



YouTube Enhanced Case Teaching in Health Management and Policy

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Abstract

Purpose: Case teaching is a popular method of health management and policy education but its relationship with technology is outdated. While several major publishers of case teaching materials have recently incorporated internet videos and other multimedia and online content into their offerings, these video case teaching materials are mostly on the manufacturing industry and not on the health care services industry. This project aims to expand existing case teaching materials with YouTube videos, and to report preliminary findings on learning outcomes.

Method: YouTube videos were selected to enhance course topics and materials found in traditional text based materials. Original videos were created in the style of Khan Academy, to prerecord short lectures promoted in the literatures on case teaching and flipped format learning. Online course evaluations measured student progress on learning objectives.

Results: Online course evaluations were completed by 48 of 93 students. All responding students reported making progress on “acquiring skills in working with others as a member of a team” and “developing skill in expressing myself orally or in writing”. For both objectives, most of the students reported making “exceptional progress”.

Discussion: YouTube videos can be a valuable source of content to supplement existing case teaching materials in health management and policy. More research is needed to distinguish the effects of YouTube videos from other case teaching materials and flipped format aspects of course design. The general method of YouTube enhanced case teaching might be expanded beyond health management and policy to other topics in health professions education.

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Keywords: Health occupations; Internet; Multimedia; Students; Teaching materials

1. Introduction

In *Teaching with Cases: A Practical Guide*,¹ Andersen and Schiano describe the range of readings and other materials that can be included in a case based course.¹ Andersen and Schiano recommend using videos in additional texts, and a contemporary education literature

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Table 1
Literature on YouTube in Health Professions Education.

| Ref. | Courses | Level | Uses of YouTube | Effects of YouTube |
|----------------------------------|---|---------------|--------------------------|--|
| Amgad and AlFaar ³⁴ | Introduction to Health Research | Undergraduate | Lectures | Student satisfaction |
| Cater et al. ¹⁵ | Introductory Radiology | Graduate | Cases | Student satisfaction, test scores |
| Cox ⁶ | Organic Chemistry, Biochemistry | Undergraduate | Lectures | Student satisfaction |
| Gao et al. ¹⁷ | Dentistry, Medicine, Nursing | Undergraduate | Lectures | Student satisfaction |
| Giuliano and Moser ¹⁴ | Literature Evaluation | Graduate | Lectures | Student satisfaction, test scores |
| Haase ⁸ | Physics | Undergraduate | Lectures | Student satisfaction |
| Hekler et al. ²¹ | Food and Society | Undergraduate | Student-generated videos | Student dietary intake |
| Hund and Getrich ¹⁹ | Introduction to Biostatistics, Regression and Survival Analysis | Graduate | Lectures | Student satisfaction |
| Lai ¹¹ | Psychiatric Nursing | Graduate | Student-generated videos | Student satisfaction, student communication skills |
| McCormick et al. ¹² | Health Assessment Across the Lifespan | Graduate | Cases | Test scores |
| Pai ²⁹ | Introductory Biology | Undergraduate | Cases | Student satisfaction |
| Tay and Edwards ⁵ | General Chemistry | Undergraduate | Lectures | Student satisfaction, test scores |
| Topps et al. ¹⁸ | Medicine, Nursing | Graduate | Lectures | Student satisfaction |
| Trelease ³ | Anatomy, Radiology | Graduate | Lectures | Test scores |

describes some educational features of YouTube. Scholars have published descriptions of teaching with YouTube throughout higher education.² Applications of teaching with YouTube can be found in the basic sciences,^{3–8} clinical professions,^{9–18} and population health.^{19–22} Although we are unaware of literature on teaching with YouTube in health management and policy, there is a literature on teaching with YouTube in other areas of management^{23–27} and policy.²⁸ Potential uses of YouTube in teaching and learning include case studies,^{1,9,12,29–32} clinical training videos,^{13,16} computing tutorials,¹⁹ group discussions,^{28,33} lectures,^{4,10,14,34} peer assessment,¹¹ and student created videos.^{26,35}

Table 1 summarizes the literature teaching with YouTube in health professions education. Most applications use YouTube for lectures and those applications that use YouTube for cases are more clinically focused. Effects of YouTube videos on teaching and learning outcomes are generally measured with student self-reports or related student satisfaction surveys. Occasionally effects of YouTube videos are quantified using test scores. Teaching with YouTube videos might have several possible advantages over teaching with readings alone. YouTube videos can help to fill in gaps left by readings. YouTube videos tend to be shorter and better at provoking empathy and at presenting multiple perspectives. Videos might also be more appropriate than texts for conveying scientific or technical material.²⁹ Younger students might be more comfortable with technology and social media compared to older students,

and might prefer videos to texts,²⁹ and there is some evidence that pictures are simply better than words for expressing teaching materials.³⁶ Videos can help to create depictions of leadership in practice, and to demonstrate the complexity decision making, two hallmarks of case teaching methods.¹ YouTube videos can also be selected to emphasize the role of minorities in leadership positions.^{1,37}

Despite the possible cognitive benefits that could result from multimedia teaching materials, a 2012 survey of 4564 faculty members in a nationally representative, online sample of higher education faculty teaching at least one course at the time of the survey found that only about 40 percent of faculty in traditional, residential educational programs used videos for teaching.³⁸ The survey included all different levels of universities from two-year colleges to major research institutions. The survey also included all different levels of faculty from adjunct instructors to tenured professors. Barriers to teaching with YouTube might include high costs, intellectual property restrictions, lack of appropriate content.²⁹ YouTube and similar sources of content have expanded considerably in recent years.³⁶ There are plenty of videos between 3 and 10 min which is generally considered the appropriate length for a given clip given human attention spans.^{29,36} YouTube and other online sources of videos tend to be inexpensive,⁴ and may also help to avoid copyright issues.³⁶

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