

PHYSICAL THERAPIST STUDENT PREFERENCE OF A PROGRAM-SPECIFIC YOUTUBE CHANNEL FOR INSTRUCTIONAL VIDEOS

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Abstract

Instructional videos are frequently used in physical therapy education, with a recent increase in use since the COVID-19 pandemic and as more hybrid programs develop. Several studies have shown that inclusion of videos in higher education courses improves student learning outcomes. Instructors often use already existing videos from various sites, including YouTube. It can be time consuming to find videos that demonstrate exactly as an instructor would like and research has shown that the content quality and reliability of these videos can be poor to fair. The purpose of this project was to assess student preferences related to instructional videos, and then develop a private YouTube channel with videos created by the program instructors. A needs assessment survey was sent out to 3 cohorts of students who were current or recent graduates of the physical therapy program. The survey determined areas and topics in which students felt supplemental instructional videos would be beneficial to learning. Most respondents felt the implementation of a program-specific YouTube channel would be a valuable resource. Most topics identified for video development were related to skills within the Movement Science, Musculoskeletal, Advanced Manual Therapy, and Neuroscience courses. These videos were developed and edited with the assistance of 3 students working on their doctoral project. Videos were uploaded to the program-specific YouTube channel and their use was initiated within the courses during the past year. Students were provided with links to the videos, and some were embedded into the learning management system for the courses. Students in the graduating class of 2023 completed a survey to assess their use and preferences related to these videos. There was an overall response rate of 81.8%, and of the respondents, 94.4% of them reported using the instructional videos provided in the courses. 76.5% of respondents found the videos with their course instructors to be more helpful than other videos found on the internet and 88.9% of the respondents agreed or strongly agreed that they preferred videos with their course instructors demonstrating skills as compared to other videos. The follow-up survey results showed a strong student preference for the use of instructional videos featuring their own course instructors. These results have led to the continuation and further development of DPT program instructor-featured videos and the use of the program-specific YouTube channel.

Keywords: *Instruction, video, YouTube.*

1. Background

Instructional videos are frequently used in higher education, with a substantial increase in utilization since the COVID-19 pandemic and as more online and hybrid programs have developed. Several studies have shown that inclusion of videos in higher education courses improves student learning outcomes. Demonstration and instructional videos are often incorporated into health professions education programs with most studies focused on nursing programs. Clerkin et al. (2022) found demonstration videos to be effective teaching tools for nursing students learning psychomotor skills. When compared to either traditional in-class teaching approaches or instructional video alone, Noetel et al. (2021) found that supplementing existing teaching methods with video had the most significant learning benefits. Miner and Stefaniak (2018) found that undergraduate students perceived multimedia videos as aiding in their learning. Similarly, nursing students have reported a preference for instructional videos via the YouTube platform rather than traditional in-class demonstrations (Burton, 2022). Weeks and Horan (2013) found that physiotherapy students who used video resources when preparing for practical examinations reported it to be a positive learning activity that assisted their learning.

Course instructors who incorporate instructional or demonstration multimedia, often use already existing videos from various sites, including YouTube. It can be time consuming to find videos that demonstrate exactly as an instructor would like. Many videos related to allied health professions have been created by students and may not convey accurate or comprehensive information (Bachman, 2020). Studies have shown that the content quality and reliability of many healthcare related education videos found on YouTube can be poor to fair at best (Kunze et al., 2022; McMahon et al., 2022). Instructors may also create their own videos to ensure the content is aligned with their objectives. However, some faculty may be hesitant due to the time commitment to create the content and others may lack comfort with the technology required to do so (Miner & Stefaniak, 2018).

2. Purpose

In response to student feedback following the increased use of instructional videos during the COVID-19 pandemic, a project was initiated within the Doctor of Physical Therapy (DPT) program to create a program-specific video library. This study investigated the need for and preferences of students pertaining to instructional videos within the DPT curriculum. Specifically, this project sought to determine if DPT students preferred instructional videos made by and featuring their instructors versus those from outside sources that do not feature their faculty members.

3. Methods

A needs assessment was conducted via an online, anonymous survey sent to the graduating classes of 2021, 2022, and 2023. The assessment surveyed if students felt a centralized DPT program YouTube channel with supplemental video demonstrations and mini-lectures would be beneficial to student learning. Additionally, the needs assessment asked a series of questions to identify topics across all courses of the curriculum that students felt could be better understood with access to supplementary videos (Figure 1). The question options for each course were determined in consultation with 3 DPT students who assisted on the project. Respondents were given the option to specify any other topics they felt could benefit from supplemental videos.

Figure 1. Sample question from needs assessment.

7. Please select any topics in the Clinical Skills I course that you feel would be easier to understand with access to video demonstration or a mini-lecture.
- Goniometric measurement performance
 - Manual muscle test performance
 - Manual muscle test grading
 - Draping and positioning
 - Transfers
 - Wheelchair management
 - None
 - Other (please specify)

The assessment yielded 41 responses with 95% of those indicating that the development of a program-specific YouTube channel would advance learning. Most areas identified as potentially being enhanced by the addition of instructional videos fell within the following courses: Clinical Skills, Neuroscience, Movement Science, Advanced Manual Therapy, and Musculoskeletal Management. Videos specific to the topics identified in the needs assessment were developed and edited with the assistance of 3 students working on their doctoral project. The videos were uploaded to the program-specific, private YouTube channel and their use was initiated within the courses during 2022 – 2023 school year. Students were provided with links to the videos, and some were embedded into the learning management system for the courses.

An anonymous survey was administered to the graduating class of 2023 to assess their use and preferences related to these videos after having access to them in their courses. This specific cohort was chosen for the follow-up survey due to the timing in which they entered the program. These students had significant exposure to non-instructor created videos that were used during 2020 and the spring of 2021 when many courses were taught online or in hybrid format. Given the sequence of the curriculum, these students also had significant exposure to the instructor created content on the program-specific YouTube

channel. Therefore, these students were thought to have the greatest ability to compare the two types of videos. Students were specifically asked about the videos utilized in their Musculoskeletal Management II course due to the timing within the curriculum and the large number of videos incorporated into the class.

4. Results

The follow-up questionnaire had an 81.8% response rate, with 18 of 22 students in the cohort completing the survey. Of the respondents, 94.4% reported viewing the videos associated with the course materials. 76.5% of the students felt the videos featuring their own instructors were more helpful than those not made by, nor featuring, their faculty (Figure 2). The remaining 23.5% of respondents were unsure if the instructor videos were more helpful than those not including their DPT faculty. Additionally, when asked to rate their level of agreement with the statement, “I prefer instructional videos that show my course instructor demonstrating skills as compared to others found on the internet,” 88.9% of students either strongly agreed or agreed. The majority strongly agreed (66.7%) with this statement, indicating a solid student preference. The remaining 11.1% of respondents were neutral with respect to their agreement with the statement of preference (Figure 3).

Figure 2. Follow-up survey response data regarding helpfulness of videos.

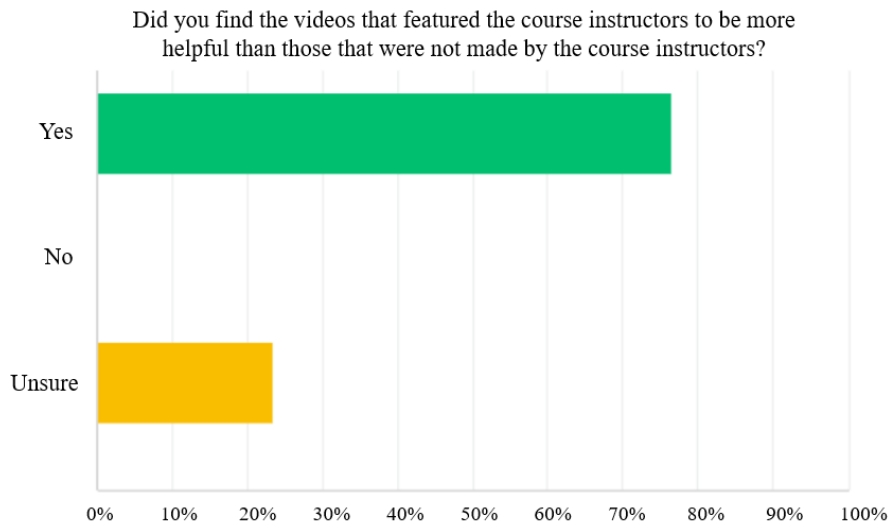
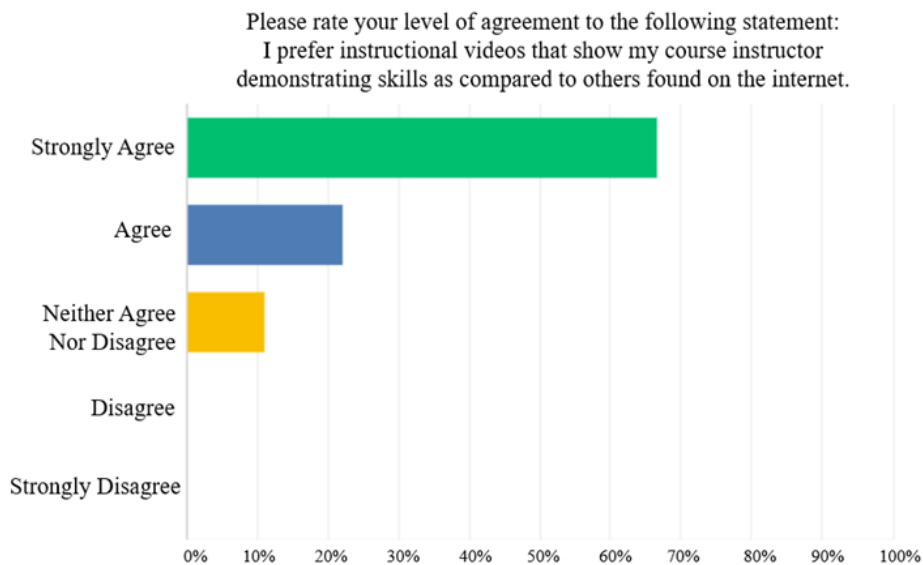


Figure 3. Follow-up survey response data regarding student preference.



5. Discussion

The initial needs assessment showed a strong student desire for a program-specific YouTube channel to access instructional videos to supplement other learning resources. Most students responding to the follow-up survey in the class of 2023 preferred videos that showed their own course instructors demonstrating skills and felt these videos were more helpful in their learning than those not made by their faculty. While this was a small sample size, the results did support findings from previous studies that showed students wanted multimedia videos included in their learning. Additionally, this found that students may be more interested in utilizing supplemental videos that are created by their own instructors.

While there can be a substantial time-commitment to initially develop the videos, DPT faculty may be wise to invest in creating their own multimedia to support their other teaching methods. Once the videos have been established, they may be easily integrated into courses in future years. Faculty creation of their own video content can also ensure validity and accuracy as compared to what may be found in other online sources. Those who may be uncomfortable with the technology necessary to develop instructional videos are encouraged to seek out assistance from their institutions' digital education or information technology department, or instructional design specialists if available.

Prior studies have shown students who utilize demonstration-based videos have positive learning outcomes. It is quite possible that instructor-featured videos may increase the likelihood of these videos being utilized given student preferences. As the program-specific video library continues to grow and develop, follow-up studies may be conducted to assess the impact on learning outcomes specifically in DPT programs, in addition to student perceptions within a larger sample size.

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