging and effective learning environment for students. Asynchronous video is one of the solutions for this problem. This study examined the use of asynchronous videos for teaching of Distance Learning students in the Distance Learning Centre, Ahmadu Bello University, Zaria. The study addressed three objectives: to determine the extent of satisfaction of distance learning students with asynchronous videos used in teaching a course in the program, to determine the advantages of using the video for teaching and to ascertain the extent to which the video covers the study material. The population of the study consisted of the 137 students that registered for the course in the 2022/2023 June Session of the Program. This study adopted a quantitative research approach using a descriptive survey research design. A Google form was used to design the questionnaire for the study. 118 students duly filled the questionnaire that was posted on the WhatsApp group for the course. Data collected for the study were analyzed using descriptive statistics, specifically frequency counts and percentages. The analyzed data were presented in tables for easy interpretation and discussion. The findings show that majority of the students 82(69.5%) were satisfied with the asynchronous video. The result also revealed that the major advantage with the use of asynchronous video was the ability to rewind and re-watch the videos as indicated by 87(73.7%) of the distant learners. The study then recommended that the Distance Learning Centre should adopt the use of asynchronous videos the supplement the synchronous mode provided on their Learning Management system. Also, e-tutors on the program should be trained on the use of asynchronous video content creation.

Keywords: Distance Learning, Screencasts, Asynchronous, Video, Teaching

Introduction

Distance learning (DL) involves learning through the use of computer and telecommunication technologies that support interactive communication between teachers and learners at different stages of learning (Galizina et al., 2020; Skripak et al., 2020; Kartseva and Tavberidza, 2020). It refers to a mode of education in which instructors and learners are separated by time, location, or

both, while technology serves as the medium for teaching and learning activities. According to Garrison (2026), distance learning has evolved from correspondence education into a technology-driven and interactive system that supports independent and collaborative learning. Distance learning is becoming an important part of educational systems in both developed and developing countries because it provides flexible access



to education regardless of geographical barriers. It also offers learners the opportunity to participate in learning activities at their convenience. The approach is multi-sensory in nature and supports the use of diverse instructional materials that accommodate different learning preferences. During the COVID-19 pandemic, higher institutions across the world increasingly adopted distance learning platforms to sustain academic activities and ensure continuity in education (Masalimova et al., 2022).

Distance learning is commonly delivered through synchronous and asynchronous modes of learning. Synchronous learning occurs when instructors and learners interact in real time using technologies such as Zoom, Google Meet, and virtual classrooms. It is a mode of delivery where all participants are present at the same time. It resembles traditional classroom teaching methods despite the participants being located remotely. It requires a timetable to be organized. Asynchronous learning, on the other hand, allows learners to access instructional materials such as recorded videos, discussion boards, and digital resources at their own pace and convenience. Asynchronous learning is an e-learning model in which the student and teacher do not have to communicate in real time, and provides an opportunity for the learner to complete his/her education at his/her own learning speed and time. This flexibility encourages learner-centred education and promotes independent learning. Asynchronous communication enables instructors and students to interact and communicate from any place or time. The flexibility in time inherent in asynchronous communication also affords the ability of time-independent access, equal opportunities to participate, improved peer interaction and participatory learning, time for reflection,

and the ability to have in depth discussions over time. Asynchronous learning are implemented as pre-recorded lectures that can be accessed via learning management systems such as Moodle, Canvas, or Blackboard, and instant messaging mobile applications like WhatsApp, Telegram, Instagram etc. It can also be implemented through the use of screencasts (Ramli et al., 2017; Orocio & Linaugo, 2023).

Screencasts are multimedia-based learning which involves multimodal sensory, such as eyes and ears. A screencast is a digital video and audio recording of what happens on a presenter's computer screen. Using screencasting technology to create video productions involves capturing images and/or audio from a computer screen and adding guided instruction to produce customized, independently-reviewable video content. Screencasted productions can include website tutorials, lessons captured during face-to-face class time, onscreen demonstrations, written edits of student work with accompanying instructor audio commentary, and multidimensional productions that contain audio, video, website demo, and other digital content. Using screencast encourages meaningful learning and active cognitive processing, and cognitive load reduction promotes deeper learning (Soden, 2017).

Statement of the Problem

Instructional materials are essential in the learning process (Lyimo & Kipng'etich, 2017) and making them more engaging, useful, practical, and attractive is the hallmark of every educational system worldwide. To achieve this, technology becomes instrumental in the advancement of instructional materials into the digital realm. As technology advances, it is evident that the education sector must adapt to provide learners with new learning opportunities



(Arinto, 2016; Bozkurt, 2019; Kristanto et al., 2017). The use of technology and the transition from the traditional face-to-face mode of education to the online mode has occasioned the need for creative ways of using multimedia to deliver instructions and instructional material.

Ahmadu Bello University, Zaria Distance Learning Centre started its operation in the year 2014. Its mode of operation is the open distance learning mode with an option for a two-week face-to-face tutorial per semester. From preliminary observation from the researcher, most new students complain about the learning management system (LMS). These complains range from the LMS not working at all as the network has issues to assignments, quizzes submitting themselves even before the learner finishes them. Some learners have also complained of not receiving notifications for assignments, quizzes and lecture times. Perhaps, supplementing the LMS with asynchronous videos will provide succor for distance learners. This is because asynchronous video communication can allow for more reflection, equitable opportunities to participate, more active learning, and fewer technological issues. Asynchronous videos allow students to record and share presentations that others can watch and respond to at their convenience. This study therefore investigated the use of asynchronous videos in one of the courses (Libs 893) of the Distance Learning Centre, Ahmadu Bello University, Zaria.

Aim and Objectives of the study

The aim of this study is to examine the use of asynchronous videos for teaching of Distance Learning students in the Distance Learning Centre, Ahmadu Bello University, and Zaria. The objectives of this study include to:

1. Determine the extent to which distance learners in the centre are

satisfied with the asynchronous video used in the Libs 893 course.

2. Identify the advantages of using asynchronous videos for teaching
3. Determine the extent to which asynchronous video covers the study material.

Research Questions

The following research questions guided the study:

1. To what extent are distance learning students satisfied with the asynchronous videos used in the Libs 893 course?
2. What are the advantages of using asynchronous videos for teaching distance learning students?
3. To what extent do the asynchronous videos cover the study materials

Literature Review

Distance learning education has become an important component of modern educational systems because it enables teaching and learning beyond the traditional classroom environment through digital technologies and online platforms. Scholars describe it as a flexible mode of education that allows learners to access instructional materials irrespective of time and geographical location (Koi-Akrofi et al., 2020). The rapid growth of online education during the COVID-19 period further demonstrated its relevance in sustaining academic activities across institutions. Studies have shown that distance learning enhances flexibility, promotes learner autonomy, and expands educational access for students facing geographical or social barriers (Schwarz et al., 2022). However, challenges such as poor internet connectivity, inadequate technological infrastructure, and low digital literacy continue to affect its effectiveness, particularly in developing countries (Koi-Akrofi et al., 2020).



Within distance learning environments, asynchronous video has emerged as a widely used instructional tool because it allows learners to access prerecorded lessons at their convenience. Research indicates that asynchronous video supports self-paced learning, improves learner engagement, and enables students to revisit difficult concepts repeatedly (Pratama et al., 2022). Belt and Lowenthal (2021) observed that video-supported instruction enhances communication and strengthens instructor presence in online courses. Similarly, studies have shown that well-designed educational videos can improve learner satisfaction, retention, and academic performance when integrated effectively into online teaching environments (Falode & Mohammed, 2023). Nevertheless, scholars caution that long or poorly designed videos may reduce learner concentration and interaction, thereby affecting the effectiveness of asynchronous learning (Belt & Lowenthal, 2021).

Ghilay (2022) examined synchronous and asynchronous learning to determine which method is preferable and why, based on the learners' point of view. Two main issues were examined: the contribution of each method to the learning process and whether one of them is significantly superior to the other and can even replace it exclusively. The research was based on two samples of students 12 (84, 56) n, where n = who enrolled in eight quantitative courses at two colleges. The courses were given during the year 2020–2021 using combined teaching formats: Asynchronous and synchronous distance learning. Learners were asked to answer an online questionnaire that assessed the characteristics and advantages/disadvantages of both methods. The findings show that students distinctly prefer asynchronous learning over synchronous. The main reasons for this are the ability to repeat lessons indefinitely, time

savings, flexible learning anywhere, anytime and at the appropriate pace as well as the ability to better understand the material.

Xu and Mahenthiran (2016) investigated the factors that influence overall satisfaction with online learning. The study used an online survey as the method of data collection for this study. The survey questionnaire was sent anonymously to all students who took the online or hybrid course sections at a US university, as well as all faculty who taught those online or hybrid course sections. The research result showed that overall student satisfaction with online learning is significantly affected by how the course is organized and how the content is sequenced, the ease with which students can complete assignments, and the use of the LMS to engage with content.

Yıldırım (2021) analyzed the views of geography teacher students on the GIS course conducted with screencasts during the distance education process. At the end of the term, 27 students studying in the second year of the geography teaching undergraduate program were asked about their opinions of the lesson. The data were collected through a structured evaluation form consisting of open-ended questions to evaluate the course. In the analysis of the comments obtained, MAXQDA software, which is frequently used in qualitative data analysis, was applied. The expressions in the answers were analyzed using the content analysis technique. Overall, the results proved that the beneficial aspects of the GIS course, which consists of applications and is conducted with screencast, outweigh the theory. Thanks to the screencast model, students can use their time efficiently and watch the videos repeatedly whenever and wherever they want.



Orocio and Linaugo (2023) examined the effect of screencast on improving learners' academic achievement and motivation in Physics. The study adopted a quasi-experimental research design. The study was conducted in a large public secondary school in a highly urbanized city in the central Philippines. Academic achievement was measured through a constructed test while the level of motivation was evaluated using Keller's Instructional Materials Motivation Survey. Results showed that screencasts improved the learners' academic achievement and increased their level of motivation. The use of screencast has a good impact on changing learners' knowledge and skills and is an effective online learning media. Findings also obtained a p-value of 0.00 which showed that there is a significant difference in the learner's academic achievement before and after treatment to screencast. This study discovered that learning using screencasts is engaging to the learners.

McCarlo, Vertudes and Garcia (2022) assessed video lessons as mathematics intervention material for 105 struggling grade 10 students at Pililla National High School's Modular Distance Learning Modality. For the two quarters covered by the intervention, the Grade 10 respondents received mean scores of 8.39 and 11.04 on the pretest. The authors used video lessons to address the learners' requirements. The study's findings suggested that learners' performance improved before and after video lessons, as evidenced by the post-test examination. However, the pretest and post-test findings in the two quarters varied significantly. This implies that video lessons as intervention material for modular distance learning can help learners improve their mathematical understanding and performance. Using this material helped learners perform better academically. The video lessons directed

learners through coping with the tasks presented to them as part of their module, and they gained confidence in answering them. Learners also learned to devise approaches to mathematical problems incorporated into the module activities. This indicates that learners were more willing to watch videos to achieve better grades in class.

Methodology

This study adopted a quantitative approach using a descriptive survey design to examine students' satisfaction with the use of asynchronous videos for teaching Libs 893 at the Distance Learning Centre, Ahmadu Bello University. The population consisted of 137 students registered for the course during the 2022/2023 June Session. A census sampling approach was adopted because all registered students were given the opportunity to participate through the class WhatsApp platform. However, 118 students successfully completed and returned the questionnaire and constituted the sample for the study.

Data were collected using a structured questionnaire titled *Questionnaire on the Use of Asynchronous Videos for Teaching Distance Learning Students (QUAVTDLS)*, designed with Google Forms. The instrument contained items on students' satisfaction with asynchronous videos, perceived advantages of the videos, and the extent to which the videos covered the course materials, using a four-point response scale. Face and content validity were established through expert review in Library and Information Science and educational technology, while reliability testing through a pilot study yielded a Cronbach's Alpha coefficient of 0.82. The questionnaire link was distributed electronically through the course WhatsApp group, and the data collected were analyzed using descriptive statistics, specifically



frequency counts and percentages, with results presented in tables.

This section presents the data collected and the analysis in line with the objectives of the study.

Results

Table 1: Extent of satisfaction with the use of Asynchronous Video used in the Libs 893 course

S/N	Item	Highly Satisfied	Partially Satisfied	Not Satisfied	Undecided
1	Quality of video content	82 (69.5%)	31 (26.3%)	3 (2.5%)	2 (1.7%)
2	Clarity of explanations in the videos	79 (66.9%)	34 (28.8%)	3 (2.5%)	2 (1.7%)
3	Ease of accessing the videos	76 (64.4%)	37 (31.4%)	3 (2.5%)	2 (1.7%)
4	Flexibility of learning with the videos	85 (72.0%)	28 (23.7%)	3 (2.5%)	2 (1.7%)

Table 1 shows students' satisfaction with the use of asynchronous videos in the Libs 893 course. The table shows that the respondents expressed a high level of satisfaction with the use of asynchronous videos for teaching. Flexibility of learning with the videos recorded the highest level of satisfaction, with 85 respondents (72.0%) indicating that they were highly satisfied, while 28 respondents (23.7%) were partially satisfied. Only 3 respondents (2.5%) were not satisfied and 2 respondents (1.7%) were undecided. This suggests that the asynchronous videos provided learners with the convenience of studying at their own pace and time. Similarly, the quality of video content received strong positive responses, as 82 respondents (69.5%) reported being highly

satisfied and 31 respondents (26.3%) indicated partial satisfaction. In terms of clarity of explanations in the videos, 79 respondents (66.9%) were highly satisfied, while 34 respondents (28.8%) were partially satisfied, indicating that the instructional delivery was largely understandable to the learners. Ease of accessing the videos also received favourable responses, with 76 respondents (64.4%) reporting high satisfaction and 37 respondents (31.4%) indicating partial satisfaction. Across all the items, only a very small proportion of respondents expressed dissatisfaction or remained undecided, showing an overall positive perception of the asynchronous videos used for teaching.

Table 2: Advantages of using Asynchronous Videos for learning

S/NO	OPTIONS	FREQUENCY	PERCENTAGE
1	Ability to learn at the learners' speed	68	57.6
2	Ability to rewind and watch again	87	73.7
3	Availability of the video at any time	74	62.7
4	Ability to download and share video	45	38.1

Table 2 shows the advantages of using asynchronous videos for learning. 68 (57.6) of the students indicated that asynchronous

videos have the allows learners' to learn at their own speed, 87 (73.7) of the students indicated that it allows learners to rewind and

watch videos again, 74 (62.7) of the students indicated the availability of the video at any time and 45 (38.1%) of the students indicated that the video can be downloaded and shared. This implies the advantages of using asynchronous videos for learning includes: it

allows learners to learn at their own speed, it allows learners to rewind and watch the videos again, the videos are available at any time and it allows learners to download and share.

Table 3: Extent to which the Asynchronous Video cover the study material

S/No	Course Area	Aspect/Topic	Fully Covered	Partially Covered	Not Covered	Undecided
1	Introduction to course objectives and expectations		98 (83.1%)	18 (15.3%)	1 (0.8%)	1 (0.8%)
2	Key theoretical concepts		85 (72.0%)	28 (23.7%)	3 (2.5%)	2 (1.7%)
3	Step-by-step walk-through of using the LMS		76 (64.4%)	35 (29.7%)	5 (4.2%)	2 (1.7%)
4	Practical demonstrations (e.g., searching databases, citing sources)		90 (76.3%)	24 (20.3%)	2 (1.7%)	2 (1.7%)
5	Case studies / real-world examples		72 (61.0%)	38 (32.2%)	4 (3.4%)	4 (3.4%)
6	Review of assignments and assessment criteria		81 (68.6%)	30 (25.4%)	3 (2.5%)	4 (3.4%)
7	Summary and revision of major course topics		88 (74.6%)	26 (22.0%)	2 (1.7%)	2 (1.7%)

Table 3 presents students' perceptions of the extent to which different course aspects or topic areas were covered, measured across four response categories: Fully Covered, Partially Covered, Not Covered, and Undecided. Overall, the results show a strong positive evaluation of course coverage across all items, with "Fully Covered" dominating every aspect.

For Introduction to course objectives and expectations (Item 1), a very high proportion of respondents (83.1%) indicated that this aspect was fully covered, with only a negligible proportion reporting partial or no coverage (15.3% and 0.8% respectively). Similarly, Key theoretical concepts (Item 2)

recorded a strong positive response, with 72.0% fully covered and 23.7% partially covered. Although slightly lower than Item 1, it still indicates effective teaching of foundational concepts, with only 2.5% reporting no coverage. For Step-by-step walkthrough of using the LMS (Item 3), responses were comparatively less strong, with 64.4% fully covered and 29.7% partially covered. This indicates that while most students received adequate LMS training, a noticeable proportion felt it was only partially addressed, and suggesting room for improvement in practical digital skills instruction. Practical demonstrations (Item 4) received relatively strong ratings, with 76.3% fully covered and only 1.7% indicating no



coverage. This suggests effective integration of applied learning activities such as database searching and citation practices. For Case studies/real-world examples (Item 5), the level of full coverage dropped to 61.0%, the lowest among all items. A relatively higher proportion (32.2%) indicated partial coverage. Review of assignments and assessment criteria (Item 6) was well covered, with 68.6% reporting full coverage and 25.4% partial coverage. Finally, Summary and revision of major course topics (Item 7) recorded strong results, with 74.6% fully covered and only 1.7% not covered. This suggests effective end-of-course consolidation of learning.

Across all course aspects, the dominant pattern is that most students perceived course content as fully covered (61.0% & 83.1%), indicating generally high instructional effectiveness. However, the consistently present “Partially Covered” responses ranging from 15.3% to 32.2% suggest that while delivery is strong, depth and completeness vary across topic. This implies the asynchronous video adequately covered the course material.

Discussion of Findings

The findings of the study revealed that the majority of the students were satisfied with the use of asynchronous videos for teaching in the Libs 893 course. This may be attributed to the flexibility and accessibility associated with asynchronous learning. The finding agrees with the study of Choe, et al. (2019) who opined that students in their study rated lecture video styles as highly satisfying, indicating that student feedback can be a valuable resource for course designers to consider as they design their own online courses. The designers of instructional material and content creators should incorporate asynchronous videos to their

platforms so as to supplement the synchronous video conferencing styles.

The study further revealed that asynchronous videos provide several advantages to learners, including the ability to learn at one's own pace, rewind and replay videos, access learning materials at any time, and download and share instructional videos. This finding corroborates the study of Yıldırım (2021) who opined that with asynchronous videos students can use their time efficiently and watch the videos repeatedly whenever and wherever they want. Similarly, Schwarz et al. (2022) opined that asynchronous teaching offers more flexibility than synchronous teaching due to on-demand availability. Harnessing the flexibility of asynchronous videos in learning will make distance learning more engaging to students.

The findings also showed that the asynchronous videos adequately covered the study materials for the course. This implies that asynchronous videos can effectively supplement synchronous instructional methods in distance learning environments. This finding is in line with the study by Schwarz et al. (2022) who opined that asynchronous videos usually focus on procedural knowledge and are viewed repeatedly, so they may include chapter markers or text blocks to signify transitions and facilitate skimming of information.

Conclusion

This study concludes that asynchronous videos as a supplement for synchronous video-conferencing applications like the one on the Distance Learning Centre, Ahmadu Bello University LMS creates more engaging and satisfying learning experience. The asynchronous videos are flexible and can be used at any time the learner chooses. This flexibility and its availability at any time provides a cover for the technological

problems associated with the use of the LMS. More so, this asynchronous video is delivered on the WhatsApp application, once downloaded will not need data to play, it becomes readily available on the device.

Recommendations

Based on the findings of this study, the following recommendations are proffered:

1. The Distance Learning Centre should develop the policy of making asynchronous video a part of their instructional materials. This can be done by creating a video content creation unit and training e-tutors on how to make these videos.
2. Practical-based courses should include asynchronous videos. The LMS could be recalibrated to take videos of a certain size or these videos could be posted on the WhatsApp group of those courses.
3. Screencasting software like Camtasia studio or Captivate should be acquired by centre and after every semester, e-tutors can be trained on how to use these software.

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