

LEARNING VIDEOS FROM A STUDENT'S PERSPECTIVE

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Abstract

Videos support different learning strategies. Numerous publications have explored the possibilities of using video, from short introductory clips to the flipped classroom approach, recorded descriptions of situations and activities, recordings of traditional classes, and remote, interactive teaching. Our objective is to understand how and why students use videos. We aim to determine their purpose and how they utilize the prepared videos. Some educators suggest that students use video primarily as a study tool before tests and exams and do not utilize the materials in other contexts. Some students prefer written materials and use video to a small extent. Other challenges relate to the technical aspects of using video, particularly in finding the expected information and using videos effectively. Addressing these issues can help in better and more effective preparation at the level of video creation. This article presents observations from teachers across different departments, literature reviews, and student survey results. The findings show that the students use mostly teacher-made videos in their learning and that the content is the most important, not the technical quality. The videos do not have to be short, and they do not have to be subtitled if the sound is satisfactory. Students do not wish to make videos themselves as hand-ins.

Keywords: *Flipped classroom, blended learning, instructional videos, video production.*

1. Introduction

The pandemic caused massive disruption to the academic field, and the work to quickly move to electronic learning (e-learning) has affected universities, teachers, and students at all levels. The number of colleges and universities worldwide offering distance learning programs has increased drastically (Pollen, 2022). During the pandemic, everyone had to acquire knowledge to use digital media in teaching. In retrospect, you can evaluate what worked well or not. Over some years, digital learning resources have been produced for use in teaching, and investigating whether such resources have positively affected students' learning is interesting. The development of learning resources can help lift the knowledge database to promote better learning for students in higher education.

It is still not the case that video in teaching guarantees better learning outcomes. The medium itself does not provide learning; it is crucial how you design the video and include it as a teaching method (NTNU, 2024). Real-time videos mean live transmission/streaming between campuses or locations. There are several reasons for streaming, such as a lack of teachers, reduced costs, and avoiding travel.

At Western Norway University of Applied Sciences (HVL), it is normal for compulsory student work to be delivered as a PDF file in the learning platform or by e-mail. Alternatively, can student work be handed in as a video? Could video feedback from teachers be an alternative for our students? Can this be used as guidance in bachelor theses or similar work? Text and words can give a better understanding of the feedback. By posting a video on the learning platform ahead of the teaching session, you can “flip” the classroom (Fojcik et al., 2020). In dialogue with the students, you can arrange for them to watch relevant videos on a topic ahead of the lesson and use the time for homework or solving various problems. Other reasons for using video in teaching and learning are to motivate, provide variety, and encourage repetition. The videos must be adapted for the students so they can watch them at their own pace, rewind, stop, play, and make notes to understand difficult theories more easily.

This article discusses a survey of the students' video use to enhance their knowledge in various subjects at WNUAS. The article is organized as follows: Part 2 presents related work, part 3 describes the survey's methodology, part 4 results, part 5 discussion, and part 6 conclusion.

2. Related work

There has been a rapid development and increase in the use of available video material in many areas of society, including higher education. Today's infrastructure and transmission systems for data transfer have been better developed, and capacity has increased. This has meant that the quality and speed of video transmission have improved, and the quality of the data material received is satisfactory.

Due to the demands of modern technology-savvy students and the availability of technology, higher education institutions feel the need to reshape traditional teaching methods (Moussiades et al., 2019). Videos are increasingly gaining a foothold in the educational landscape. It is recognized that videos can enliven sterile theoretical concepts with vivid images and spark students' imaginations (Abdous & Yoshimura, 2010; Chan, 2010; Pelton, 2013). Therefore, teachers in schools and universities are increasingly encouraged to use video instruction in their teaching and develop students' learning skills through videos. Empirical studies on the use of videos report that video is a powerful medium for presenting educational material, expert demonstrations, giving and repeating lectures, and exploring complex scenarios (Berk, 2009; Moussiades et al., 2019). As a result, most universities have started mixing live teaching with various digital approaches, which is a blended or hybrid learning perspective (Higgins, 2003). Video-based learning (VBL) is an important part of blended learning, especially in flipped classrooms and Massive Open Online Courses (MOOCs).

According to de Boer (2013, p. 17), the emergence of digital networks, such as the Internet, has made it possible to watch videos at any time, regardless of time. It has also led to the teaching being somewhat detached from a specific location (i.e., the classroom). The video can be viewed on any computer connected to the internet. Siemens, Gasevic, and Dawson (2015, p. 205) refer to this as "the idea of classroom constraints where teachers can now use a variety of technologies and interact with students and content worldwide". This has led to opportunities outside the classroom with the rise of MOOCs (Fox, 2013; Baggaley, 2014), transforming the educational landscape (Bates, 2015). It is difficult to imagine modern teaching without the video elements (Andrist et al., 2014) that allow students to engage with the material before class in their free time. On the other hand, using digital elements such as video content is not limited to students conducting self-study, i.e., watching a particular video at their own time and pace. Digital elements are also used for formal learning. The fact that videos can also be integrated into face-to-face sessions means that the use of video is by no means limited to a supplementary element (Andrist et al., 2014).

Within the education sector, many different videos have been produced, each with its own aspects and functions. Categorizing, describing, and defining the differences between the various forms is a challenging process, and due to the dynamic nature of the field, it is a process that is constantly evolving. Changes are required for lecturers who switch from face-to-face teaching to video teaching with screen processing. Doing this efficiently while maintaining a spotlight on the teaching process without getting lost in the complexity of new technologies is an ongoing challenge. For some lecturers, it may seem controversial to record their teaching on social media and make it available to a larger audience. Nevertheless, the probability is high that video teaching will become more standard over time (Woolfitt, 2015).

Shephard (2003, p. 295) pointed out over twenty years ago that "video has been used in various ways for many years to support student learning in all branches of education". Access to websites such as YouTube, Facebook, TeacherTube, and others has improved a lot recently, and most of them are freely available to students and lecturers. There are also many specific videos made for our educational purposes, made by academics, which have had the same purpose as us in investigating the use of self-produced video material for students. There are examples of video use evaluation in higher education's learning and teaching field, as Shephard (2003) has pointed out. The research in this area has often focused on the lecturer's views and experiences on correctly using the technology (Cook-Sather, 2003; Lee & Sharma, 2008). Guo, Kim, and Rubin (2014) found that videos should be short, about 6 minutes and that the content was the most important thing for the students, not the technical quality.

3. Method

3.1. Study description

The survey was conducted among HVL students, and the questionnaire was given to engineering students on two HVL campuses. The survey aims to assess how videos are used in teaching, examine the students' experiences with different backgrounds and perspectives, and determine whether opinions coincide. The goal is to facilitate change and development.

3.2. Collection of data

Students were asked about using videos in their learning process, whether they enhanced their knowledge, and details about their usage. The data was collected from two of the university's five campuses, Førde and Bergen. Most students are on the Bergen campus, divided into IT (computer engineering) and Electronics (electrical engineering). In the IT program, 34 out of 41 students responded; in the electrical program, we received 51 responses out of 64 students surveyed. Overall, we received a response rate of 81% for the two study programs. The survey was conducted in the spring of 2024. The survey includes first-, second-, and third-year students pursuing a bachelor's degree in electronics and IT/computer engineering at our university.

3.3. Survey

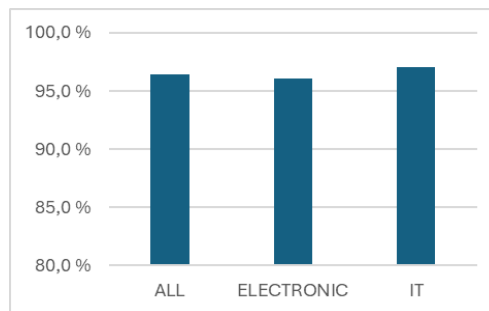
The survey consists of a questionnaire with 16 closed questions. Closed questions mean yes/no answers or to what extent. The lecturer will never fully know what type of students are following the class; they can be full-time students, distance students, or students who combine work and study.

Questions such as “What type of videos do you prefer?” may be of interest as we, as teachers, spend much time creating video resources. Is our work useful? Students have many opportunities to find relevant video resources online. Should videos be added to the learning platform before or after the lesson? Here, teachers tend to practice differently because those who post resources in advance of teaching often get answers from students, such as, “No, we have not had time to watch the video.” We ask, “How do you experience the technical quality of the videos?” and “What is important to you when you start a video?” On this last question, we give the student several options.

The survey was anonymous and voluntary and was considered non-reporting and non-sensitive. No personal information was collected about the participants. The entire questionnaire, including space for the answers, was given on one A4 sheet printed on both sides. This was done to indicate that short and precise answers were expected. The questions in the survey lead to quantitative analysis.

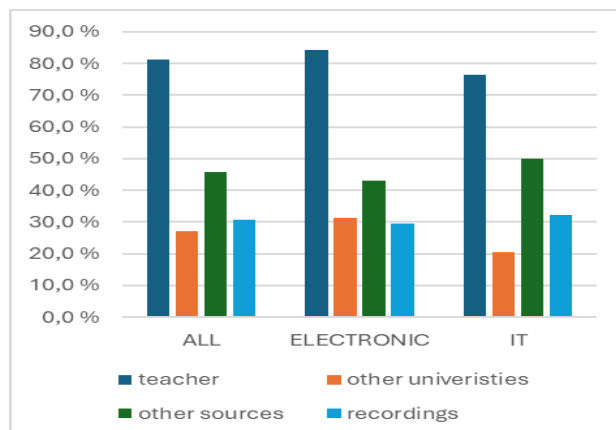
4. Results

Figure 1. Are you using videos in your learning?



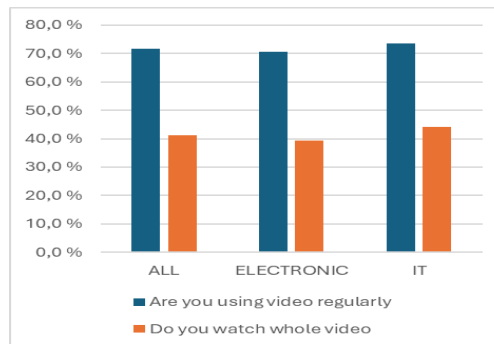
Almost all students (average 96%) are using videos, and there are very small differences between the two student groups.

Figure 2. What kind of videos do you use?



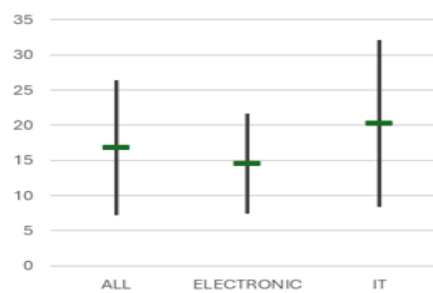
Most students use videos prepared by their lecturer (approx. 80%). Electronics students watch slightly more videos than IT students.

Figure 3. a) Are you using videos regularly during the whole semester, and b) are you watching the whole video without moving forward and back?



On average, 70% of students watch videos regularly. However, statistics from YouTube and Canvas show that most students watch videos only before exams. Students use videos mostly to find useful information (60%). Only 40% of them will watch the whole video.

Figure 4. Preferred video length.



The preferred video length varies from about 5 minutes to more than 30 minutes. Another question was about videos as student hand-ins. Most students (80%) do not want to make videos themselves.

Table 1. What is the most important in a video? Likert scale from 1 (most important) to 6 (least important).

1.	Content	1.4
2.	Availability (easy access)	2.8
3.	Form (design)	3.4
4.	Size	3.9
5.	Subtitling	4.5
6.	Fitting to display on mobile device	5,2

We can see that content and availability are the most important factors and that size and subtitling are less important. Some students answered that subtitling is unnecessary if the sound is satisfactory. However, 60% of the students want subtitling.

5. Discussion

The meta-survey (Guo et al., 2014) carried out 10 years ago showed that students wanted short video clips and that relevant content was the most important thing, not the technical quality. This was before the pandemic, and a lot has changed since then. At the time, there were not many lecturers making videos at our university; now, there are many more. Students today expect videos to be available to support their learning, and it is an important part of the flipped classroom (Baig & Yadegaridehkordi, 2023; Fojcik et al., 2020). Our survey shows that almost all students use videos but to varying extents. They prefer videos made by subject teachers, but some watch videos on other channels, such as YouTube. Students are happy to watch videos longer than the recommended length of 6 minutes (Guo et al., 2014). In higher education, you must not only acquire subject competence but also so-called soft skills, such as creativity, the ability to communicate, the ability to collaborate, the ability to exercise source criticism, and persistence (Poláková

et al., 2023). Learning takes time, and how long it takes to acquire new skills is individual. You must spend the time you need using different sources, not just videos. You can stop long videos and take breaks when needed. Our survey shows that the length of the video is not decisive; it is the content and accessibility that are most important; everyone is pretty much in agreement there. It coincides with Guo's study. Videos must have relevant content, but it can be easy to forget that if you try to make them technically perfect. However, the students do not want to submit work requirements on video, and they do not want to make videos themselves.

6. Conclusion

The survey shows that the students use videos and that the content is the most important, which means that we do not need to spend much time trying to create technically perfect videos. The first version is often good enough if you speak clearly and have a good microphone. We have emphasized making short videos, but it is not as important as we thought. This survey is a great inspiration for continuing to facilitate learning by creating digital learning resources.

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