

Dyad Pedagogy and the Application of Video Education in Anatomy

Adam Blumenberg, Vincent Trivigno, Hassan Khan, Lloyd Sherman, Samuel Marquez College of Medicine, SUNY Downstate Medical Center, Brooklyn, NY



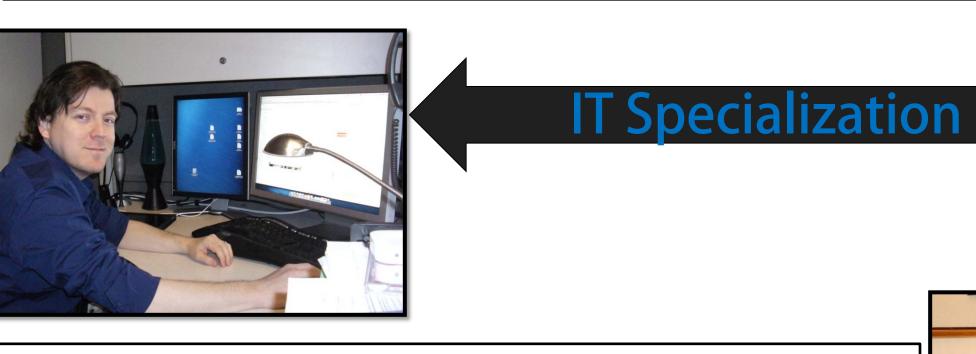
Abstract

A new pedagogy is required in the curriculum reform movement of medical education. The most effective pedagogy for anatomy is when students work in dyads. Dyads were given the task of producing well-made videos to help students grasp contiguous structures in 3D. Dyad pedagogy provided feedback and assistance, i.e., the producer worked one-on-one with Downstate's Anatomy Director, intranet specialist, and student narrators. Production drew on Bloom's taxonomies of learning. Delivery was labor intensive because dyads had to synthesize a large volume of material, often from internet resources at Downstate and elsewhere, then create comprehensive and comprehensible videos. The clips were offered to the first year medical class via SUNY Downstate's intranet PRIME system. Activity logs showed over 50% of the class viewed videos, and multiple hits (>2) from single individuals pointed to more than passing curiosity, and perhaps a learning intent. Usage levels increased coinciding with the approaching midterm exam, indicating active utilization of the videos as a study tool. Informal surveys of the class refined the conceptualization of the videos: they ought to be succinct, dynamic, and visually intelligible.

The Beginning...

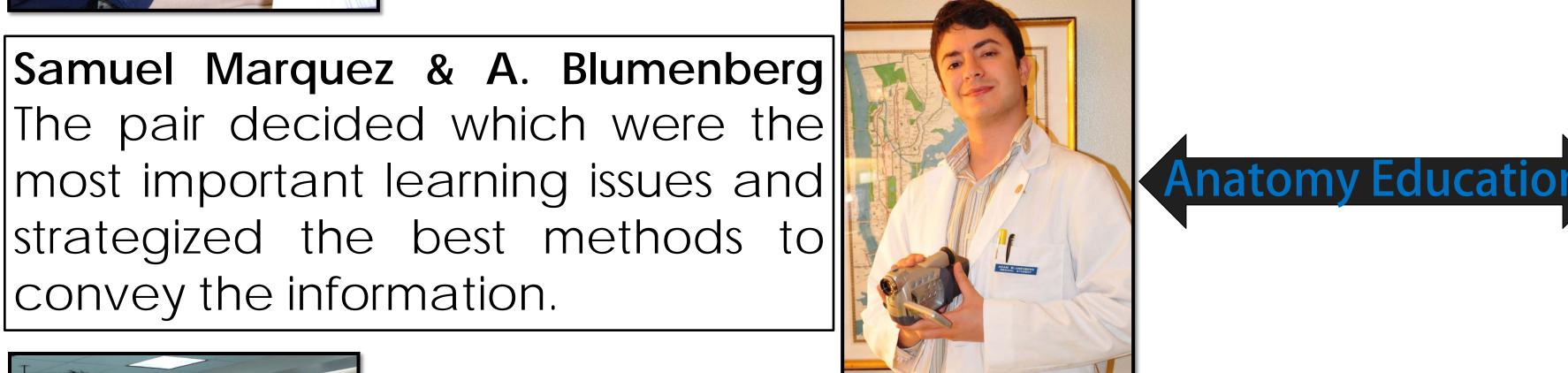


The Dyads



convey the information.

Brett Laurence & Adam Blumenberg The dyad selected the most efficient software to capture, compress and make accessible the video files.



Student Narrators & Adam Blumenberg The duos scripted, rehearsed and shot the raw footage which the filmmaker would edit into the final product.

Video Production

Before Recording

- -The filmmaker carefully framed the shot to avoid need for disorienting camera movement.
- Narrators briefly rehearsed gestures to ensure a clear and unobstructed view.
- Both identified structures to guarantee quality of presentation.

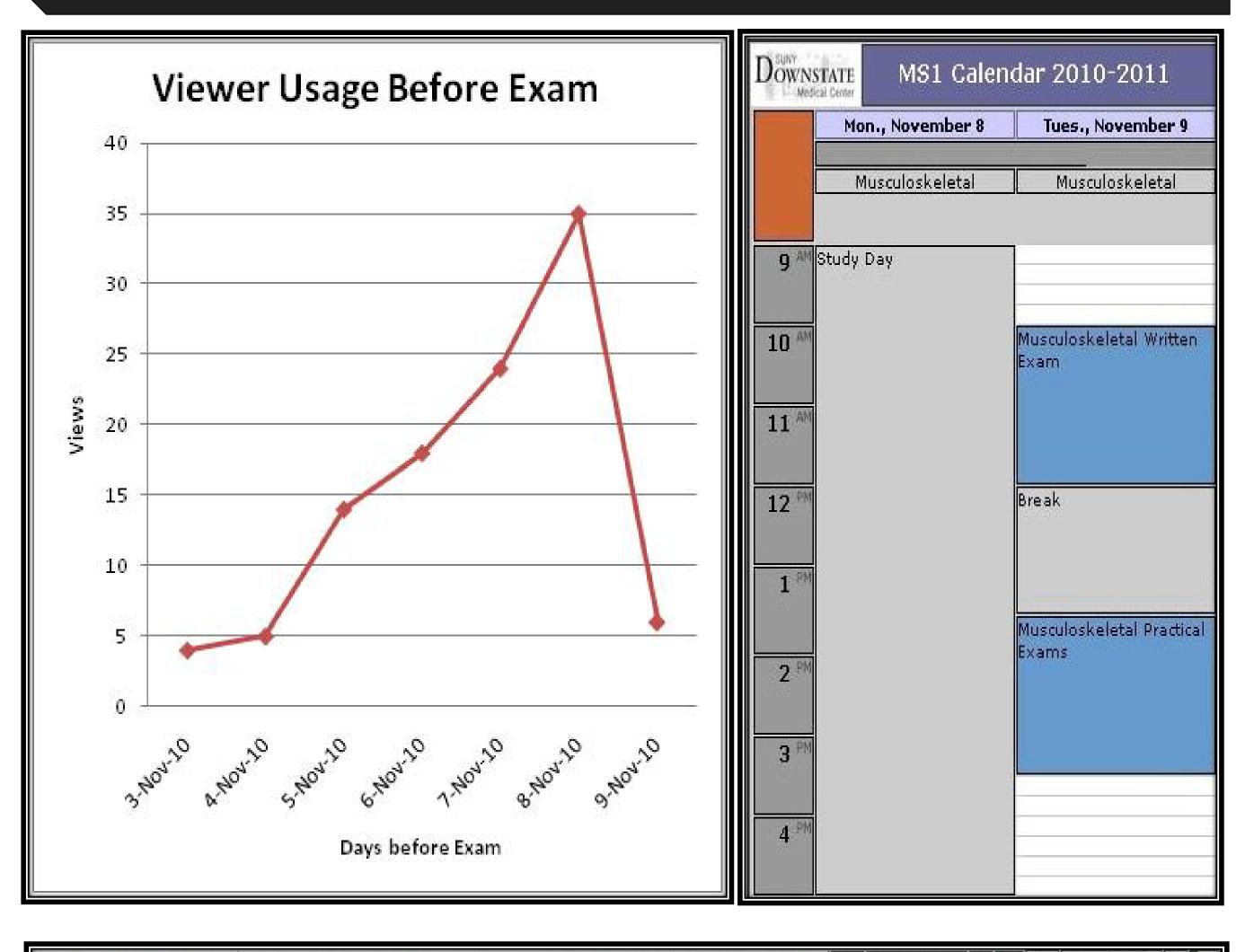
Techniques

- Garbage matte is used to trace the structure on screen and apply color emphasis, etc.
- Layering and chroma key allow for composite images, e.g., a color image with B&W sections.
- Contrast and tint are used to enhance color.

- Enhanced contrast to clarify all structures. Color isolation to emphasize specific topic.
- Text matches audio to highlight naming.
- "Umms" removed to maximize fluidity.



Results



	Login Name	Visits	3	13.	200901563	2	100	26.	200904825	1	39.	200903012	1	52.	200802991	1	65.	200902410	1	
1.	200801396	5		14.	200805487	2		27.	200904893	1	40.	200903084	1	53.	200803166	1	66.	200902542	1	
2.	200903985	4		15.	200902781	2		28.	200905100	1	41.	200903182	1	54.	200804025	1	67.	200902574	1	
3.	200906237	3		16,	200903222	2		29.	200906172	1	42,	200903209	1	55,	200805128	1	68.	200901970	1	
4.	200903173	3		17.	200902165	2		30.	200906229	1	43.	200903217	1	56.	200901661	1	69.	200902053	1	
5.	200901298	3		18.	200903693	2		31.	200906323	1	44.	200805911	1	57.	200901411	1	70.	200902704	1	
6.	200901812	3		19.	200904038	2	100	32.	200903920	1	45.	200806175	1	58.	200901428	1	71.	200902753	1	
7.	200902638	3		20.	200904040	2		33.	200902201	1	46.	200901118	1	59.	200901300	1	72.	200902756	1	1
8.	200902703	3		21.	200904230	2	100	34.	200903396	1	47,	200901140	1	60.	200901393	1	73.	200902650	1	
9.	200901844	2		22.	200904267	1		35,	200903549	1	48.	200901168	1	61.	200712988	1	74.	200902675	1	
10.	200902259	2		23.	200904704	1		36.	200903676	1	49.	200901227	1	62.	200715742	1	75.	200902690	1	
11.	200901406	2		24.	200904722	1		37.	200902788	1	50.	200802045	1	63,	200902304	1				
12.	200901466	2		25.	200904783	1		38.	200902973	1	51.	200802695	1	64.	200902360	1				

The data indicate consistently increasing usage as the exam drew near, with a maximum on the day before the test. The average usage growth was 5.2 viewers per day. The usage logs also point viewings (n>2) from individual to repeated students.

Discussion

The data combined with informal surveys of student users shows the utility of high quality prosection videos. The use of dyad pedagogy instilled the project with an element of selfoptimization, thereby improving successive videos. Dyad pedagogy enabled extraordinary learning by the students who developed the resource and by those who accessed it for study. As each video was created the process evolved and adapted to optimize clarity, accessibility and succinctness.