SHAPING THE ENGAGEMENT OF ONLINE LEARNERS THROUGH INSTRUCTOR-MADE VIDEOS WITH QUIZZES

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ABSTRACT

This study presents findings from a quasi-experimental, nonequivalent groups research design to examine graduate students’ engagement with Instructor-Made-Videos (IMVs) before and after applying best-practices production procedures with the addition of graded quizzes for accountability. Results showed that learners’ video-watching patterns improved when instructors spoke quickly using an enthusiastic style, maintained video length to approximately six minutes, and required students to complete a short, graded assessment when the video ended. Whereas 37% of potential video-watching sessions were viewed in their entirety by the comparison group (n = 90 students, three course sections), the treatment group (n = 78 students, three course sections) viewed 88% of the watching sessions entirely and earned average quiz grades of 95.7% across all six assessments. These findings suggest that the intervention successfully mitigated online learners’ tendencies to minimally view or not view Instructor-Made-Videos at all and that the students learned the content presented in the videos. The implications are that reasonably simple changes in instructional design and delivery can assist learners as they make choices that influence the quality of their interactions with course content in the online environment.

Keywords: instructor-made videos, online student engagement, ruthlessly efficient online learners, satisficing student behavior

INTRODUCTION

Instructors in online courses often struggle to establish and maintain student engagement without face-to-face class time. In traditional settings, professors build engagement and connect with students through conversation, class discussion, and addressing questions immediately; however, teaching fully online, asynchronous courses creates the need for a new set of strategies to achieve similar results. Professors of online courses often experience frustration when students neglect to access material, ask questions already answered in multiple locations, and then express confusion and anxiety. Darby and Lang (2019) referred to this phenomenon as the “ruthlessly efficient online learner” who accesses content minimally, even when told that the content is essential (p. 56).

Student engagement with content and the instructor are essential elements of learning, and so ruthlessly efficient online learners who do not regularly access materials place themselves at risk for poor outcomes. However, research indicates that one effective approach for increasing student engagement in online courses is the strategic use of video.

REVIEW OF THE LITERATURE

Over the past decade, online learning has become an increasingly popular course delivery
method at the college level. The growing demand for and supply of online courses and fully online degrees is a result of the many advantages of remote learning such as increased flexibility for working students (Zimmerman, 2012) and the ability to access a course at any time from any location (Lee & Choi, 2011).

Despite the benefits, students who participate in online instruction face a higher risk of achieving poor academic results than traditionally taught courses. Low student retention and the likelihood of earning failing grades are often reported as primary concerns for online learning (Holley & Oliver, 2010). In an investigation of the relationship between grades and learning mode in an undergraduate English composition course, Bourdeau et al. (2018) found that grade distributions varied significantly depending on course delivery. Students who enrolled in traditional face-to-face courses earned more Bs and fewer Cs, Ds, and Fs than students who took the same course online. In another study, Wilson and Allen (2011) found that students who had a low cumulative GPA before enrolling in an online course were more likely to earn a failing grade than students with higher cumulative GPAs.

Many of the poor outcomes for students in online courses can be attributed to the lack of face-to-face interaction between students and instructors and the resulting lack of opportunity to motivate students and help them master course objectives (Protopsaltis & Baum, 2019). In the absence of the instructor-student relationship built in face-to-face environments, many busy online students gradually adopt the “ruthlessly efficient” behaviors that they see as time savers or they do just enough to get by (Darby & Lang, 2019). Ruthlessly efficient online learner behavior can be viewed through the lens of the satisficing model, in which decision-makers survey all available options and choose the one that will adequately, rather than perfectly, meet expectations (Simon, 1956). In other words, satisficing describes a process where one settles for doing what they see as good enough or no more than satisfactory work rather than investing more time to “optimize” their work, i.e., work towards excellence.

Research is abundant regarding satisficing versus maximization in decision making, but very little of it is focused on educational settings. However, in a study of business students in their first required finance course, Stohs (2016) found that about one-third of the students self-reported as satisficers, although this behavior was not necessarily irrational and likely driven by the combined demands of being a full-time student, working, and having family responsibilities. Stohs also found that satisficers were likely to earn lower grades, but 92% of them ultimately earned degrees. It follows then that relatively minor pedagogical changes such as additional structure may increase their success.

Given the increasing enrollment in online courses in the higher education setting and the problems posed by ruthlessly efficient behavior and satisficing decision making, renewed attention to how instructors might increase the likelihood of student engagement, persistence, and success is in order. For learning to occur in any environment, students need to understand and successfully apply the content. Therefore, online instructors are encouraged to carefully consider how to structure courses to successfully engage even the most ruthlessly efficient learner to achieve the course objectives (Steinbrom & Merideth, 2008). An increased focus on student engagement with content is essential for successful online learning (Banna et al., 2015) and requires that instructors serve as “facilitator, strategist, and coordinator” rather than as a disseminator of information (Steinbrom & Merideth, 2008, p. 266).

**Increasing Student Engagement**

The inclusion of active student engagement with content videos has been documented as an effective strategy for increasing student-content and student-instructor engagement in online courses. In a study of graduate student perceptions of online learning, King (2014) found that students especially valued contact with their instructor and that short videos and screencasts were tools that students found to be useful to increase instructor visibility and set academic expectations. In the same study, students reported that the instructor’s timely feedback was another valuable tool to assist students as they make improvements in their learning process. In a similar study of student perceptions of online learning, Bailey et al. (2015) reported that student engagement required the presence of materials, tasks, and activities that students found relevant and that online learners preferred the use of teaching
strategies that made full use of the available technological tools, including video. When students were asked to rate online learning assessments, response to video received the highest rating across all categories. Abrami et al. (2011) found that while video was an engaging course strategy, effective learning required that there also be a mechanism to provide clear and accurate feedback focused on the development of competence, expertise, and skill. The overarching theme of these studies is that online students prefer approaches that allow them to interact with the content and their professor in a manner that provides feedback.

Video as an Engagement Tool

There is ample guidance in the literature for online instructors who seek to create compelling instructional videos that are most likely to engage students. Guo et al. (2014) conducted an empirical study of engagement with videos in MOOCs, i.e., Massive Online Open Courses. They addressed student engagement related to the production attributes of the videos themselves, measuring engagement by determining how long students watched each video and whether they attempted to answer postvideo assessment problems. Their analysis of 6.9 million video watching sessions in four math and science courses from edX affiliates MIT, Harvard, and UC Berkeley resulted in seven recommendations, of which three are reported here. They found that students tended to watch the entire video when it was less than six minutes long, and as videos got longer, the engagement decreased so dramatically that making a video of longer than six to nine minutes was likely a waste of instructors’ time. They also recommended that instructors speak quickly and enthusiastically and film themselves in an informal setting without attention to sophisticated video production techniques.

Mayer (2009) recommended signaling, also known as cueing, in his list of 12 multimedia learning principles. Signaling refers to using arrows or highlighting to draw attention to essential content, particularly when multiple pieces of information are on the screen. He offered a word of caution to use signals sparingly, though, because the overuse of cues can decrease rather than increase content acquisition.

Brame (2015), the assistant director at the Center for Teaching at Vanderbilt University, added suggestions drawn from her review of the literature and her work with colleagues in the teaching center: (1) videos should be brief and focused on course objectives, (2) audio and visual elements should complement rather than repeat each other to avoid redundancy, and (3) instructors can increase student engagement by embedding video as part of a more extensive assignment such as homework or a quiz. This is important because video is a stagnant tool, much like reading course content, unless students interact with and process the material to make the learning meaningful.

Darby and Lang (2019) built on this work with their recommendation to add a short, graded assessment at the end of every video if instructors deem the content to be essential. They argued that few busy online learners, i.e., ruthlessly efficient students, will watch videos unless there is a mechanism attached, such as points earned towards a final grade, to hold them accountable for engaging with the material. They also suggested that instructors create quizzes within the learning management system and implement the auto-grading function with built-in feedback to facilitate scoring (p. 56).

STATEMENT OF THE PROBLEM

Aspiring school leaders need a deep understanding of content knowledge and entry-level leadership behaviors/skills; however, many education leadership students opt for the strategies exhibited by ruthlessly efficient online learners. In other words, they display satisficing behaviors by seeking alternatives to engage with content fully, choosing the “good enough” approach over “the best” (Augier & March, 2001, p. 400). These behaviors raise legitimate concerns of diminished learning, as students may be unskilled in determining essential content from content that is useful but not critical. Instructors concerned with the potential adverse effects of satisficing behaviors are not without remedies, as effective strategies exist to encourage student-content interaction and reduce suboptimal choices to scan or skip videos entirely.

This investigation contributes to the literature in several ways. First, the study examined a student population that differs from those typically presented in the online engagement literature, which almost exclusively focuses on undergraduate students. The participants in this study were adult learners and full-time K–12 educators enrolled in
A 100% online, graduate educational leadership program provided by a traditional brick-and-mortar institution with a long-standing history (15 plus years) of online course and program offerings. Upon completing the leadership program, the students were required to pass the state’s licensure examination to apply for leadership positions in their professional settings. Thus, the instructors created videos and quizzes focused on essential content that was likely to be emphasized on the licensure examinations.

Second, the study tested the effectiveness of a combination of best practice video and accountability strategies, rather than a single approach, to determine if the intervention altered students’ ruthlessly efficient behaviors and satisficing decision-making approaches to engaging with the Instructor-Made-Videos (IMVs). In other words, the instructors produced the videos with attention to video length (approximately six minutes), spoke briskly and with an enthusiastic style, filmed the videos in informal settings that ignored minor interruptions such as a ringing telephone (Guo et al., 2014), and required students to take a short quiz at the end of each video (Brame, 2015; Darby & Lang, 2019).

**Three research questions guided this study:**

1. What were students’ viewing patterns with IMVs that did not conform to research-based best practices or include an accountability measure such as a quiz?
2. Did students’ viewing patterns change when IMVs followed research-based best practices to include required quizzes?
3. What level of mastery of video content did students demonstrate as measured by quizzes?

**METHOD**

The method section begins with a description of the study’s research design, followed by a list that explains the terms used in this study. The participants and instructors are described with attention to equivalency between the comparison and treatment groups and the instructors’ professional backgrounds and approaches to teaching and learning. Lastly, the procedure describes the production of the Instructor-Made-Videos and accountability quizzes, which formed the basis of the study.

**Research Design**

A quasi-experimental, nonequivalent groups research design was used to examine students’ engagement with the Instructor-Made-Videos before and after applying best-practices production procedures and adding graded quizzes. We examined the video-watching behavior of students enrolled in six sections of three required post-master’s graduate courses that are part of the initial certification program for educational leadership roles in Georgia’s K–12 schools. Three fall 2019 sections formed the comparison group (N = 90 students), and three spring 2020 sections (N = 78) comprised the treatment group.

Quasi-experiments seek to evaluate interventions that cannot use randomization when assigning participants to the treatment or comparison groups. Although preferable, randomization may not be feasible in educational research studies that compare the effects of interventions applied to intact groups of students, which was the case for this study. Quasi-experimentation’s lack of randomization introduces the possibility of important differences between the two groups, i.e., the treatment and comparison groups, that may explain differences in outcomes unrelated to the intervention. We took steps to address this possibility when designing the study, as noted in the sections that describe the participants and instructors.

**Explanation of Terms**

The following list of terms explains how each one functioned within the study and is included as a helpful reference for the sections that follow. Some terms, like engagement and satisficing, are specified more narrowly than their typical use found in the literature.

- **Engagement.** Engagement was determined through a proxy measure, i.e., that the student watched the IMV from beginning to end, based on the Kaltura Video Platform metric “sum_time_viewed.” Although this measure could not prove that a student actively watched a video, the performance score on the associated IMV quiz increased confidence that engagement was real (Brame, 2015; Guo et al., 2014).
- **Instructor-Made Videos (IMVs).** The instructors created videos to clarify misunderstandings throughout the semester.
and emphasize essential content that students typically found challenging. Videos attended to three best practices for production that include maintaining length at approximately six minutes, filming in an informal setting such as an office or home, ignoring minor interruptions like a ringing telephone, and having instructors speak enthusiastically and briskly (Guo et al., 2014).

- **IMV Quizzes.** Short quizzes (five multiple-choice questions) followed each IMV. The quizzes functioned as the accountability measure to mitigate the behaviors of the ruthlessly efficient student who might otherwise not watch the video (Darby & Lang, 2019). The quizzes were produced within the learning management system (LMS) using the quiz tool, and the instructors set quiz parameters for automatic grading and transferring grades to the LMS grade book.

- **Ruthlessly Efficient Students.** The “ruthlessly efficient student” purposefully selects the content with which they will engage fully, partially, or minimally to complete the course successfully. Typically, these are successful students searching for ways to make the best use of their time because they have both work and family obligations (Darby & Lang, 2019, p. 56).

- **Sacrificing Behavior.** A student’s sacrificing behavior demonstrates doing just enough to get by, resulting in a subpar performance (Seb, 2013). Sacrificing behaviors contrast with positive satisficing behaviors that produce a “good enough” outcome for engagement with content and does not demand optimal performance. Sacrificing behavior can be equated with negative satisficing behavior. In other words, sacrificing does not equate with satisficing (Seb, 2013) when satisficing is viewed as a positive time management strategy.

- **Satisficing Behavior.** Satisficing behaviors describe a student’s decision to make a “good enough” choice to achieve an acceptable grade instead of spending more resources, e.g., time and effort, to engage fully with course content. A combination of the words satisfy and suffice; this term was coined by Herb Simon (1956), who won the Nobel Prize in Economics in 1978. Simon used the term satisficing to help explain his theory of bounded rationality, arguing that decision makers lack the cognitive capacity to process all information available to make optimal choices. Instead of making an entirely rational choice that assumes unlimited cognitive ability and complete knowledge, decision makers choose the

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Table 1. Student Demographics of the Comparison and Treatment Groups

<table>
<thead>
<tr>
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<th>Treatment Group</th>
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<tr>
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Note. N=186 (n=90 for the comparison group, n=96 for the treatment group).

*Students self-identify on their admissions applications as American Indian or Alaskan Native, Asian, Black or African American, Caucasian or White, Hispanic or Latino, Native Hawaiian or Pacific Islander, two or more races, or unknown or not reported.

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Participants
Participants were post-master’s graduate students enrolled in three of the six required courses in an Educational Leadership Program for initial K–12 leadership certification in Georgia. All were practicing educators, with most from Georgia and a small number from nearby states. Program admission requires that students hold a valid, clear, and renewable teaching certificate.

Demographically, the comparison (fall 2019) and treatment (spring 2020) groups were very similar (see Table 1). Further, student enrollments in the two terms were nonduplicative, meaning that students in the fall 2019 classes were not the same students who enrolled in the spring 2020 courses. Approximately half the students in this study were classroom teachers; the other half functioned in leadership roles such as assistant principal, instructional coaches, department chairs, and program directors. Slightly more than half reported their race/ethnicity as Caucasian, a third as Black/African American, with others choosing not to self-report. Participants’ responses indicated that approximately 80% were female and 20% male.

Instructors
Both of us taught sections that formed the treatment and comparison groups. We share professional backgrounds in K–12 and higher education teaching and leadership roles, including principal, associate superintendent, superintendent, university department chair, associate vice president for academic affairs, and associate provost. These leadership experiences shaped our similar teaching philosophies and expectations for ourselves and the students, with a commitment to effective instructional leadership influencing how we design the online courses.

Instructor-Made-Videos (IMVs)
We created the IMVs with the Kaltura Video Platform (version 4.2.29, https://corp.kaltura.com), which was incorporated into the Learning Management System (D2L, Desire to Learn, version 20.20.5, https://d2l.com).

The comparison group’s three videos were made before we incorporated best practices for video production (Guo et al., 2014), such that the median length was approximately 15 minutes. None of them was followed by an accountability quiz (Brame, 2015; Darby, 2019).

The treatment group’s six videos followed production best practices that included attention to length, the instructors’ conversational style, informally filming videos, and the addition of quizzes as a measure of accountability. The target for video length was six minutes, although two were slightly longer at 7.5 and 8 minutes but still within the 6–9 minutes range that Guo et al. (2014) recommend lest students start dropping off before they finish watching the videos.

The students accessed the videos within announcements posted on the course home pages, both at scheduled and opportune times throughout the semester. The students opened the videos by clicking on a link or clicking on the play button for an embedded video.

Accountability Quizzes
The students were required to take short, five-question accountability quizzes after watching each IMV. The creation of the video quizzes served two purposes. First, the required, short, graded assessments after each video served as a check to ensure that the students engaged with the videos (Brame, 2015). Second, using automatically graded quizzes with scores that transferred instantly to the learning management system’s grade book reduced the demands on our time.

Data Collection
Student engagement with the Instructor-Made-Videos was determined by examining the Kaltura Video Platform metrics that measured the number of times a student clicked “play” to watch a video, and the length of time watched.

We used the variable “Video Watching Sessions” to make inferences about the level of student engagement with the Instructor-Made-Videos. The number of Video Watching Sessions for the comparison group was determined by multiplying the number of enrolled students by the number of videos they were instructed to watch (see Table 2). For example, 61 students enrolled in Principles of Instructional Leadership were directed to watch two videos, creating 122 Video Watching Sessions. The 29 students in the School Community Relations course were required to
watch one video, resulting in 29 Video Watching Sessions. Together, the comparison group students had the opportunity to watch 151 video sessions (i.e., 122 plus 29 watching sessions), although not all students did so.

The Kaltura Video Platform analytics were examined individually to determine the students’ video viewing patterns for the comparison and treatment groups. Each potential Video Watching Session for each student was categorized as watched completely, watched partially, or not watched at all. “Watched Completely” meant that a student engaged with the Video Watching Session from its beginning until its end. “None Watched” indicated that a student never opened the video. If a student opened the video but did not finish watching it, the session was labeled “Watched Partially.”

RESULTS

Data Analysis

We attempted to use the Mann-Whitney U test to determine if the treatment, i.e., applying best practices to video production and requiring the accountability quiz, significantly influenced students’ video watching patterns, but the data violated the assumption of independence of observations. The comparison group was comprised of three course sections in which some students were required to watch two videos, whereas others only one. Likewise, the treatment group was made up of three course sections, with each one requiring the same students to watch three videos (see Table 2). Combining classes was a deliberate choice for this initial exploration of the video/quiz strategy’s effectiveness to enhance student-content interaction in the online courses. Thus, we analyzed data descriptively.

The results are presented in the order of the three research questions that guided the study. First, we examined the students’ viewing patterns of Instructional-Made-Videos that did not adhere to production best practices or include accountability quizzes. This initial analysis was followed by a similar one that assessed students’ viewing patterns after the videos were made by following production best practices with graded quizzes. Lastly, we assessed the students’ mastery of the content presented in the IMVs through performance on the video quizzes.

Research Question 1. What were students’ viewing patterns with Instructor-Made-Videos (IMVs) that did not conform to research-based best practices or include an accountability measure such as a quiz? In other words, these videos did not curtail video length, no attention was given to the instructors’ delivery style, and no graded quizzes were required after watching the videos.

The comparison group (two sections of Principles of Instructional Leadership and one course in School-Community Relations, n = 90 students) were asked to watch a total of three videos (151 video watching sessions; see Table 2). These students did not engage with the video content as hoped, with a disappointing 37% of the video watching sessions entirely watched from beginning to end. These unsatisfactory outcomes led us to search the literature for research-based strategies to improve student engagement with Instructor-Made-Videos, apply those strategies to videos produced the next semester (the treatment group), and examine differences in student engagement.
between the two groups. Research Question 2 addresses the changes.

**Research Question 2.** Did students’ viewing patterns change when production of the IMVs followed research-based best practices to include required quizzes? We created the treatment group IMVs with attention to the video length, i.e., approximately six minutes but no more than nine minutes, a delivery style that was both brisk and enthusiastic, and the requirement that students take a quiz after watching each video.

The treatment group (one section of Principles of Instructional Leadership and two sections of Professional Learning Communities, n = 78 students) was asked to watch a total of six videos (234 video watching sessions; see Table 2). The intervention changed students’ ruthlessly efficient behaviors. Whereas 37% of the 151 potential watching sessions were viewed entirely by the comparison group, the treatment group watched 88% of their 234 potential watching sessions completely (see Figure 1).

![Figure 1. Student Engagement with Video Watching Sessions by Group](image)

**Research Question 3.** What level of mastery of video content did students demonstrate as measured by quizzes? This last research question addressed the underlying inquiry, “Did it matter? Did these students learn the video content?” Class averages for each of the six video quizzes ranged from 90.8% to 99.6%, with an average across all six quizzes of 95.7% by the treatment group. Therefore, the application of video production best-practices to IMVs and the graded quizzes changed the treatment group’s engagement with the IMVs. Clearly, students learned the content.

**DISCUSSION**

The approach of dealing with the ruthlessly efficient online learner through strategies applied to the treatment group accomplished the intended purpose. The treatment interventions were successful for mitigating the ruthlessly efficient online learner’s tendencies to minimally view or not at all view the videos.

The results of this study confirmed the assertion of Darby and Lang (2019) and Brame (2015) that students were more likely to watch Instructor-Made-Videos when a measure of accountability such as a short, graded assessment was added after the video. Similarly, the results confirmed that students were more likely to watch IMVs when the production best practices suggested by Guo et al. (2014) were used. These strategies included making short videos that are no longer than 6–8 minutes; using a conversational, enthusiastic style to create the videos; and using an informal setting to create the videos, such that minor interruptions like a ringing telephone were ignored. When these strategies were combined with the graded accountability measure to ensure that students watched the videos, the results indicated a dramatic increase in video viewership and student understanding of course material.

The best practices modifications to the Instructor-Made-Videos changed how students engaged with the course content. Essentially, students were forced to watch—and pay attention to—the videos, as evidenced by their successful completion of the video quizzes. Thus, the overarching goal that drove this study had been achieved, i.e., to find out if best practices videos with accountability quizzes change students’ behaviors. Three implications related to this study’s findings follow.

**IMPLICATIONS**

First, might the reasons for students to choose ruthlessly efficient behaviors, i.e., satisficing behaviors, at times be a legitimate response to their busy lives and complicated schedules? After all, the students in this study were practicing professionals who held full-time jobs, cared for their families, and attended graduate school at night and on weekends. Second, do professors of educational leadership...
who prepare school leaders for the region’s K–12 schools and school systems have a responsibility to ensure that graduate students learn? If professors believe that all students can and will learn, does it follow that using accountability measures to force that learning is both desirable and appropriate? Third, what are the implications for instructional design to improve online courses? If explorations of the first and second questions indicate that adjustments to course content, learning activities, and assessments are warranted, what suggestions can produce meaningful changes that will help students learn while not burdening online faculty with excessive demands on their time? The remainder of the discussion section explores these three implications.

**Ruthlessly Efficient and Satisficing Behaviors**

We approached this study with the belief that even students who exhibit ruthlessly efficient behaviors wanted to learn. This belief was derived, in part, because the study was conducted with students in a graduate program in educational leadership who were working toward licensure required for eligibility to work in school leadership positions. These jobs are demanding, stressful, and require proficiency with a wide variety of skills and knowledge that is taught in the program.

Darby and Lang (2019) speak of the ruthlessly efficient online student in terms of behavior learned over time as they navigate their busy lives and competing priorities; thus, these behaviors may cause them to access course content minimally. Their observation led to a consideration of economist Herb Simon’s satisficing concept to explain the ruthlessly efficient student’s choices when making decisions about engagement with course content. Simon believed that human decision makers are constrained from making rational decisions because of their limited ability to process information (Augier & March 2001).

The concept of satisficing was applied to ruthlessly efficient students to further explain their decisions about engagement with course content. The investigators found that ruthlessly efficient students chose to participate with some course content at a level that adequately, rather than perfectly, met course expectations. Frequently this happened when they were most pressed for time.

**Compelling Students to Engage Appropriately**

The obvious question follows, “Is satisficing a bad choice or a reasonable choice?” when viewed within the context of their circumstances. The answer depends on two distinct factors. First, does the depth and complexity of the content require maximum student attention? Second, has the ruthlessly efficient learner chosen a satisficing approach to their learning or a sacrificing approach? If satisficing, it may be reasonable for the student to read the syllabus and assignment instructions, determine what must be done to achieve an acceptable grade, and then pursue that goal. Conversely, if sacrificing is their approach, the student makes poor choices in deciding how far to engage or not engage with the content. This student sacrifices the quality of learning to their detriment. According to Seb (2013), satisficing is a distortion of the concept of satisficing. Seb notes, “There is no sacrifice with satisficing” (2013, Sufficient Not Sacrifice section). Indeed, satisficing choices can achieve quite good results in a fraction of the time it would take to produce an optimal outcome. Satisficing seems a reasonable choice, perhaps even an effective time management strategy, when a satisficing result is acceptable. If a good student wants to use this approach effectively, the dilemma becomes sorting through what content to engage with deeply and what might be given less attention. We found that not all ruthlessly efficient students make wise satisficing decisions, with some falling victim to sacrificing habits of doing just enough to get by through focusing on earning an acceptable grade rather than engaging with course content appropriately.

In the educational leadership field, effective satisficing decision-making strategies can be viewed as an asset because of the volume and complexity of decisions that school leaders make daily. Indeed, K–12 administrators can be quite effective if they have learned to sort through essential tasks and not-so-essential, time-consuming activities, and focus their attention on those that matter most. If one believes that it may be appropriate for an online student to make a satisficing decision when time constraints warrant it, how might professors help them determine when satisficing is in order and when optimal performance is required? What strategies might faculty employ within their online
courses to help students make wise choices when deciding how and to what extent they will engage with the content? Further, if students make a sacrificing choice to engage minimally or not at all with content that the instructor deems essential, what implications for the instructional design of online courses are in order?

Implications for Instructional Design

Time is a precious commodity for online students, as well as for the faculty who teach them. When this study was first conceptualized, we were puzzled by the number of students who neglected to access material, asked questions already answered in multiple locations, and expressed confusion and anxiety as they searched for clarification. Different choices would have saved both time and unnecessary angst. Indeed, many students did not fit this description, but enough did that it became logical to explore the root causes of these behaviors and potential solutions.

Graduate educational leadership students are taught that blaming K–12 students is never the answer; instead, undesirable student behaviors frequently are associated with ineffective instruction. It follows then that professors of graduate students should adhere to that guidance as they examine online graduate courses’ instructional design. Indeed, improvements are in order when patterns of undesirable student behaviors emerge.

This study uncovered easily resolved problems with the comparison group Instructor-Made-Videos. We began by creating IMVs with the best intentions but without knowledge from the literature regarding video production best practices. Disappointing results led to us making changes in practice in the following term. After applying best video production practices (Guo, Kim, & Rubin, 2014) and accompanying the videos with accountability measures (Brame, 2015; Darby & Lang, 2019), we saw dramatic improvements in students’ behaviors from 37% of the video sessions watched in their entirety to 88%, and 95% mastery of content as measured by the quizzes.

Interestingly, this idea of “satisficing” (Simon, 1956) arose as we examined the video watching data. If students choose—and many did—to interact minimally or not at all with some content, even content deemed essential, it follows that there is an instructional responsibility to help students make better choices. The strategy tested in this study, i.e., best practices Instructor-Made-Videos with accountability quizzes, ensured that students engaged fully with content considered essential. This study demonstrated that even minor modifications in online courses’ structure could successfully engage students (Steinbrom & Merideth, 2008), which is essential if students are to experience success with online learning (Banna et al., 2015).

LIMITATIONS AND FUTURE DIRECTIONS

The purpose of this study was to determine the impact on the video watching behavior of graduate students when instructors produced videos using production best practices followed by an accountability quiz. Although the study accomplished the purpose for which it was created, certain limitations were present, constraining the generalizability of the results and providing an opportunity for future research.

First, the study’s population was comprised of students enrolled in a six-course program at the graduate level that meets the requirements for an entry-level school leadership certificate in Georgia. All students had previously earned master’s degrees and were full-time teachers or school administrators approved to work with provisional certificates. Given the students’ specific profile in the population studied, the results may not be generalizable to other groups such as undergraduates, degree-seeking graduate students, or students studying fields other than educational leadership.

Second, the comparison group courses included two sections of Principles of Instructional Leadership that were combined in the learning management system and one of School-Community Relations, whereas the treatment group was comprised of one section of Principles of Instructional Leadership and two of Professional Learning Communities (combined in the LMS). The different course make up of the comparison and treatment groups may limit the interpretation of the study’s outcomes, although it is unlikely because students in all sections were demographically alike (see Table 1). Also, the instructors shared similar professional backgrounds and both applied comparable teaching philosophies and approaches to instructional design and delivery.

Third, this study sought to understand student video watching behavior but did not consider
Further research is necessary to determine if students perceive the videos as valuable for their time and whether they find the process helped achieve course learning objectives.

Lastly, the quizzes in this study included only multiple-choice questions and were created to test students’ ability to remember and understand the concepts presented in the videos. Further research is necessary to determine if viewing Instructor-Made-Videos will also increase students’ ability to apply, analyze, and evaluate the concepts.

CONCLUSION

This study’s promising results offer instructors of online courses a relatively simple strategy to establish and maintain student engagement with both the content and the professor in an asynchronous environment. The creation of Instructor-Made-Videos with accompanying quizzes reduced the “ruthlessly efficient” student behavior that often is the source of frustration for professors who struggle to motivate online students to access valuable content in their courses. Furthermore, IMVs with accountability quizzes seemed to reduce the negative satisfying behaviors of graduate students by enticing them to watch the videos and engage with the material afterward rather than skip the videos to save time.

As enrollment in online courses increases, instructors must think carefully about the instructional design of courses, particularly focusing on identifying essential content, developing assignments that require the application of concepts learned, and developing assessments that measure learning effectively. This requires online faculty to understand effective teaching strategies that are particular to the online environment and incorporate into their courses only those strategies that are most effective.
REFERENCES


In response to the global Covid-19 pandemic, universities across the world moved coursework online and frequently used Zoom videotelephony software to replicate the experience of learning in a classroom. While this platform supported certain aspects of the traditional classroom, such as immediacy of responses and the facilitation of social interactions, learning via Zoom also differed in various ways from the familiar classroom experience. Although there has been considerable research on online learning, most studies focused on an asynchronous design and interaction. Thus, the understanding of learning within synchronous, video-mediated platforms, such as Zoom, is nascent. In this study, the data was derived from a focus group with eight university students from the United States that was conducted over Zoom. Using content analysis, the transcripts of the focus group’s interaction yielded four themes: Zoom Challenges, Zoom Benefits, Faculty Proficiency, and Student Learning Experiences. Cameras, a distinguishing feature of Zoom, could strengthen engagement, yet they also heighten anxiety for some and fatigue for most users. However, when those challenges were mitigated and the benefits harnessed by faculty informed about how to support student learning, students experienced a deepened sense of connection to their peers, the faculty, and their learning. Family science educators who recognize the strengths and limitations of this platform have the opportunity to teach more effectively and support their students’ socio-emotional learning and well-being.

Keywords: Zoom, synchronous, online learning, pandemic, socio-emotional learning, video-mediated learning

INTRODUCTION

Novel coronavirus SARS-CoV-2 emerged as a threat to human life at the end of 2019. In the months that followed, the global pandemic and shelter-at-home orders led universities to shutter face-to-face classes, and many students, some with little or no experience in online classes, abruptly became online learners. To facilitate course continuation, many universities adopted Zoom, a video communication platform created for corporate enterprise use. With campus buildings closed, synchronous learning via Zoom, or similar videotelephony platform, rapidly became the new classroom. The current focus group study, informed by a systematic literature review of research on synchronous online