Qualitative descriptive study on the use of instructional videos by undergraduate students

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This qualitative descriptive study explored how undergraduate students in the south-eastern United States of America use instructional videos in online courses. Grounded in the technology acceptance model and informed by concepts related to self-regulated learning, the study examined student perceptions of use, usefulness, ease of use and enjoyment. Twenty participants shared their experiences through individual interviews (11 participants) or focus groups (nine participants). Reflexive thematic analysis resulted in seven interconnected themes: use, usefulness, enjoyment, ease of use, length of video, video characteristics and student factors. Usefulness was the strongest influence on video use. Students also considered length and, occasionally, enjoyment when deciding whether to watch videos. Video characteristics, such as enthusiastic speaker, and student factors, such as academic goals and time management, also influenced use. Students demonstrated self-regulated learning by strategically managing their time, attention and effort through behaviours such as increasing playback speed, multitasking and determining whether videos aligned with their academic goals. These findings offer insight into student decision-making and suggest strategies for designing instructional videos that students are more likely to use.

Implications for practice or policy:

- Instructors should clearly state why an instructional video is necessary for students' academic goals.
- Creators of instructional videos should understand that undergraduate students will often employ time-saving strategies when using instructional videos.
- Creators of instructional videos should create instructional videos that are as short as possible.
- Creators of instructional videos should create videos with enthusiastic and engaging speakers, dynamic visuals and real-life applications.

Keywords: instructional videos, educational videos, online learning, technology acceptance model, self-regulated learning, qualitative research

Background

Instructional videos are a central component of online education. Research has shown that instructional videos provide many benefits (Beheshti et al., 2018; Estriegana et al., 2019; Fyfield et al., 2019) and are often preferred by students (Campbell et al., 2019; Jayaratne & Moore, 2017). In online classes, videos are often the primary instructional format (Mayer, 2021). However, studies on the effectiveness of instructional videos have reported mixed findings (Breneiser et al., 2018; Fyfield et al., 2019; Laugerman & Saunders, 2019; Pal & Patra, 2021; Zielinski et al., 2018). These inconsistencies highlight the need to better understand how students use instructional videos.

Most research on instructional videos has employed quantitative methods, and research findings have been inconsistent and, at times, unexpected. Several studies have reported positive effects of instructional video use on learning outcomes (Estriegana et al., 2019; Fyfield et al., 2019; Martin et al., 2019; Pal & Patra, 2021), while other studies found no significant learning gains (Zielinski et al., 2018). For example, Laster-Loftus and Cooper (2019) reported that online students who had access to instructional videos obtained similar grades to students who did not have access, and Laugerman and Saunders (2019) found a negative correlation between the number of minutes face-to-face students spent watching

instructional videos and their grades. Although research on multimedia design principles, such as the dynamic drawing and gaze guidance principles, has demonstrated learning benefits under controlled experimental conditions, the contextual conditions that shape the effectiveness of these principles are not understood (Mayer et al., 2020). Additionally, Pal and Patra (2021) have argued that there is a need to explore the decision-making processes that shape whether and how students engage with instructional videos. Collectively, these findings and recommendations support the need for a qualitative study.

Therefore, the purpose of this qualitative descriptive study was to explore the use of instructional videos by online undergraduate students at community colleges and universities in the south-eastern United States of America. The framework for this study was the technology acceptance model (TAM), which suggests that the use of a technology is influenced by the potential users' perceptions related to ease of use, usefulness and enjoyment (Davis et al., 1992). By exploring how students describe their use of instructional videos and their perceptions of ease of use, usefulness and enjoyment, this study aimed to generate insights that can help instructors design video content that students are more likely to use and find beneficial.

Literature review

Although the value of various forms of audiovisual media in educational settings has been researched for many years, updated research is needed due to changing technology. Since instructors can now create their own videos, research studies have focused on identifying principles and designs that increase learning from videos (Mayer, 2021). Since classes can now be taught virtually, Park and Shea (2020) have suggested that future research focus on the characteristics of online learners and the best combinations of technology and pedagogy.

When TAM was first proposed by Davis in 1985, it included only two factors, ease of use and usefulness. Ease of use refers to the accessibility and usability of technology (Ali & Ali, 2019), which may not influence the intention to use instructional videos since students watch videos online daily. The usefulness of instructional videos includes the effectiveness of the videos in achieving learning outcomes. In 1992, Davis et al. expanded TAM to include enjoyment. According to Pereira and Tam (2021), enjoyment predicts the use of technology more than usefulness if the technology provides pleasure.

In addition to TAM, Zimmerman's (2000) cyclical model of self-regulated learning (SRL) provides a useful framework for understanding students' responses. Zimmerman conceptualised learners as active agents who engage in three cyclical phases: forethought, performance or volitional control and self-reflection. The forethought phase involves goal setting, strategic planning and motivational beliefs such as outcome expectations, intrinsic interest and task value. During the performance phase, learners exercise self-control by focusing attention and using strategies for tasks. Finally, self-reflection includes self-evaluation, which leads to adaptive adjustments. Students' decisions to watch, partially watch or not watch instructional videos reflect these regulatory processes.

The use of instructional videos as an instructional method has increased since videos are now cheaper, easier and readily available for online use (Fyfield et al., 2019). Online students choose whether to use instructional videos and how they will use them. Students have reported that they liked and used instructional videos, but they also stated reasons for not using them (Harrison, 2020). Students said they would use videos to prepare for classes, but they often did not (Bordes et al., 2021). Although most of the research on instructional videos relates to the usefulness of videos, the use of instructional videos needs to be understood because videos cannot be useful if they are not used.

Despite extensive quantitative research examining the effectiveness of instructional videos, less attention has been given to students' decision-making processes regarding when and how they engage with video content in authentic learning environments. Studies have often measured outcomes but have provided limited insight into the evaluative and regulatory processes that shape engagement. Given the inconsistent findings in the literature and the recognition of learner autonomy in online contexts, a

qualitative approach is needed to explore students' decision-making in depth. By examining students' perspectives in their own words, the present study seeks to illuminate the strategic, goal-oriented considerations that contribute to instructional video use and to extend TAM research through the lens of SRL.

Methods

A qualitative descriptive design was used to explore the use of instructional videos by undergraduate students. Qualitative research was needed to clarify a complex and context-dependent phenomenon, as recommended by multiple researchers in this area (Bordes et al., 2021; Laster-Loftus & Cooper, 2019; Laugerman & Saunders, 2019; Yi et al., 2019). A qualitative descriptive research design enabled the collection of rich, participant-centered accounts that accurately represented students' experiences, perceptions and motivations related to their use of instructional videos. Data were collected through individual interviews and focus groups, focusing on the following research questions:

1. How do online undergraduate students describe their use of instructional videos?
2. How do online undergraduate students describe their perceptions of the ease of use, usefulness and enjoyment of instructional videos?

I developed the interview and focus group protocols and refined them through feedback from students and experts, as well as field testing.

Ethics approval and consent to participate

This research study was conducted in accordance with guidelines and regulations related to research studies with human participants. Informed consent was obtained from all participants. All protocols for this research study and communications with participants of this research study were reviewed and approved by the Grand Canyon University Institutional Review Board.

Participants

This study consisted of 20 research participants. Eleven were individually interviewed, and nine participated in focus groups. Focus group attendance varied, with two, four and three participants per group. Although 34 potential participants clicked on the participation link, 20 completed an interview or focus group. Participants were initially recruited from two community colleges with a combined enrolment of approximately 15,000 students; however, despite multiple recruitment efforts, only a few students responded. Consequently, convenience and snowball sampling strategies were also employed. I shared information about the research study on my personal Facebook page and encouraged participants to share the opportunity with others. Participation required voluntary enrolment and follow-through, which may have been more appealing or accessible to academically engaged students. Eligibility criteria required participants to be at least 18 years of age and to have completed an online undergraduate course that incorporated instructional videos at a college in the south-eastern United States of America.

Data collection

After confirming eligibility and providing informed consent, participants completed a brief demographic questionnaire online. Individual interviews and focus groups were conducted online and recorded via Zoom from February to June 2023. Participants received a $20 online gift card.

As a result of COVID-19 restrictions and the subsequent increase in online course enrolment, participants reported using instructor-created lecture videos and third-party educational videos across a range of undergraduate courses including anatomy, biology and biology laboratory, mathematics, physics, theatre, and yoga. I verified the transcripts generated using Microsoft Word's transcription tool. Identifying information was removed, and transcripts were sent to participants for member checking. No corrections

were submitted. Transcripts were uploaded to MAXQDA, a qualitative analysis software. Pseudonyms were used for interviewees, and focus group transcripts were identified by number.

Data analysis

Reflexive thematic data analysis (Braun & Clarke, 2021) guided the analysis. Familiarity with the data was achieved through conducting interviews and focus groups, verifying transcripts and reviewing transcripts. Initial coding included a deductive approach using structural codes based on TAM constructs and video types, supported by MAXQDA's autocode feature. This was followed by an inductive, line-by-line process incorporating descriptive and in vivo coding. For example, codes such as "required to watch" and "multitask" reflected students' strategic decision-making processes. Second-cycle coding involved identifying relationships and patterns. MAXQDA's drag and drop tool, code matrix browser, creative coding tool and code relations browser were used to connect, merge and reorganise codes into hierarchical themes. Following completion of the interview and focus group data analysis, ChatGPT was used as a supplementary analytic tool to support my interpretations of the focus group data. All transcripts were fully deidentified prior to use with ChatGPT, and no personally identifiable or confidential data were entered into the system. Outputs generated by artificial intelligence were compared with my existing interpretations and the original transcripts. No substantive discrepancies were identified between the outputs generated by artificial intelligence and my interpretations. However, the process prompted additional reflection and contributed to refinement of the final thematic interpretations.

Prompts were adapted from MuellerMixedMethods (2023). Two prompts were used and repeated for each theme. Those for ease of use consisted of the following:

- These are text segments from focus groups about the use of instructional videos. The segments belong to a category called "ease of use". Provide a summary of the text segments that belong to this category. Highlight the commonalities among all statements but also describe some exceptional cases.
- These are text segments from focus groups about the use of instructional videos. The segments belong to a category called "ease of use". Provide a definition for this category, provide a good example from the input segments and point out any segments that might not fit this category and explain why they do not fit.

The process of entering data excerpts and applying analytic prompts was repeated across each potential theme. The use of ChatGPT served as an additional reflective step in the analytic process and functioned as a form of analytic triangulation intended to enhance the trustworthiness and credibility of the findings.

Results

Participant characteristics

The final sample consisted of 20 undergraduate students. Interview participants attended eight colleges and included eight females and three males. Ten were 18–24 years old, while one was 55–64. More than half of interviewees reported a grade point average of 3.6 or above, and most had taken more than 15 classes. Focus group participants had similar demographics. Six out of nine were female, and eight out of nine were 18–24 years of age. Focus group participants attended seven colleges, most reported grade point averages of 3.6 or above, and most had taken more than 30 classes.

Themes

Thematic analysis resulted in seven interconnected themes related to students' use of instructional videos: use, usefulness, length, enjoyment, ease of use, student factors and video characteristics. These themes were constructed through iterative coding. Definitions for each theme are provided in Table 1.

Table 1
Themes for the use of instructional videos

Themes	Definition
Use	How students interact with instructional videos The use theme includes why and how students use instructional videos and student behaviours that relate to how they use instructional videos.
Ease of use	Usability of instructional videos The ease-of-use theme includes the accessibility and functionality of instructional videos and all issues that hinder performance.
Usefulness	Benefits of instructional videos The usefulness theme includes ways that instructional videos are helpful to students in accomplishing their educational goals, directly or indirectly.
Enjoyment	Gratification from instructional videos The enjoyment theme includes experiences watching instructional videos that students consider to be interesting, entertaining, or positive.
Length of video	Time required to watch an instructional video The length of video theme includes how long the video is and students' perceptions related to the length of the video.
Video characteristics	Various characteristics of instructional videos The video characteristics theme includes specific aspects of instructional videos, including the type of instructional video.
Student factors	Various characteristics of online undergraduate students The student factors theme includes preferences, characteristics, behaviours and motivations of online undergraduate students.

Use

The use theme includes why and how students use instructional videos and addressed research question one: "How do online undergraduate students describe their use of instructional videos?". Across interviews and focus groups, students described evaluating instructional videos primarily in terms of academic necessity and time investment. Participants frequently considered whether the content was required for tests or assignments, whether they already understood the material and whether watching the video would improve their grade. As Participant 1 (P1) explained:

> If I'm really unfamiliar with it, and it's something I need to know, like the teacher says there's going to be a quiz, or this will be on your test, make sure you know it. Then, I'll absolutely sit down and watch it.

However, if a video was perceived as unnecessary, redundant or overly time-consuming, students often skipped it unless they had personal interest in the topic. Video length was particularly influential and frequently discussed. When asked how she decides whether to watch a video, P3 said, "The length of the video. Also, like the importance of the video". Participants also reported that engagement depended heavily on presentation style, with enthusiastic speakers and dynamic visuals increasing the likelihood that students would continue watching. P2 said:

> Usually I always click the link, and I may watch a few minutes, and if then I decide this is kind of boring, or I've already learned this or something like that … it's monotonous, then I am more likely to X out of it.

Other aspects that influence the use of instructional videos are related to the online environment. When taking an online class, there is not a specific place and time set aside to watch instructional videos. P2 talked about distractions, like a roommate knocking on her door. Course format also plays a significant role. As P13 stated, "If it's like a 100% online class, I watch like every video…but if it's like a in-person and half online, then half the time I won't watch the videos". Students also described how they maximised

efficiency when using instructional videos. For example, many participants reported multitasking while listening and increasing playback speed. P13 said, "I do put mine in fast speed too, and I'll turn like the closed captioning on so I can just read it faster". Overall, participants viewed instructional videos as a tool to help them achieve their goals while managing demands on their time and attention. As P4 stated, "My goal is to get the information that I need in the least amount of time".

Ease of use

Participants described ease of use as a baseline expectation rather than a motivating factor in their initial decision to watch a video. Usability became salient when technical or functional problems interfered with viewing. Students described barriers such as broken or confusing video links, unreliable Wi-Fi connections and complications associated with third-party hosting platforms. Participants also reported frustrations related to audio and visual quality, including inaudible recordings, small writing on boards and captions obscuring information on the screen. As P14 explained, "They're trying to screen record a YouTube video, and you can't hear anything that they're saying". P5 suggested that instructors review videos prior to posting them to ensure technical quality.

Enjoyment

Most participants preferred instructional videos over other learning methods. P6 said, "I like the visuals, and I also like somebody explaining it". However, enjoyment depended heavily on presentation style and instructor delivery. Students disliked videos that were monotonous, repetitive, or overly slow. P7 stated, "I enjoy watching videos, but sometimes, if they talk really slow, or they … it's kind of bland information, then I will not watch the video".

Participants described enjoyment in different ways, including whether videos were interesting, helpful, engaging or personally enjoyable. Some students seemed to have a mindset that schoolwork was not supposed to be enjoyable. When P8 was asked if he enjoyed instructional videos, he immediately responded, "No;" however, he later said, "Actually, I'm going to recant the previous statement". He added that he watched certain educational videos "for fun". Participants reported that enjoyment increased when videos included interesting topics, real-life applications, storytelling and concise, engaging formats. Instructor qualities were especially influential, with students preferring instructors who appeared enthusiastic about the topic, invested in teaching and compassionate. As P8 said, "Voice is the biggest factor".

Usefulness

Participants viewed instructional videos as useful when they supported their academic goals and improved understanding of course material. Students described videos as an essential component of online education. As P10 explained, "You have your textbook, but you need the video". Instructional videos provide demonstrations and visual representations that explain concepts in ways that text cannot. Students preferred videos created by their own instructors because the content aligned more closely with course expectations and assessments. Students want the necessary information without unnecessary details. As P15 said:

> I would rather have someone tell me how to do something when they're going to be grading that same thing a week later, rather than some online video covering every single topic when I don't even know if everything on that video is going to be on the exam or final.

Participants reported that instructional videos were most useful when they were engaging and included animations and visuals. When P2 described an engaging speaker, she said, "He looked at the camera, looked directly at it … I felt like he was talking at you, felt like you were sitting in a class". Participants also value the ability to individualise learning by pausing, rewinding, rewatching or skipping sections based on their needs. When videos included real-life applications, participants reported an increased motivation to learn.

Participants perceived videos as less useful when the content was redundant, poorly explained, misaligned with assignments or tests or delivered by a speaker who is not engaging. Students avoided

videos with instructors who spoke with a monotone voice and were not passionate about their topics. Students often evaluated usefulness by considering whether they already understood the material and whether watching the video would improve their performance. Participants said that if they watched a video, and then the video was not discussed or used for test questions, they felt like they wasted their time.

Length of video

Participants consistently identified video length as an important influence on the use, usefulness and enjoyment of instructional videos. Most participants preferred shorter videos and often considered video length before deciding whether to watch. Although definitions of "long" varied between over 5 to over 20 minutes, participants associated longer videos with decreased attention and greater likelihood of postponing, skipping or multitasking. As P2 explained, "Sitting there trying to watch an hour-long video or even a 30-minute-long video…I always felt like there was other things I could be doing". Participants reported better attention and retention with shorter videos. P18 said:

> I'm gonna get every piece of information from this while I'm watching this 10-minute video versus like, OK, I got 45 minutes to watch this. And you know, maybe I look at my phone while it's playing cause I'm still going to see most of it.

Most participants preferred six 5-minute videos instead of one 30-minute video because shorter videos increased flexibility, helped them manage their time, allowed them to check off completed segments and made reviewing specific topics easier. However, other students preferred a single longer video because it felt less overwhelming than seeing a list of videos to watch, and they could easily double the playback speed, manage one block of time and pause and timestamp the video if needed. Participants favoured concise videos that minimised unnecessary introductions, repetition and other time-consuming activities.

Video characteristics

The video characteristics theme describes aspects of instructional video design and format that influenced students' perceptions of usefulness and enjoyment. Students reported watching many types of instructional videos, including teacher-made videos and non-teacher-made videos. Teacher-made videos included narrated Microsoft PowerPoint slides, lectures, overviews, laboratory demonstrations, problem-solving on whiteboards, smartboards or other screens, composite videos with instructor and notes and narration over preexisting videos. Non-teacher-made videos included professionally made videos, videos made by other instructors or lecturers, videos from online textbooks and other educational groups, television shows, movies, performances and videos from real-life applications.

Participants preferred videos that were specifically made for online viewing as opposed to videos that were recorded during a classroom lecture due to better visual and audio quality and more direct engagement with online students. Students reported that teacher-made, course-specific instructional videos are particularly useful because the material aligns with course content and assessments. Students also valued teacher-made videos because the instructor often emphasised the concepts that they need to know and personalised the information for that specific group of students. However, some participants preferred videos that were not created by their instructor when they needed to hear a different instructor explain a concept or when preparing for a standardised test. Students appreciated it when their instructor narrated over a preexisting video to clarify concepts. Students perceived this extra step as indicative of their instructor's belief that the information in the video was important. Participants identified several characteristics that made videos more enjoyable and effective. Preferred elements include interaction, animations, step-by-step problem-solving, dynamic visuals and annotations, and text to follow. P2 said, "I have to have subtitles on because it just keeps me so much more focused in on it".

Student factors

The student factors theme describes how personal preferences, behaviours, motivations and personal goals influenced instructional video use. Recurring themes included time management and personal goals. Students emphasised the importance of using their time efficiently and avoiding activities they perceived as unnecessary. Students appreciated instructors who respect their time. Participants often

employed multitasking although they acknowledged that multitasking could hinder or support attention depending on the situation.

Students' personal goals also shape video use. Those aiming for high grades were more likely to fully engage with instructional content. As P13 stated, "For making better grades, you're probably watching everything and reading everything". Students noted that online learning environments require greater self-discipline since there is less accountability. As P5 noted, "In person, you're kind of forced to listen, but online you can turn the volume down. You can zone out".

Discussion

This study increases understanding of undergraduate students' use of instructional videos by demonstrating that video use often reflects deliberate, goal-oriented regulation. Across participants' accounts, engagement decisions were shaped primarily by perceived usefulness with additional considerations of video length and time investment. Decisions about whether and how to engage with videos reflected SRL processes, including strategic evaluation of academic necessity, efficiency and perceived value. These findings suggest that instructional video use in authentic learning environments is governed by strategic evaluation processes that extend beyond traditional technology acceptance explanations (see Figure 1). Given that the sample consisted primarily of high-achieving students, these patterns may reflect adaptive self-regulatory strategies associated with academic success.

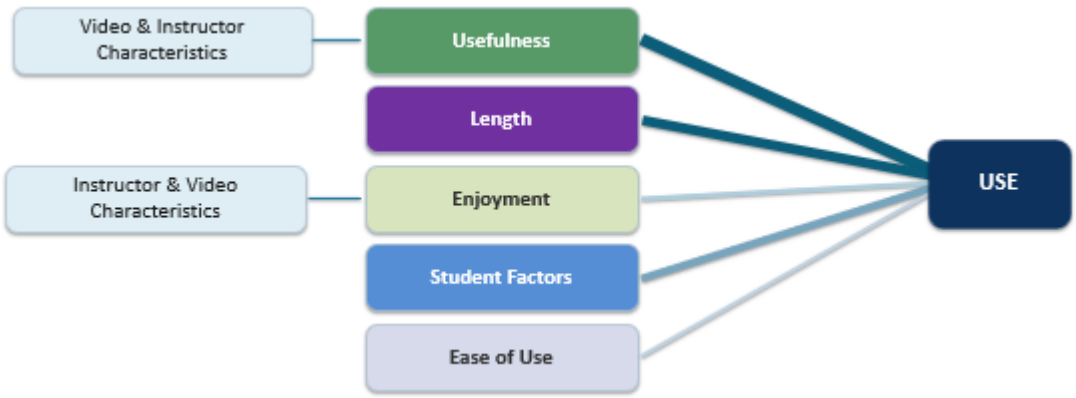


Figure 1. Relationships among themes influencing the use of instructional videos

This study extends TAM by distinguishing between intention to use, actual use and sustained use. Usefulness is a primary influence across all three stages of use. In contrast, ease of use appeared to function less as a motivator and more as a prerequisite expectation, consistent with findings by Nagy (2018) and Turan and Cetintas (2020). Ease of use became relevant when technical or usability issues interfered with use. Enjoyment supported sustained engagement but was rarely sufficient to prompt initial viewing. Video length influenced all three stages of use, supporting research emphasising the importance of the length of instructional videos (Beheshti et al., 2018; Bordes et al., 2021; Harrison, 2020). These findings suggest that TAM does not fully explain instructional video use, particularly in autonomous online environments.

Beyond identifying the influences on the intention to use, actual use and sustained use of instructional videos, this study contributes to the literature by identifying patterns of strategic non-use and partial use of instructional videos. Students did not simply use or not use instructional videos; they engaged in deliberate regulation of their time, attention and effort. Participants reported increasing playback speed, which aligns with findings by Wilson et al. (2018). Participants also described sampling videos to determine relevance, using transcripts to extract key information, multitasking while listening, selectively reviewing segments and allowing required videos to play while focusing only on portions deemed essential. These behaviours reflect SRL processes, including goal setting, metacognitive monitoring and strategic resource management (Zimmerman, 2002). Importantly, non-use often represented an

evaluative judgment about the video's perceived alignment with academic goals and time constraints. Students actively regulate their engagement with instructional videos, reflecting their role as strategic learners who selectively invest time and attention in activities they perceive as necessary for their academic goals. SRL processes and the themes of usefulness, video length, enjoyment and ease of use differentially influence intention to use, actual use and sustained use (see Figure 2).

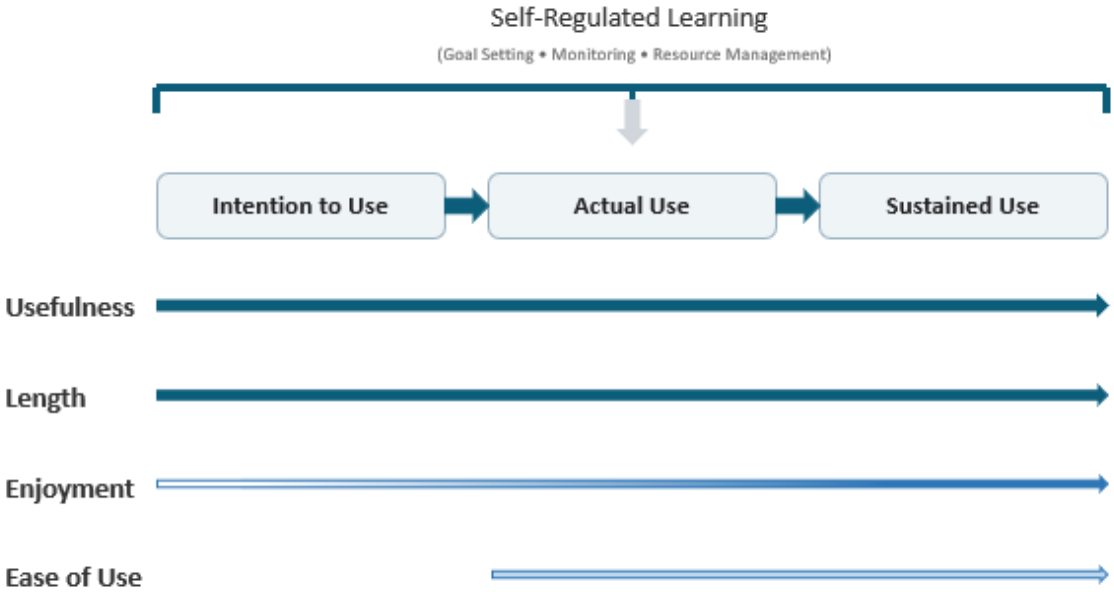


Figure 2. Stage-based extension of TAM incorporating SRL

Additional, indirect factors also influence video use. Students' academic goals influenced whether videos were perceived as useful, which subsequently affected intention to use. Video and speaker characteristics affect both actual and sustained use. Specifically, video characteristics, such as format and design, influence usefulness and enjoyment, while speaker traits, such as enthusiasm and effectiveness, enhance enjoyment and usefulness.

The findings from this study help explain mixed results in the literature. Although students have often reported preferring instructional videos (Campbell et al., 2019), preference does not necessarily translate into consistent or sustained use (Bordes et al., 2021). Most participants preferred short videos, as also found by Bordes et al. and Mustafa et al. (2021), and participants described selectively avoiding videos that were perceived as redundant or overly lengthy. If students believed that they understood the material, they did not use the videos, which may explain studies that did not find increased learning when videos were available (Laster-Loftus & Cooper, 2019; Laugerman & Saunders, 2019). Even when the content was academically necessary, students were less likely to engage if the speaker was perceived as monotonous or insufficiently engaging, which is consistent with the importance of instructor quality, as found by Harrison (2020) and Utz and Wolfers (2020). These patterns suggest that studies examining the effectiveness of learning from videos may yield different results depending on the context in which engagement occurs. In laboratory settings, where participants are expected to attend to video content as part of the study (Martin et al., 2019), outcomes may reflect idealised conditions of use. In contrast, research conducted in naturalistic environments (Schnee et al., 2019) captures the variability of real-world engagement, where students retain autonomy over whether and how they use videos. A key contribution of this study is the distinction between instructors' intended or ideal use of instructional videos and students' actual patterns of engagement. This distinction helps to explain inconsistent findings in research and highlights the importance of accounting for SRL processes and student autonomy when interpreting video effectiveness.

Although participants reported that some instructional videos were not helpful, they generally consider instructional videos to be valuable learning tools. Participants' descriptions align with several multimedia learning principles, including signaling, segmenting, personalisation, voice and image principles (Mayer, 2021). However, findings related to text density suggest that contextual factors may shape how these principles operate outside laboratory settings. Whereas Mayer cautioned against excessive on-screen text, participants in this study expressed a preference for additional textual support, particularly when it enhanced efficiency or reduced cognitive effort. Discrepancies between Beheshti et al. and Mayer regarding the optimal amount of text that should be included may reflect differences between controlled experimental conditions and authentic course contexts. These findings suggest that multimedia learning principles may operate differently in authentic online environments where learners independently regulate engagement and viewing behaviours.

Overall, this study reframes instructional video use as an active, strategic and evaluative process shaped by students' academic goals, perceived costs and self-regulatory behaviours. By integrating TAM with SRL processes and distinguishing among intention, actual use and sustained use, this study offers a more nuanced explanation of video engagement in authentic online environments. These findings highlight the importance of designing instructional videos that are not only pedagogically effective but also aligned with students' strategic decision-making processes, time constraints, and academic needs.

Implications for practice

Instructors have a large impact on students' enjoyment of instructional videos, which aligns with findings by Harrison (2020) and Utz and Wolfers (2020). Instructors can support video use by creating concise, course-specific content and ensuring high production quality. In addition, instructors need to clearly state the relevance and usefulness of the video. Overall, promoting effective video use requires aligning content design with students' motivations, expectations, and time management needs. Effective videos should:

- be directly aligned with course objectives
- contain all necessary information – no more, no less
- be concise and focused
- feature instructor-made or instructor-adapted content, which is specific for the course and personalised for the learners
- include narration, notes or context if using preexisting videos
- be visually dynamic, with helpful text and animations
- incorporate real-world examples or stories
- include enthusiastic speakers who engage with the viewers
- use humor or creativity to enhance enjoyment.

Limitations

A primary limitation of this study is the small and potentially unrepresentative sample. The limited heterogeneity of participants, particularly the predominance of high-achieving students, may restrict the transferability of findings to academically struggling or more diverse student populations. Because participation was voluntary and recruitment relied in part on convenience and snowball sampling, the study may have attracted students who were more academically engaged and reflective about learning strategies. As a result, the patterns identified may reflect regulatory approaches characteristic of academically successful learners. At the same time, this focus provides valuable insight into how even high-performing students strategically evaluate and regulate instructional video use.

Future research

Future research should aim to replicate and expand upon these findings with a more diverse and representative sample. To reduce bias, future qualitative analyses could be conducted by researchers who are unfamiliar with the instructional video literature. In addition, a quantitative study could investigate

how much variance in the use of instructional videos is explained by the key factors identified in this study: usefulness, length, enjoyment, ease of use, video characteristics and student factors. Innovative data collection methods could also be explored. For example, a smartphone-based ecological momentary assessment could capture students' real-time decisions and reasoning about whether to use instructional videos.

Conclusion

This qualitative descriptive study provides meaningful insights into how online undergraduate students use and perceive instructional videos and contributes to the growing literature on instructional video use in online education. The findings suggest that well-designed instructional videos enhance learning, student engagement, and motivation while potentially supporting academic success and retention among online learners. Although participants varied in their preferences regarding video length, number of videos and instructor presence, students consistently valued videos that aligned with course objectives, respected their time and clearly supported their academic goals. Participants interpreted well-designed videos as evidence that instructors cared about both the course content and the students. Students described strategically regulating their engagement with instructional videos based on perceived usefulness, time demands, and personal goals. These findings suggest that instructors should focus less on enforcing video use through monitoring tools and more on creating engaging, relevant and efficient instructional videos and communicating the value of the videos to students.

References

Ali, S. M., & Ali, A. Z. M. (2019). Perceived ease of use towards acceptance on focused educational video sharing site. *Asia-Pacific Journal of Information Technology and Multimedia, 8*(1), 1–15. https://doi.org/10.17576/apjitm-2019-0801-01

Beheshti, M., Taspolat, A., Kaya, O. S., & Sapanca, H. F. (2018). Characteristics of instructional videos. *World Journal on Educational Technology: Current Issues, 10*(2), 79–87. https://un-pub.eu/ojs/index.php/wjet/article/view/3418

Bordes, S. J., Walker, D., Modica, L. J., Buckland, J., & Sobering, A. K. (2021). Towards the optimal use of video recordings to support the flipped classroom in medical school basic sciences education. *Medical Education Online*, *26*(1), Article 1841406. https://doi.org/10.1080/10872981.2020.1841406

Braun, V., & Clarke, V. (2021). Thematic analysis: A practical guide. Sage.

Breneiser, J. E., Rodefer, J. S., & Tost, J. R. (2018). Using tutorial videos to enhance the learning of statistics in an online undergraduate psychology course. *North American Journal of Psychology, 20*(3), 715–730. https://psycnet.apa.org/record/2018-59228-016

Campbell, L. O., Planinz, T., Morris, K., & Truitt, J. (2019). Investigating undergraduate students' viewing behaviors of academic video in formal and informal settings. *College Teaching, 67*(4), 211–221. https://doi.org/10.1080/87567555.2019.1650703

Davis, F. D. (1985). *A technology acceptance model for empirically testing new end-user information systems: Theory and results* [Doctoral dissertation, Massachusetts Institute of Technology]. DSpace@MIT. https://dspace.mit.edu/entities/publication/05fa6107-3a9f-4c38-8bfc-b35789aba3ed

Davis, F. D., Bagozzi, R., & Warshaw, P. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology, 22*(14), 1111–1132. https://doi.org/10.1111/j.1559-1816.1992.tb00945.x

Estriegana, R., Medina-Merodio, J.-A., & Barchino, R. (2019). Student acceptance of virtual laboratory and practical work: An extension of the technology acceptance model. *Computers & Education, 135*. https://doi.org/10.1016/j.compedu.2019.02.010

Fyfield, M., Henderson, M., Heinrich, E., & Redmond, P. (2019). Videos in higher education: Making the most of a good thing. *Australasian Journal of Educational Technology, 35*(5), 1–7. https://doi.org/10.14742/ajet.5930

Harrison, T. (2020). How distance education students perceive the impact of teaching videos on their learning. *Open Learning: The Journal of Open, Distance and e-Learning, 35*(3), 260–276. https://doi.org /10.1080/02680513.2019.1702518

Jayaratne, K. S. U., & Moore, G. (2017). Perceptions of college students toward online classes: Implications for teaching online. *NACTA Journal, 61*(4), 304–309. https://www.nactaarchives.org/index.php/vol-61-4-dec-2017/2670-perceptions-of-college-students-toward-online-classes-implications-for-teaching-online

Laster-Loftus, A., & Cooper, L. J. (2019). The role of instructional videos in psychology students' course success. *Journal of Educators Online, 16*(2), 77–85. https://doi.org/10.9743/JEO.2019.16.2.5

Laugerman, M. R., & Saunders, K. P. (2019). Supporting student learning through instructional videos in business statistics. *Decision Sciences Journal of Innovative Education, 17*(4), 387–404. https://doi.org/10.1111/dsji.12193

Martin, C. D., Underwood, A., & Molinaro, N. (2019). I'm doing better on this own: Social inhibition in vocabulary learning in adults. *Frontiers in Psychology, 10*. https://doi.org/10.3389/fpsyg.2019.01350

Mayer, R. E. (2021). Evidence-based principles for how to design effective instructional videos. *Journal of Applied Research in Memory and Cognition, 10*(2), 229–240. https://doi.org/10.1016/j.jarmac.2021.03.007

Mayer, R. E., Fiorella, L., & Stull, A. (2020). Five ways to increase the effectiveness of instructional video. *Educational Technology Research & Development, 68*(3), 837–852. https://doi.org/10.1007/s11423-020-09749-6

MuellerMixedMethods. (2023, April 16). *ChatGPT & MAXQDA: Qualitative data analysis with AI* [Video]. YouTube. https://youtu.be/9yN2bmf6BNE

Mustafa, A. G., Taha, N. R., Zaqout, S., & Ahmed, M. S. (2021). Teaching musculoskeletal module using dissection videos: Feedback from medical students. *BMC Medical Education, 21*, Article 604. https://doi.org/10.1186/s12909-021-03036-5

Nagy, J. T. (2018). Evaluation of online video usage and learning satisfaction: An extension of the technology acceptance model. *The International Review of Research in Open and Distributed Learning*, *19*(1), 160–185. https://doi.org/10.19173/irrodl.v19i1.2886

Pal, D., & Patra, S. (2021). University students' perception of video-based learning in times of COVID-19: A TAM/TTF perspective. *International Journal of Human-Computer Interaction, 37*(10), 903–921. https://doi.org/10.1080/10447318.2020.1848164

Park, H., & Shea, P. (2020). A review of ten-year research through co-citation analysis: Online learning, distance learning, and blended learning. *Online Learning, 24*(2), 225–244. https://doi.org/10.24059/olj.v24i2.2001

Pereira, R., & Tam, C. (2021). Impact of enjoyment on the usage continuance intention of video-on-demand services. *Information & Management, 58*(7). https://doi.org/10.1016/j.im.2021.103501

Schnee, D., Ward, T., Philips, E., Torkos, S., Mullakary, J., Tataronis, G., & Felix-Getzik, E. (2019). Effect of live attendance and video capture viewing on student examination performance. *American Journal of Pharmaceutical Education, 83*(6), 1200–1206. https://doi.org/10.5688/ajpe6897

Turan, Z., & Cetintas, H. B. (2020). Investigating university students' adoption of video lessons. *Open Learning: The Journal of Open, Distance and e-Learning, 35*(2), 122–139. https://doi.org/10.1080/02680513.2019.1691518

Utz, S., & Wolfers, L. N. (2020). How-to videos on YouTube: The role of the instructor. *Information, Communication & Society, 25*(7), 959–974.https://doi.org/10.1080/1369118x.2020.1804984

Wilson, K. E., Martin, L., Smilek, D., & Risko, E. F. (2018). The benefits and costs of speed watching video lectures. *Scholarship of Teaching and Learning in Psychology, 4*(4), 243–257. https://doi.org/10.1037/stl0000127.supp

Yi, T., Yang, X., Pi, Z., Huang, L., & Yang, J. (2019). Teachers' continuous vs. intermittent presence in procedural knowledge instructional videos. *Innovations in Education & Teaching International, 56*(4), 481–492. https://doi.org/10.1080/14703297.2018.1470020

Zielinski, D., Matthews, R., Koman, C., Jezik, K., & Kiel, E. (2018). College student feedback about librarian-created instructional videos: Why aren't they using them? *Journal of Library & Information Services in Distance Learning, 12*(1-2), 56–66. https://doi.org/10.1080/1533290X.2018.1467811

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). Academic Press. https://doi.org/10.1016/B978-012109890-2/50031-7

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice, 41*(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2

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