Utilizing supplementary video material to enhance classroom confidence in LIN 220
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Introduction

Supplementary Materials & Video Instruction

Supplementary materials are free-standing materials that serve to augment information being learned in class (Davenellos, 2010). Educators can use a variety of resources like articles, books, pictures, voice recordings, or videos to provide external information about a specific class topic. Particularly, video instruction has been gaining more attention from teachers since the 90’s. The medium provides a type of manageability which allows the professor to introduce the video at an optimal point in their lectures where they can choose various video segments to discuss, while replaying the video at their convenience (Wetzel, Radtke, & Stern 1994). With the launch of Youtube in 2002, this website has provided another platform for professors to provide students with more supplementary materials. There are several purposes for using video instruction including recording a lecture, presenting guest lectures, and explaining solutions to problems (Kay 2012; see Figure 1). Furthermore, there are various benefits like displaying various exemplars of theories (Goldman 2007), reducing the amount of teacher preparation efforts with using prepared video material and incorporating multiple formats relevant to students’ learning styles (Wetzel, Radtke, & Stern 1994).

Table 1
Summary of benefits for using video podcasts.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>No. of studies</th>
<th>Details</th>
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<tbody>
<tr>
<td>Reasons for use</td>
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| Learning | 23 | • Review for assessment  
• Preparing for class, understanding, note taking  
• Improve face-to-face classes  
• Location, time and pace of learning  
• Students can review missed lectures |
| Control | 9 | |
| Missed Classes | 9 | |
| Attitudes | | |
| Affective | 14 | • Enjoyable, motivating, interesting, stimulating |
| Cognitive | 15 | • Useful, helpful, effective, very positive about creating podcasts, easy to use |
| Behaviors | | |
| Frequency | 7 | • No. of downloads, views per week% of students who viewed% pods viewed |
| Attendance | 4 | • Viewing podcasts had not impact on attendance, may depend on type of podcast used |
| Study Habits | 6 | • Independence, self-reflection, efficient test preparation, better review, increased contact |
| Learning performance | | |
| Test Scores | 7 | • Higher scores in tests than traditional approaches |
| Self-report | 2 | • Team and technology skills, teaching skills |
| Practical tasks | 2 | • Sunscreen use, field techniques |
Linguistics 220: Intro to Grammatical Systems

We used supplementary video material in Linguistics 220 due to the limitations in the resources available to students in the class. The class does not have an available textbook. The lack of a textbook is, in part, due to the structure of the class. Each week, concepts build upon one another in a way that is steered by the input from the class. Outside of class, students must rely on their notes, workshops, and Professor Jeffrey Runner’s online handouts to understand the material and prepare for homework or exams. Students could benefit from additional supplemental material that employs a different method of presentation – one that may be used as an outside reference.

Professor Runner has mentioned that in previous years, students’ feedback have suggested that assigning a textbook or providing other supplementary would likely be beneficial for them. Additionally, he has voiced his concerns about the students that may not necessarily learn in the most effective manner from the current course format. From Professor Runner’s experience at a recent teaching conference, one could argue that a conscious effort needs to be made to cater to students of all learning styles. A well-cited approach towards understanding differences in learning styles was first proposed by Felder & Silverman (1988; Figure 2). With this framework in mind, we want to create supplementary material that may address difficulties for some students of the class. These difficulties may be due to an inherent bias from students that have certain learning styles – our aim is to use supplementary video material to attempt to remove this bias.
About halfway through the course of the semester, we asked for feedback from students on what they considered the most difficult concepts were in the class. This preliminary procedure was relatively informal, and was only used to ascertain which topics to cover in our supplementary videos. The topics that were eventually chosen were: “Multiple Transformations” and “Finding the Deep Structure”.

In designing the presentation of the material for the videos, we decided on a method that we believed would appeal to all learning types. The format was similar to that of a lecture; a single presenter gave spoken step-by-step instructions while writing on a blackboard, which we hoped would be helpful to both visual and verbal learners. An overview of the task was given at the beginning of the video and then broken down into segments that focused on individual steps toward completing the task. At the end, the presenter reviewed all of the steps that had been taken to get to the final answer. The step-by-step instruction coupled with the overview and summary was made to appeal to both global and sequential learners. The video format itself
seems to be effective for both active and reflective learners, as the students may choose to play it straight through and follow along or to stop at various intervals and reflect. The information and advice presented in the videos was tailored to the needs of both sensing and intuitive learners through the use of explicit instruction (sensing) and the reasoning behind it (intuitive).

**Post-Video Questionnaire**

Following the dissemination of the videos, students in the class were instructed to complete a short questionnaire to give feedback on their opinions regarding the utility of the videos. Questions concerning the videos’ impact on the respondent’s understanding and confidence were asked. Also, participants responded to questions regarding how available they would like to have video supplementary material in LIN 220 and other classes. An example of the questionnaire is presented in the Appendix. Thirty-four students’ responses were analyzed.

**Results**

Results from the post-video questionnaire found that the majority of students had a positive response towards the videos. For instance, the majority of students (>50%) found the video format, specifically, to be helpful, and the videos helped with the problem sets in the class, and very generally with the course material, as well.

When asked questions about future availability of supplementary videos, only 15% of students said they would not be interested in seeing them utilized again. Of the 85% that would like future videos, 59% responded that they would like to see them in LIN 220 and other classes, 24% in LIN 220 only, and 3% only in other classes.

Finally, when asked to rate on a 5-point scale the content of the videos, the data show a .8 confidence rating increase in student confidence when completing the problem set assigned in class after having watched the videos compared to confidence before having watched the videos.
Discussion

Taken together, these results show strong support that the students thought that the video supplementary material had a positive influence on their confidence in the course material, and the students would like to continue to see videos implemented in their coursework. What this means for instructors is that supplementary material in a video format, though not traditional, can be an effective tool for enhancing student understanding of material --especially material that is difficult to explain in a formal written format. Videos allow instructors to present material in multiple modalities at once, as in the lecture setting, but have the added bonus of being accessible outside of class and having stop, pause, and rewind features so that students won’t “miss” something or have to depend on their own watered-down notes.

We believe that additional testing of the video format as an effective supplementary material would produce results that not only support the conclusions we’ve made thus far, but actually strengthen them. Some questions concerning instructive video materials that should be researched further are: whether the increase in student confidence found here correlates with an
increase in student performance; whether videos are similarly effective for all disciplines; whether videos result in enhanced understanding for all learning types and if they favor any learning types over others; and how the video format for supplementary materials compares with other, more widely utilized formats.
References


article&catid=43%3Adavanelos-articles&articleid=111%3Ahow-to--effectively-use-supplementary-materials-in-class&format=pdf&option=com_content&Itemid=157.


Appendix

Questionnaire:

1. Did you watch the videos? A) Yes B) No

2. Which videos did you watch? A) Finding the Deep Structure B) Multiple Transforms C) N/A

3. Did you find the videos helpful with the class material? A) Yes B) No C) N/A

4. Did the videos help you with the Problem Set? A) Yes B) No C) N/A

5. How helpful did you find these videos on a scale of 1-5?

6. Would you like to see more of these videos in this class or in other classes? A) Yes only in this class B) Yes, only in other classes C) Yes, in this and other classes D) No E) N/A

7. Did this “video format” presentation facilitate your understanding of the material presented in class? A) Yes B) No C) N/A

8. On a scale of 1-5, how confident did you feel doing the problem set before watching the videos?

9. On a scale of 1-5, how confident did you feel doing the problem set after watching the videos?