

Rich Media in Teaching and Learning

What is “Rich Media?”

Rich media is information that consists of any combination of text, images, audio, video, and animation. Also called “multimedia.” – *Computer Desktop Encyclopedia*


Why Rich Media?

- Rich media is everywhere, expected as a part of everyday experience in a connected world.
- Rich media can give the learner more control over the information received – a way to learn deeper by being able to stop, rewind, fast-forward, and replay content as many times as needed.

Rich Media on the U.S. Internet...

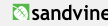
is over 50% of top 10 peak period fixed connection traffic

Rank	Upstream		Downstream		Aggregate	
	Application	Share	Application	Share	Application	Share
1	BitTorrent	36.35%	Netflix	31.62%	Netflix	28.18%
2	HTTP	6.03%	YouTube	18.69%	YouTube	16.78%
3	SSL	5.87%	HTTP	9.74%	HTTP	9.26%
4	Netflix	4.44%	BitTorrent	4.05%	BitTorrent	7.39%
5	YouTube	3.63%	iTunes	3.27%	iTunes	2.91%
6	Skype	2.76%	MPEG - Other	2.60%	SSL	2.54%
7	QVoD	2.55%	SSL	2.05%	MPEG - Other	2.32%
8	Facebook	1.54%	Amazon Video	1.61%	Amazon Video	1.48%
9	FaceTime	1.44%	Facebook	1.31%	Facebook	1.34%
10	Dropbox	1.39%	Hulu	1.29%	Hulu	1.15%
		66.00%		76.23%		73.35%



is over 48% of top 10 peak period mobile connection traffic

Rank	Upstream		Downstream		Aggregate	
	Application	Share	Application	Share	Application	Share
1	Facebook	20.62%	YouTube	17.69%	YouTube	16.65%
2	YouTube	13.20%	Facebook	15.44%	Facebook	16.62%
3	HTTP	12.64%	HTTP	14.07%	HTTP	13.74%
4	SSL	11.11%	MPEG - Other	7.92%	SSL	8.59%
5	Pandora Radio	5.19%	SSL	7.84%	MPEG - Other	7.27%
6	MPEG - Other	5.11%	Google Market	5.99%	Google Market	5.75%
7	Google Market	4.95%	Pandora Radio	5.03%	Pandora Radio	5.07%
8	Instagram	3.52%	Netflix	5.01%	Netflix	4.36%
9	Netflix	2.19%	Instagram	3.53%	Instagram	3.53%
10	iTunes	1.59%	iTunes	3.16%	iTunes	2.80%
		80.12%		85.68%		84.40%



November 2013, source: Sandvine - www.sandvine.com/trends/global-internet-phenomena

Barriers to create and access content are lower than ever

- Many people carry a high quality video camera – their smartphone.
- The Internet makes it easy to find, provide, use, and store media content.

The Impact of Broadcast and Streaming Video in Education

“...brick-and-mortar classrooms are opening up to rich media content, subject matter experts, and to one another. This shift has been influenced largely by technological and pedagogical trends, greater worldwide access to the Internet, an explosion of mobile phone users, and the appreciation for these technologies by young people, as well as by teachers...”

“Video appears poised to be a major contributor to the shift in the educational landscape, acting as a powerful agent that adds value and enhances the quality of the learning experience.”

2012, source: Cisco Systems Inc. and Wainhouse Research, LLC

Media Content: Seven major categories of application

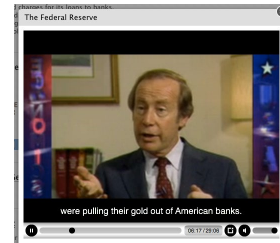
- basic instruction
- classroom enrichment
- accelerated learning
- distance education
- global student collaboration
- communications via digital signage
- professional development

2012, source: Cisco Systems Inc. and Wainhouse Research, LLC

Uses of rich media

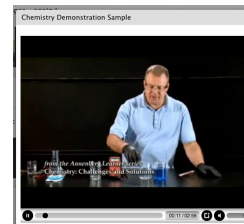
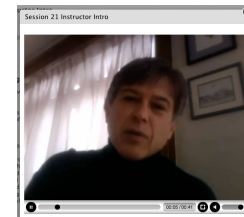
Lectures and long form content

- Flip the Classroom (media is studied outside the classroom while group interaction occurs face to face).
- Recorded class lectures as prime or review material.
- TED, Khan Academy, and other content, much free.
- Fully produced content, much designed specifically for curricular instruction, free and for a fee.



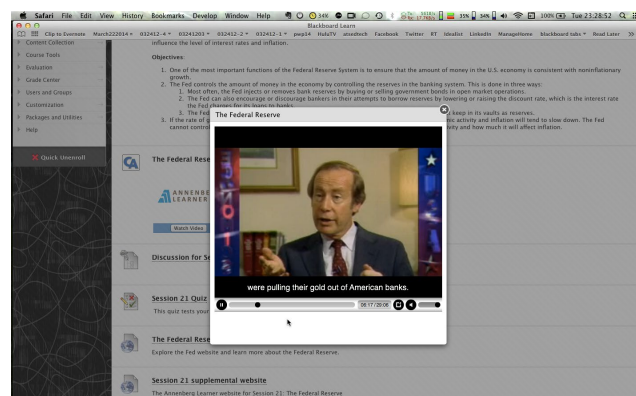
Teachable Moments

- Everybody's a producer: accessible technology, with smartphones or webcams and sophisticated yet easy to use production software, to create personalized media.
- Bookmarks from produced content allow choosing a part of longer content without violating copyright.
- Supplemental videos – demonstrations, guest speakers, and more – take learners to places and include people not available face to face.
- Intros, wrapups, review – personalized, timely, engaging.



Interactive

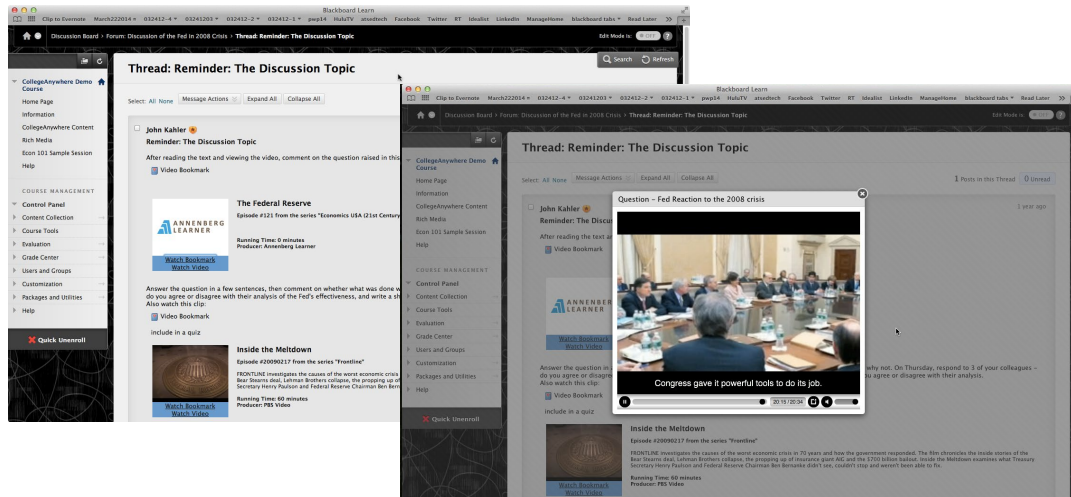
- Even Powerpoint has many interactive possibilities through embedded content and with hyperlinking, both within a slide set and connecting out to other resources.
- Live technology – from audioconference to telepresence to webinars to meetups to Skype, and more – allow pre-planned and ad hoc synchronous interaction.



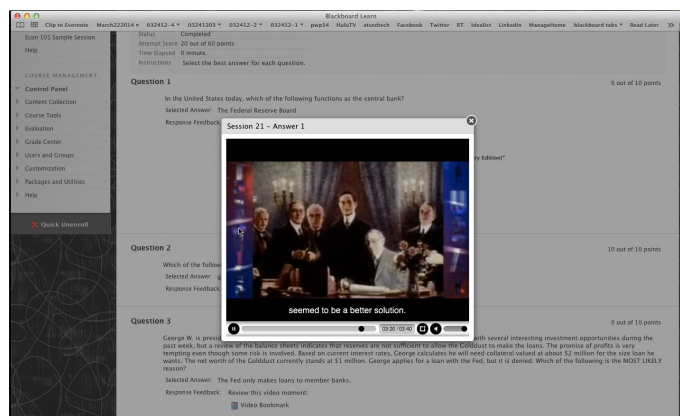
Interactive within an LMS

- Incorporate rich media into discussions – in face to face and online settings (synchronous or asynchronous) – as discussion starters, instructor responses, and as student comments and responses.

In this example, the discussion prompt includes several bookmarked segments for the learner to view before discussing the topic:



- Incorporate rich media into evaluation tools.
 - Prompts for questions.
 - Media content for the learner to view and then respond using written text or rich media content they discover or create.
 - Supplemental content from the instructor to help explain incorrect answers and reinforce correct answers, along with additional learning opportunities. Here, a bookmark highlights the correct answer:



- Direct the learner back to content for review.

Student-produced rich media content can take any number of forms and be designed to meet learning objectives in any number of ways.



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CollegeAnywhere helps faculty teach and inspire students by providing tools and resources that bring rich media content to teaching and learning.

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Rich Media Resources

Streaming Video: Pedagogy and Technology

<http://editlib.org/p/16411/>

Digital Media Pedagogy - MindMeister Mind Map

<http://www.mindmeister.com/66229100/digital-media-pedagogy>

What Sesame Street Teaches Us about Video in Education

<http://www.vingapp.com/uncategorized/what-sesame-street-teaches-us-about-video-in-education/>

The Impact of Broadcast and Streaming Video in Education: Executive Summary

<http://www.cisco.com/web/strategy/docs/education/ciscovideoes.pdf>

Media and Pedagogy in Undergraduate Distance Education:

A Theory-Based Meta-Analysis of Empirical Literature

<http://mcluhan.unk.edu/nanette/LitReviews/Media%20and%20Pedagogy%20in%20Undergraduate%20Distance%20Education-A%20Theory-Based%20Meta.pdf>

Streaming Video: Overcoming Barriers for Teaching and Learning

<http://cde.athabascau.ca/ISEC2002/papers/strom.pdf>

Applying Pedagogical Concepts in Online Course Development

<http://www.bolton.ac.uk/AME/eLearning/eResources/Applying%20Pedagogical%20Concepts%20in%20Online%20.pdf>

A framework for the pedagogical evaluation of eLearning Environments

<http://halshs.archives-ouvertes.fr/docs/00/69/62/34/PDF/Liber-2004.pdf>

The Davideon Project:

Capitalizing the Possibilities of Streaming Video as Flexible Learning Objects for the Humanities

http://www.innovateonline.info/pdf/vol2_issue1/The_Davidson_Project-__Capitalizing_the_Possibilities_of_Streaming_Video_as_Flexible_Learning_Objects_for_the_Humanities.pdf

The Impact of Broadcast and Streaming. Video in Education: Executive Summary

<http://www.cisco.com/web/strategy/docs/education/ciscovideoes.pdf>

The Impact of Broadcast and Streaming Video in Education (white paper)

<http://www.cisco.com/web/strategy/docs/education/ciscovideowp.pdf>

Pros and Cons of the Flipped Classroom

<http://edreach.us/2012/11/09/pros-and-cons-of-the-flipped-classroom/>



A CollegeAnywhere Teaching and Learning Brief

Rich Media in Teaching and Learning *Bringing engaging experiences to enhance learning*

Rich media content has multiple uses in today's many and varied teaching and learning environments. Media from simple instructor-created content to high quality video from world-class producers enhance the learning experience. Students with different learning styles are served by content incorporating images, sound, motion, and other engaging elements. Students are connected to a media rich environment throughout their days. Why should the learning experience be any different?

In the classroom

The traditional classroom, with lectures and individual and group activities, is only one of the teaching and learning experiences found in today's educational environment. Instruction often includes media elements, from simple slide shows to video and other media. Media content can illustrate complex concepts, introduce different viewpoints, and transport students to times, places and scenarios far outside the classroom walls. Media elements can be teachable moments, discussion prompts, or used to conclude a class with a closing message or image.



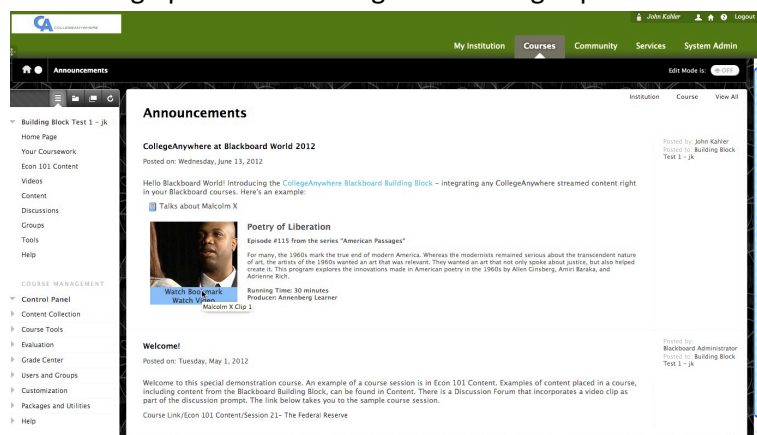
Online teaching and learning

Moving out of the classroom for some or all learning opens the teaching and learning experience to

many rich media possibilities. The flipped classroom often uses classroom time for group and individual engagement with students and the instructor, and move concepts out of the classroom. "Distance Learning" – which can be in forms such as totally online classwork to the large scale MOOC experience – puts much or all of the content and interaction online.

There are many variations on the non-traditional classroom teaching and

learning experience. From pre-recorded instructor lectures to professor-produced teachable moments to simple and complex slide shows (with complexity including synchronized audio, animations, embedded video elements and built-in interactivity) to high quality media from major producers, rich



media can engage the student, serve different learning styles, and put the student in control of when, where and how they engage with their learning. Pause and review a piece of content. Watch a teachable moment that the instructor has provided to illustrate a point. Respond to a clip from the video for the session included in a discussion prompt or exam question.



Flipped classroom work might begin with students working asynchronously, assigned to view one of a series of videos designed for the particular course or subject, and followed by classroom small group discussions prompted by a teachable moment taken from the online content. The instructor might record a personal introduction to each online session, or a summary and review from the previous classroom session.

The full distance course, be it small cohort or huge MOOC, can extend the out of classroom elements of the flipped classroom with activities for interaction and assessment. Creative possibilities are many.

Considering Rich Media

With the proliferation of webcams and smart devices, not to mention low cost cameras, just about anyone can be a producer. Add this to many media resources available, and rich media is a valid resource in any teaching and learning.

Some things to consider as you include rich media in your teaching and learning:

- Students are used to a truly rich media experience. They are surrounded by high quality content (though they watch low quality content too!) with quality production values – including good images and sound – that students take for granted.
- Not everyone is a Steven Spielberg or Ken Burns (nor do they have the time and budget!). Personally produced content can be compelling, but poorly produced content is a significant barrier to good teaching and learning with other students, and poor quality picture and sound are poor quality picture and sound. And you can include content from Spielberg and Burns.
- It's said that content on the Internet wants to be free. But that doesn't mean free content is something to build a course around. Licensing helps producers to continue providing content, and insures content will be available when you need it, and assures you comply with copyright.

CollegeAnywhere offers tools and resources to upload and stream your own content, along with licensed streaming media from outstanding producers content with management and bookmarking tools to leverage that content.

Learn more about how to bring rich media to your teaching and learning environment. Our free Webinars with supplemental resources explore the topics in this brief and present examples you can use. Watch them online at CollegeAnywhere.org.

Learn more! Contact us at info@CollegeAnywhere.org or call 855.227.8732.