Video PBL Cases: An Upgrade for the Next Generation

Denise Zwahlen, MD;
Shelley Bhattacharya, DO, MPH
Landon Center on Aging
University of Kansas School of Medicine, Kansas City, KS
June 2021

Background
- Medical students prefer video formats and hands-on approaches to learning.¹
- Problem-Based-Learning (PBL) facilitates critical thinking and translation of basic science into clinical context.
- PBL cases are traditionally delivered in text format using PowerPoint presentations.
- Studies show students and facilitators prefer case presentations in video format²-⁵
- KUMC should explore using video presentations in PBL cases.

Methods
- Two KUSOM M2 PBL cases were transitioned to include video format to present the patient’s history at all three campuses.
- The videos were embedded in the PowerPoint presentation of the case.
- Both formats had the same content; there was no content advantage to either format.
- Cross-Over design employed to ensure all groups would experience and provide feedback on the video case presentations.
- PBL groups were randomly assigned to the video or control groups based on Learning Community.
- Participation optimized by providing drawing for $20 gift cards to 100% completion PBL groups.

Hypotheses
- The video format will be well received by both students and faculty.
- Video PBL cases will have a similar impact on critical thinking to text-based versions.
- Video PBL will allow students to better relate to the patient in the video cases as “real people”.

Assessment
- Standard Oasis feedback for PBL cases from students and faculty were reviewed.
- A RedCap survey was sent to students at the end of the PBL case for evaluation; quality and content questions were included.
- A RedCap survey was sent to faculty at the end of the PBL case to evaluate quality and to assess the impact the PBL case had on students’ critical thinking.

Results
- Response rates: Case 1 Students—109/220, Faculty 20/36, Case 2 Students 115/220, Faculty 35/36
- Students and Faculty thought the traditional format should be used again
- Students and Faculty rated both formats equally high on encouraging comprehensive discussions
- Faculty preferred the PBL format for relating as a person, critical thinking, in-depth discussion and pathophysiology discussions
- Students preferred the traditional format for all of the questions.

Discussion
- Training and recording SP for video content in pandemic affected video quality.
- Technical difficulties using video format were exacerbated by the virtual classroom.
- Unexpectedly, traditional format was preferred by both students and faculty.
- Faculty reported the video format stimulated more in-depth learning issues whereas students felt the traditional case was more effective.
- Faculty felt the PBL format allowed the group to have more critical thinking and engage the case “as a person”.

Conclusions
- With this pilot, data shows traditional PowerPoint format for PBL cases was preferred.
- Technical difficulties likely lowered the video PBL appeal.
- Video PBL had clear benefits for the faculty and should be explored further.
- More video cases are needed to decide whether video format should be included.

Future Directions
- Improve technical components to improve the PBL video experience.
- Consider alternate enhancements for PBL presentation.
- Consider repeat study when PBL returns to in-person sessions.
- Complete full review of data.

References
1. Assay, J Training Multi-Races for a Multi-Generational Work Force. http://C:\Users\dean\OneDrive\Library\Books\Microsoft\MicrosoftOffice_Books\61602.pdf Downloads\assets\training\a multi-generational -21553266-9695817-60507666-9766716-84706765-2549656.  

KU is an EO/AA institution.

THE UNIVERSITY OF KANSAS
www.ku.edu