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Kelly Murdock
kmurdock@sfcn.org

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Evaluating Video Usage in an Online Excel Course

Kelly L. Murdock

A project submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

Dr. Randy Davies, Committee Chair
Dr. Heather Leary, Committee Member
Dr. Gove Allen, Committee Member

Department of Instructional Psychology and Technology

Brigham Young University

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ABSTRACT

Videos have become a common resource in online courses, but course developers often question whether the videos are being used when other resources such as text and screenshots are available. This evaluation project looks closely at the videos included in an online Excel course. The Excel course for this project is different from others in that it was built with embedded learning analytics. These analytics give a detailed look at how the students use the various available resources. An initial look at the analytics shows that the videos for the course are not being used by the students.

This project determined the extent that the videos were being used and established a rubric for evaluating the quality of the online videos provided to see if this is a factor on how the videos were being used. The rubric for this evaluation was based on Mayer's 12 Points of Multimedia Instruction along with a paper by Brame (2016).

An analysis of the learning analytics divided the students into several groups depending on the study approach they used. The group that used the videos more than any other group still only watched the videos 29% of the time and the other groups used them even less.

Evaluating all the videos in the course showed that most of the videos in the course need some improvement. The areas where the videos could be improved include reducing the length of the videos, signaling where the discussion is headed and improving a number of technical areas for better audio and visuals. The videos can also be improved by including an editing phase to remove any recorded errors.

Keywords: video usage, learning analytics, online, rubric

TABLE OF CONTENTS

Introduction.....	1
Evaluand	2
Evaluator Background	2
Key Stakeholders	3
Stakeholder Issues and Concerns.....	3
Evaluation Questions	3
Review of the Literature	4
Evaluation Design.....	7
Data Collection	7
Learning Analytics Data Analysis Procedures	8
Video Resource Evaluation.....	8
Results and Discussion	10
Video Usage.....	10
Video Quality Evaluation	13
Conclusions.....	16
Recommendations.....	17
References.....	18
Appendix A.....	20

List of Tables

Table 1: Main group cluster percentages and average scores by lesson. (n=995).....	11
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List of Figures

Figure 1: Percentage of students that completed online readings by lesson.....	12
Figure 2: Percentage of students that completed online videos by lesson.....	12
Figure 3: Overall evaluation scores for each principle of quality online instruction video.....	15

Introduction

A growing trend in many educational institutions involves the development of online content. According to the 2019 Online Education Trends Report, 80% of the 2018 survey respondents stated that they have seen an increased demand for online courses (Venable, 2019). In online courses, videos are a particularly important aspect of the instructional process (Carmichael, Reid, and Karpicke, 2018). However, there are many different ways to use videos; and videos can enhance online learning only if they are created in such a way that students are willing to spend time watching them. If students do not watch the videos provided, any value they might have provided is lost.

Video development for online courses represent a significant amount of effort both in time and budget, so making the most of this expensive resource is extremely important. However, it is often difficult to tell whether including video as part of the course is worth the effort. One approach for determining whether the videos are being used is to use learning analytics. This does not indicate whether students find the resource valuable, but assumes that if students do not bother to watch them, they do so for a reason. If students are not viewing the videos provided in a course, it is important to find out why.

This evaluation project looked closely at the videos provided in an online course designed to teach Microsoft Excel. The purpose of this project was to evaluate the quality of the videos in addition to determining the extent to which the videos included in this course were being used. A review of data analytics results suggest that many of the videos are not being watched. However, this is not always the case. Some videos are being used more than others. Based on the results of this evaluation, several videos were identified as good candidates for improvement.

Evaluand

The evaluand for this project was the videos created for an Excel spreadsheet online course developed by the My Educator team. The videos included in this course are all streamed online allowing the students to watch videos at their leisure as they complete various parts of the course in preparation for completing assignments and exams. Watching the videos is optional, but is intended to help students learn the material. This course includes several different resources, some of which are redundant, in that they cover the same content topics just in different ways. For example, most the instructional text covers the same material as screenshots or screen-captured video with instructor voice-overs. Some of the videos show a screen capture with the professor demonstrating the software while explaining what is being shown on the screen. Other video segments show how specific examples are completed. The students are instructed to use any or all of these resources to complete their assignments.

This Excel course is used by several universities. The course was built with complex learning analytics gathering features embedded into the delivery system that show which pages of the course are accessed, which and how much of the videos are being watched, and a log of the student's activity while completing assignments.

Evaluator Background

This project is an extension of the work done by Dr. Randy Davies and Dr. Gove Allen. Dr. Allen was influential in helping develop the Excel course and capturing and analyzing the learning analytics for the course. I was included in the project to complete an evaluation project as part of my Master's thesis requirements. My role is to review the analytics data in order to determine which videos are being watched and then to compare the videos to a set of criteria for quality, effective online videos.

Key Stakeholders

The key stakeholder for this project is the My Educator company that developed the Excel course. They are aware the videos are not being used very much and hope to gain insights into why this is the case and how the videos might be improved. Another set of stakeholders are the students that are taking or will be taking this course in the future. An analysis of the video portions of the course will hopefully provide valuable insights and recommendations that will lead to improvements in the videos used in the course. This study and its guidelines might also be used by developers of online courses that use video instruction. Course developers (like myself) could use the information gleaned from this study to improve the video segments they plan to create in their future course development efforts.

Stakeholder Issues and Concerns

This evaluation project will be a formative evaluation and the results of the evaluation will be used to improve the videos used in this course. The main concern of the stakeholders is that the videos for the course are not being used by the students. The project stakeholders want to know how the videos in the online course might be improved.

Evaluation Questions

The purpose of this evaluation was to determine which videos are being used more than others; then based on their purpose and the quality of the video determine how these particular videos might be improved. Based on an analysis of the video quality and the intended purpose of the videos, the evaluation recommendations will provide stakeholders with information they need to improve the course.

This project has three evaluation questions or purposes:

EQ1: To what extent are the videos being used in the online Excel course?

EQ2: What do the videos that are being used more intend to accomplish?

EQ3: To what degree do videos follow established quality criteria for online videos?

Review of the Literature

The documented explosion on online courses and the use of video instruction might in part be due to the availability of streaming video over the Internet; but video-based learning isn't a new development. Video-based learning was first used along with the introduction of visual media including film and television. Video training was also used on a large scale in preparation for World War II (Yousef, Chatti, and Schroeder, 2014). In the 1980s, attempts in using video courses was made possible with older technology such as VHS tapes and LaserDiscs, but this technology did not mature to ubiquity and was replaced by more advanced technologies.

Throughout the 1990s, entire courses of videos were delivered to the student as course materials on CD-ROM discs. These course materials included textual and video instructional content stored on CDs and were provided to students taking a course. These materials made remote course instruction possible, but was expensive to deliver.

The technological advancement that really made the rapid increase in online courses possible was the development of streaming video over the Internet. Internet technologies initially delivered low quality, highly compressed video that was difficult to work with, but over time, this technology has improved because of faster broadband networks. Today, high-definition quality streaming videos are commonplace for online courses. In addition, modern video creation and editing technology have made it possible to produce quality videos quickly and easily.

The use of instructional video has been shown to produce positive learning gains, especially with conceptual knowledge on topics that are difficult for students to learn by reading alone (Lloyd & Robertson, 2012). However, just including video in an online course does not

ensure that a video will be used or that it will be useful. Several research studies address the need to follow specific criteria that will help make instructional videos effective in online learning.

One such source is found within the Multimedia Instruction chapter in the *Handbook of Research on Educational Communications and Technology*, Mayer (2014) stresses that effective video design should reduce extraneous processing, manage essential processing, and encourage generative processing. These high-level design goals can be further broken down into specific principles. In an earlier work, Mayer (2009) defined 12 Principles of Multimedia Learning that include several relevant criteria for evaluating online videos. These 12 principles include the following:

1. Coherence: Are the graphics simple and clear?
2. Signaling: Are visual cues used to highlight essential information?
3. Redundancy: Is text and audio redundantly included throughout the video?
4. Spatial Contiguity: Do the graphics and their labels appear close to each other?
5. Temporal Contiguity: Are graphics and text presented at the same time?
6. Segmenting: Do the videos try to cover too many concepts in a single video?
7. Pretraining: Are important concepts being taught prior to showing the process?
8. Modality: Do the videos include audio along with the graphics and not just written text?
9. Multimedia: Do the videos include images and graphics in place of simply text?
10. Personalization: Are the videos conversational?
11. Voice: Does the video include a human voice or a machine voice?
12. Image: Does the video include the narrator's image?

Online videos that adhere to these principles are more likely to be effective videos when used for online instruction.

In another study, Brame (2016) suggests three general principles for video design and implementation that will help instructors maximize video utility. These elements include

managing the cognitive load, increasing student engagement and promoting active learning. Several specific aspects of a video help achieve these high-level goals. For example, to help reduce the cognitive load, the principles of Signaling, Segmenting, Weeding and Modality are key. Weeding involves eliminating any extraneous information (both visual and auditory) thereby reducing the overall cognitive load and helping students to focus. Weeding is demonstrated in the criteria of Editing Errors, Clear Screen and Audio Quality.

Principles that help increase student engagement include the following:

- Keep each video brief (Video Length): Are the videos of appropriate length?
- Use conversational language (Professionalism and Personalization): Does the audio narration use correct grammar and a conversational tone?
- Use of Audio: Is audio used throughout the video?
- Emphasize relevance (Clear Objectives): Is the video's purpose clearly stated?

Finally, the principles that promote active learning include the following:

- Preparation: Are the video examples prepared beforehand?
- Scripted: Is the audio narration scripted?
- Give students control (Navigation): Does the video player include navigation controls?

One important aspect of making online videos engaging is determined by the video's length (Doolittle, Bryant, and Chittum, 2015). Both Brame (2016) and Mayer (2009) mention the need for the videos to be brief, but the actual recommended length was found in a research project studying MOOCs. Guo, Kim, and Rubin (2014) found that the optimal median engagement time for an effective video was only 6 minutes in length. The study found that videos that were 9-12 minutes in length were typically abandoned less than half-way through. For longer videos students tended to give up watching even earlier.

Evaluation Design

The purpose of this evaluation project was to look at the learning analytics for the online Excel course and determine which video segments are most often being watched by the students and then compare all the videos to specific criteria to identify ways for improving the videos, so when they are watched they will more likely be helpful to students. The approach used in this study was to first analyze the learning analytics for the course to determine which videos are being watched, then review each of the videos offered in the online course.

Data Collection

Descriptive data from the learning analytics was compiled and graphed to determine which videos were being used by the students. This included the percentage of students that viewed each video as they completed the course. Percentages of time spent reading was also examined. The extant data used for this activity was obtained from 988 students who completed all ten lessons of the course in 2019. Each of these students were university students from three different universities. The data was extracted after the course was completed. Each of the students agreed to allow this data to be used to improve the course.

Although the learning analytics data indicates what percentage of the videos for each lesson was viewed, we cannot know for sure that the video was actually watched by the students or if it was helpful for their studies. We make the assumption that if students did not view a video or read the instructional text provided, it was either because it was not needed or perhaps unhelpful. The evaluation of the videos was completed by watching each individually and rating each against quality guidelines. In order to ensure validity, the video quality rubric was reviewed by a subject matter expert in online video usage. The video quality coding was also peer

reviewed by two students. These two students reviewed and independently coded two videos and the coding results were within 5 points of my coded results.

Learning Analytics Data Analysis Procedures

The learning analytics captured by this course's logs identified how much of the reading and video resources were used by students who took the course. The total amount of available video and reading for each lesson was determined. A video was presumed to have been viewed as the video or a portion of the video was accessed. A page was considered viewed (and presumably read) if students paused on a page for the specified amount of time set by the analytics team (Davies, Allen, Albrecht, Nesrin, & Ball, 2020). To determine video usage pattern, a k-means cluster analysis was conducted. The cluster analysis used normalized reading and video usage data to identify a pattern for each lesson. As students did not always follow the same pattern (in terms of resource use) for each lesson, they were assigned a main group based on the typical way in which they used the instructional resources for the course (10 lessons). If a student did not follow a specific usage strategy at least 50% of the time, they were not assigned to a main group. Seven percent (7%) of students had no main group in that they did not consistently use the resource in a particular manner. Data captured from the learning analytics was graphed and tabulated in order to determine usage patterns.

Video Resource Evaluation

The main purpose of this evaluation was to examine the quality of the instructional videos and determine which if any needed to be improved. To do this, a rubric was created. I was unable to find a comprehensive instrument for evaluating the quality of online videos, but I was successful in pulling together several relevant sources to create a useful set of criteria. The

selected set of video criteria includes the work of Mayer (2009), Clark and Mayer (2016), Brame (2016) and Guo, Kim and Rubin (2014).

The response scale for the rubric used a Likert scale, ranging from 1 to 4, on how well the video followed each specific criteria. Each point on the Likert scale was defined as Poor, Fair, Good and Great. From these point values, each video was classified into one of three categories: Needs Significant Improvement, Needs Some Improvement, or Okay As Is. Based on the scores, recommendations were made as to how the videos might be improved.

The rubric used in this evaluation was developed based on a compilation of several different principles used to assess online videos. The main theoretical foundation for the rubric comes from Mayer's 12 Points of Multimedia Instruction (Mayer, 2009). Although many of these principles are directly applicable to the study, one of the criteria did not work for the screen cast-type videos that are found in this particular Excel course. The criteria of Temporal Contiguity doesn't relate because the screen simply shows the teacher's Excel screen and no text is used to highlight specific areas. The rubric included most of Mayer's 12 points but the principle of Temporal Contiguity was removed because it did not apply.

In addition to Mayer's 12 points, several criteria from the paper by Brame (2016) were included. In her paper, she emphasized the principles of Signaling, Segmenting, Weeding, and Modality. For this rubric, the weeding principle is unique and is represented by three different principles. The first principle of weeding is labeled as Editing Errors. For screen cast examples, this is an important point because videos can be tedious or misleading if presented without editing out any errors. The weeding principle is also included for extraneous visual information as the Clear Screen criteria. This principle requires that the screen cast visuals not have any extra

icons or desktop files other than what the student should focus on. Finally, the Audio Quality principle determines if unwanted background noise has been weeded out.

Other unique principles included in the rubric from Brame's paper (2016) include Video Length, Professionalism, Use of Audio, Clear Objectives, Preparation, Scripted, and Navigation. These principles help eliminate distractions that can arise during the development of online videos such as overlong videos, incorrect grammar, long pauses in narration, unclear purposes, and improvised narration and examples. The Navigation principle makes sure that controls over starting, stopping and pausing the video are available. The issue of video length is defined by the work of Guo, Kim and Rubin. This criteria keeps the quality videos less than 6 minutes.

In addition to the criteria, the rubric also addresses the purpose of each video. This is demographic information that helped categorize the various video types. Altogether the rubric consists of 21 different principles that collectively define quality online video that is likely to appeal to online students. The completed rubric is presented in Appendix A.

Results and Discussion

Video Usage

A detailed analysis of the learning analytics was completed for this study to describe the video usage of students taking the course. For this analysis, a k-means cluster analysis was used to determine how much of the video and reading resources were used by groups of students in each of the ten lesson in the course. Three distinct groups were identified based on their resource usage (Davies, Allen, Albrecht, Nesrin & Ball, 2020). The first group was identified as Novice Careful. This group may have been new to the topic of spreadsheets. Alternately, they may simply have been diligent or careful in completing most of the reading and watching large amounts of the available video (29% on average, see Table 1). The second group was labeled

Confident Traditional. Students in this group were characterized by a moderate amount of reading with very few video views (less than 10% on average). The third group might best be described as Knowledgeable Confident. They may have some familiarity with the subject and were confident in their abilities. On average they read less than half the available readings and viewed a very small amount of the available videos (4% on average). Cluster analysis was conducted based on resource usage by lesson and students were grouped based on the amount of resources they tended to use across all ten lessons. However, 7% of the 988 students did not follow any specific pattern of resource use. These students were inconsistent in the amount of reading and video views used across lessons. Table 1 shows the break-down for each of these groups regarding viewing the available text sections and videos, as well as the average scores obtain. Figures 1 and 2 present resource use for reading and video by group for each of the lessons.

Table 1

Resource use and achievement for student grouping based on k-means cluster analysis. (n=988)

Group	Average Resources Used		% in Group	Avg. Score
	% Instructional Text Viewed	% Video Viewed		
Novice Careful	63	29	21	96
Confident Traditional	52	10	14	95
Knowledgeable Confident	41	4	58	97
No Main Group			7	96

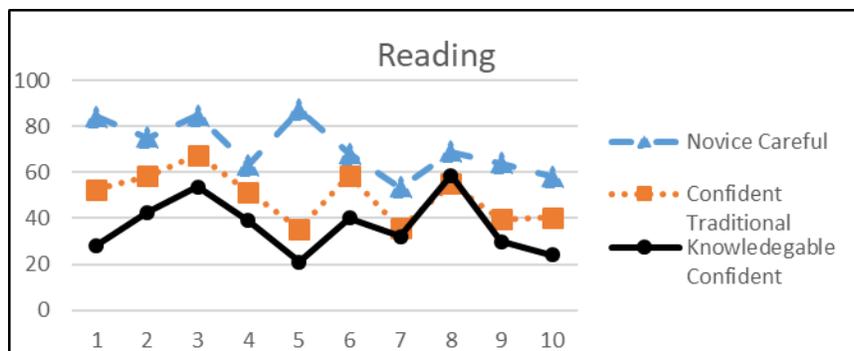


Figure 1: Percentage of students that completed online readings by lesson.

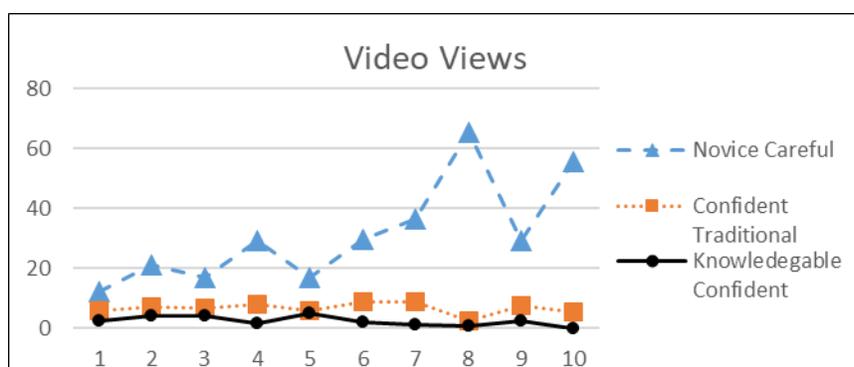


Figure 2: Percentage of students that completed online videos by lesson.

Overall, it was determined that a large number of students did not access the video resources to any great extent. Of the three groups identified by the cluster analysis only the Novice Careful students viewed the available videos to any great extent. For this group (21% of students) their reading decreased slightly over the course and their video usage increased toward the end of the course. The way in which students accessed available instructional resources did not seem to have a significant impact on the average score for the students.

Analyzing this data presents several possibilities that might explain the low video usage by student taking the course. It is possible that many of the students had no need to watch the instructional video as the course seems to have been fairly easy. Still there were a substantial number of students who took the time to watch videos rather than simply completing the

readings, especially later in the course once topics presumably became a bit more challenging or unfamiliar to students.

The video usage for the course was highest for the Novice Careful group across all lessons. However, of particular note is the fact that in lesson 8 (which covers Statistical Functions), the Novice Careful group watched on average 66% of the available videos. And in lesson 10 (which covers Optimization and the *Solver* feature of Excel) this group of students watched 55% of the videos for that lesson. The videos for lesson 8 only included a single, long concept video (27:18 minutes) and a single process-type video showing how to complete the assignment. Lesson 10 only had two concept videos and a single example video. These particular videos were watched more often than any of the videos by a large margin.

Video Quality Evaluation

After looking at the data analytics for the course, each video was evaluated according to the defined rubric. There were a total of 68 videos spread across 10 lessons in the course. Of these 68 videos, 44 were identified as concept-type videos that instructed on a specific concept and the remaining 24 were process-type videos that showed how specific problems were completed.

Each video was given a score between 1 to 4 for each of the 21 principles identified as important for quality instructional video. A video receiving a score of 4 on each principle would end up with a total score of 84. Videos with a total score greater than 70 were designated as “okay as is.” There were four videos that had a score of 70 or greater. The majority of videos (50 in total) had a score between 62 to 69. These videos were designated as “needs some improvement.” There were 14 videos had a total score of less than 61. These were designated as “needs significant improvement.” Most of these low scoring videos had some technical

problems. Overall most of the evaluated videos need some kind of improvement. Figure 3 presents a breakdown of the evaluation results by principle. These metrics show how effectively the videos achieved satisfactory ratings for each principle in the rubric.

Overall, the videos successfully adhere to many of the defined principles (indicated by the blue bars), but other principles could use some improvement (yellow bars) or significant improvement (red bars). Successful principles included Modality, Navigation, Redundancy, Contiguity, Voice, Multimedia, and Narrator's Image. Many of these successful principles are inherent with the screen capture technology such as Multimedia and Navigation.

The areas where the videos struggled the most included principles of Signaling, Segmenting, Scripted, Editing Errors, Clear Objectives, Coherence, and Audio Quality. It was also obvious for many videos that they ran too long and tried to cover too much material at once, which explains the low segmenting score.

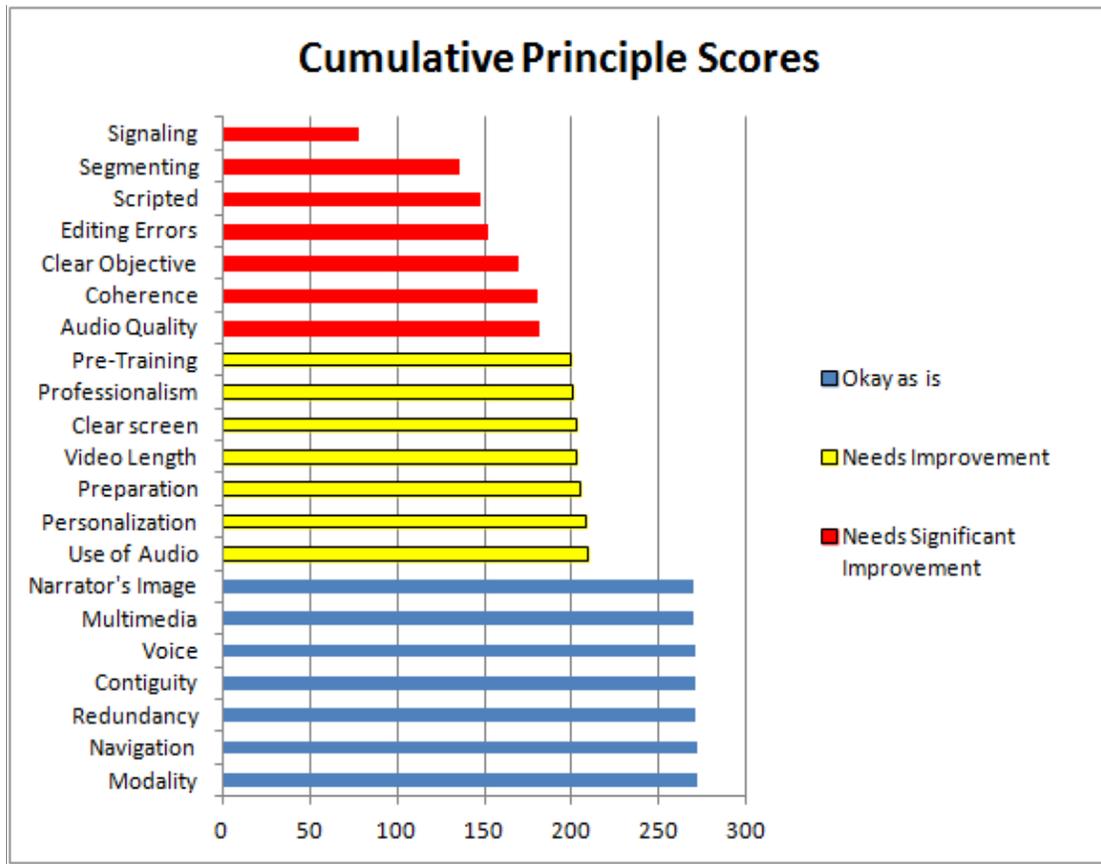


Figure 3: Overall evaluation scores for each principle of quality online instruction video.

Several of the videos had technical difficulties that lowered their score. These technical difficulties included poor audio quality where the audio was only played in one speaker and problems with the video size that made the screen appear blurry. Another common problem was that the several of the videos were recorded with errors. These errors were not edited out of the final video. These unedited errors often contributed to the adverse length of many videos and could have been easily fixed with modern video editing tools. Several videos also suffered from poor audio quality including background voices and noises that were distracting to the students and videos that showed more of the screen than was necessary providing a distraction.

Conclusions

Although it is not a focus of this evaluation, it is clear that many students do not use the videos in this course. It may be that these students do not see the need to spend time watching the videos as course grades were typically high; but may also be that they do not see the value in watching them. There were a significant number of students who took time to watch video towards the end of the course in lessons that were presumably more challenging.

When considering the quality of the videos produced for this course, the overall conclusions of this evaluation project was that the many aspects of the online videos used in this course do align with good principles for creating such resources. However, several aspects of the videos definitely could be improved. The principles that were most often correctly followed include synching the video and audio together, and presenting the video in a player that gives the student control over the video playback. The screen casting technology provides a good environment for process-type videos, but many of the concept-type videos could be reduced in length and improved by using multimedia-based graphics and text in place of a screen cast.

The areas that can be improved mainly deal with the length and segmentation of the videos. Many videos run too long and were not being edited to remove obvious mistakes. The software also does not use any signaling cues to inform the student what is coming up. In several videos the objectives are not clear. Finally, the screen shown in the videos often included extraneous information such as additional icons at the bottom of the screen and occasionally some annoying background noise. Clearing the screen and removing these audio distractions would reduce the cognitive load for students.

Recommendations

In general there were two different purposes identified for the videos in this course. One purpose is to explain a concept (i.e. a *teach me* video) and the other is to demonstrate a process (i.e. a *show me* video). Presenting the process videos using screen cast technology is a great way to demonstrate exactly how to accomplish the assigned task. Concept videos however could be shown using short animated segments with examples in place of a screen cast. This could help keep the videos shorter and more engaging for the students. It would also help focus the video on a single concept.

Another important recommendation focuses on eliminating any technical difficulties that tend to reduce the quality of the video including maintaining professional level audio quality, removing all background noise and chatter and focusing the screen on only those areas that are pertinent.

Lastly, one way to improve the videos in this course is to prepare the scripts beforehand so that the lessons are focused and to divide videos into appropriate segments. This will help to keep the videos length small and reduce potential errors. Any examples that are used should be prepared beforehand and be loaded before the video begins. During the video development, an editing phase after the recording is complete should be used to remove any problem sections.

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Appendix A

Quality Online Video Instrument
based on Mayer's 12 Principles of Multimedia Learning (2009) and a paper by Cynthia Brame (2016).

Purpose	What is the purpose of this video?	Conceptual Explanation (Teach Me)	Procedure Demonstration (Show Me)		
Principle	Question	Poor (1 pt)	Fair (2 pts)	Good (3 pts)	Great (4 pts)
1. Coherence	Is the video free of any extraneous words, pictures and sounds?	The screen is cluttered with too much information.	The screen has several unnecessary items.	The screen mostly clear.	The screen is clear and focused.
2. Signaling	Does the video include cues that highlight essential information?	The video doesn't include any cues.	The video includes at least one cue that highlights essential information.	The video includes some cues that highlights essential information.	The video regularly uses cues that highlights essential information.
3. Redundancy	Does the video include on-screen text along with the narration?	All spoken audio is transcribed and shown on screen.	Most spoken audio is transcribed and shown on screen.	Some spoken audio is transcribed and shown on screen.	None of the spoken audio is transcribed and shown on screen.
4. Contiguity	Does the audio narration match the visuals?	The audio is frequently out of synch with the visuals.	The audio is sometimes in synch with the visuals.	The audio is mostly in synch with the visuals.	The audio is always in synch with the visuals.
5. Segmenting	Is the video presented in smaller, clearer segments?	A single video runs on too long and should be broken into segments.	The video is longer than it needs to be.	The video runs a little long.	The video is broken into smaller segments.
6. Video Length	Are the videos of an appropriate length?	The video is longer than 15 minutes.	The video is between 12-15 minutes.	The video is between 9-12 minutes.	The video is less than 6 minutes (Guo, 2014).
7. Pre-Training	Are important concepts being taught prior to showing the process?	Concepts aren't presented at all before showing how to do something.	Concepts are referred to in previous videos.	Concepts are briefly mentioned before showing how to do something.	Concepts are fully explained before showing how to do something.
8. Modality	Do the videos include audio along with the graphics and not just written text?	The video has no spoken audio, just written text.	The video has some spoken audio and some text.	The video has mostly spoken audio but has some long pauses.	The entire video has spoken audio throughout.
9. Multimedia	Do the videos include images and graphics in lieu of simply text?	The video includes no images or graphics.	The video includes some graphics but is mostly text.	The video is mostly graphics but has sections of only text.	The entire video is replete with graphics and images.
10. Personalization	Is the narration conversational in tone or formal?	The narration is too formal or uses slang.	The narration is monotone or uninteresting.	The narration is somewhat conversational.	The voiceovers are conversational and personable.
11. Voice	Is the narration spoken in a friendly human voice?	The video has no spoken audio.	The video has audio created using a computer voice.	The narrator's voice is dry and lifeless.	The narrator's voice is personable and friendly.

12. Narrator's Image	Is the narrators image added to the screen?	The narrator's image is shown throughout the video.	The narrator's image is shown periodically throughout the video.	The narrator's image is shown at the start of the video.	The narrator's image isn't shown at all.
13. Editing Errors	Is the narration free of any mistakes and errors?	Multiple mistakes and errors are left in the narration.	Narration has several mistakes and errors.	Narration has only a few mistakes and errors.	Entire narration is free of mistakes and errors.
14. Preparation	Are the screencast examples prepared beforehand.	The screencast examples are created on the fly.	The screencast seems haphazard.	The screencast follows some notes but is not polished.	The screencast is well-presented and purposeful.
15. Clear Screen	Is the screen desktop clear of distractions?	Lots of extra unused data is shown on the screen.	Some unused data is displayed.	Most of the screen data is used.	The screen is clear of distractions.
16. Scripted	Is the screencast narration scripted?	The narration is ad-libbed.	The narration follows some notes.	The narration mostly follows a script.	The narration follows a defined script.
17. Professionalism	Is the narration presented using correct grammar?	The narration has multiple grammar errors.	The narration has some grammar errors.	The narration has a few grammar errors.	The narration has no grammar errors.
18. Purpose	The purpose of the screencast is clear?	The screencast makes no mention of what is covered.	The objective is assumed from the name of the screencast.	The objective is stated, but unclear.	The objective is stated and clear.
19. Use of Audio	Is audio used throughout the video effectively?	The video has no audio.	The video has only a little bit of audio for specific terms.	The video has some audio but lots of lengthy pauses.	The voiceovers are excellent.
20. Audio Quality	Is the audio quality good?	The audio has background noise.	The audio is unclear.	The audio is clear but has some distracting noise.	Narration is clear of unwanted noise.
21. Navigation	Does the video include navigation controls?	The video has no navigation controls.	The can be stopped but not paused.	The video can stop and pause but cannot move to a specific point.	The user can stop, pause and move to any point in the video.