

A Peer Review Model To Support Faculty-Produced Video Microlectures In A Flipped Medical Curriculum

Leslie Hammersmith, MA; Yerko Berrocal, MD; Jon Fisher, PhD; Max Anderson, MLIS, MS – University of Illinois College of Medicine

Abstract: The University of Illinois College of Medicine has moved to a flipped classroom format and uses short, faculty-developed educational microlectures to prepare students for class. We have produced 255+ videos during this process, but we noticed significant variability in video quality. We have created a peer review model to aid faculty in producing and improving their videos.

PEER REVIEW PROCESS

1

Faculty prepare draft of presentation, script, and video layout. Record a version for review.

2

Peer Review committee selected for 2 week review period for assigned videos.

3

Feedback via rubric is provided to author: Accept, Accept with Edits, or Re-work

4

Faculty makes changes and re-records. Final version goes through QA and published.

UICOM Curriculum Model

- Integrated model new for the 2017-2018 academic year.
- Organ system based program
- Relevant discipline-specific content and clinical presentations presented as a cohesive unit, which we call a Block.
- 8 Blocks in the first two years of the UICOM curriculum.

Video Creation

Faculty record short, mini-lecture educational videos as preparatory materials for class. To control variability in video content, organization, and quality, UICOM developed a review rubric for video recordings. This effort is to improve the content for our students and encourage faculty development with new technology.

Introduction

There has been a large push in recent years to increase the amount of integrated coursework in medical school curricula. The traditional model of basic sciences in years one and two, and clinical sciences in years three through four is being replaced with a model that integrates aspects of both across all four years. This shift in educational dogma has coincided with an increased reliance on active learning methodologies such as flipped classrooms, case discussions, and Team-based Learning™.

Video (micro lecture) Peer Review Rubric						
Presenter:			Reviewer:			
Title:	Category	Process	Needs attention (1 point) *	Meets requirements (2 points)	Exceeds requirements (3 points)	
	Learning Objectives		Vague, difficult to measure, unreasonable, subjective, or otherwise intangible	Clear, measurable and tangible	Includes the "Meets Requirements" criteria, and LOs are also action-oriented, reasonable, and time-bound.	
	Content		Difficult to read or is unorganized	Main points are clear and well developed. Most information is linked to learning objectives. Information is organized.	Main points are very clear and very detailed. Information is directly linked to learning objectives. Information is very organized.	
	Managing cognitive load	Signaling – cueing (highlighting important info)	Minimum cueing/signaling	One or two of the following are present: Use on-screen text or symbols Keywords are present Use a symbol (e.g. arrow) that draws attention to a specific region of the screen	Includes the "Meets Requirements" criteria, and: Uses drawing tools or creative visual aids while presenting. directs learner attention by using interactive tools to highlight important points	
	Segmenting (chunking of information)		Video length was long and not broken into small pieces	Allow learners to engage with small pieces of new information: video length is short includes "click forward" pauses	Includes the "Meets Requirements" criteria, and provide students with questions and prompts them to click forward after completion	
	Weeding (eliminating extraneous information)		Information that does not contribute to the learning objective(s) is present: sounds, complex backgrounds, or extra features	Minimum weeding is needed	Not needed – very clean and clear presentation	
	Matching modality (using both auditory and visual channels to convey complementary information)		Visual and verbal channels did not match	Clear narration while presenting content was present	Includes the "Meets Requirements" criteria, and: includes narrated animations; provides sketches to illustrate the verbal explanation	
*If this is missing from the video, award 0 points						
Adapted from Effective Educational Videos: https://cft.vanderbilt.edu/guides-sub-pages/effective-educational-videos/						
Video (micro lecture) Peer Review Rubric						
Active Learning			Video is missing components as described in "Meets Requirements" to the right	Used guiding questions, interactive elements, used conversational/enthusiastic style to enhance engagement	Includes the "Meets Requirements" criteria, and: used interactive features that gave students control	
Points:						
Notes:						
Overall Impressions						
		Far short of expectations – not effective (1 point)	Short of expectations – slightly effective (2 points)	Equals expectations – moderately effective (3 points)	Exceeds expectations – very effective (4 points)	Far exceeds expectations – extremely effective (5 points)
How well did this video stay brief and targeted on learning goals?						
Use of audio and video elements tended to convey appropriate parts of an explanation						
Audio and video elements were pleasant and high quality						
Is the length of the video appropriate?						
Overall presentation effectiveness						
*Is the length of the video appropriate? (Guse and colleagues – 2014): < 6 minutes (close to 100% median engagement); 9-12 minutes (~50% median engagement); 12-40 minutes (~20% median engagement)						
What went well:						
What could be improved:						
Additional recommendations (keep/change):						
*If this is missing from the video, award 0 points						
Adapted from Effective Educational Videos: https://cft.vanderbilt.edu/guides-sub-pages/effective-educational-videos/						

Next Steps

- Applying the video review rubric to videos produced before implementation
- Expanding peer review to other curriculum development

UICOM Microlectures

Scan the QR Code to Watch

Dr. Berrocal
Block 4
Cardiac Cycle

Dr. Clements-Jewery
Block 1
Nernst Potential

Dr. Fisher
Block 4
Respiratory Tract

Dr. Lin
Block 1
Signal Transduction