

Forward Through the Rearview Mirror

Joseph Cevetello

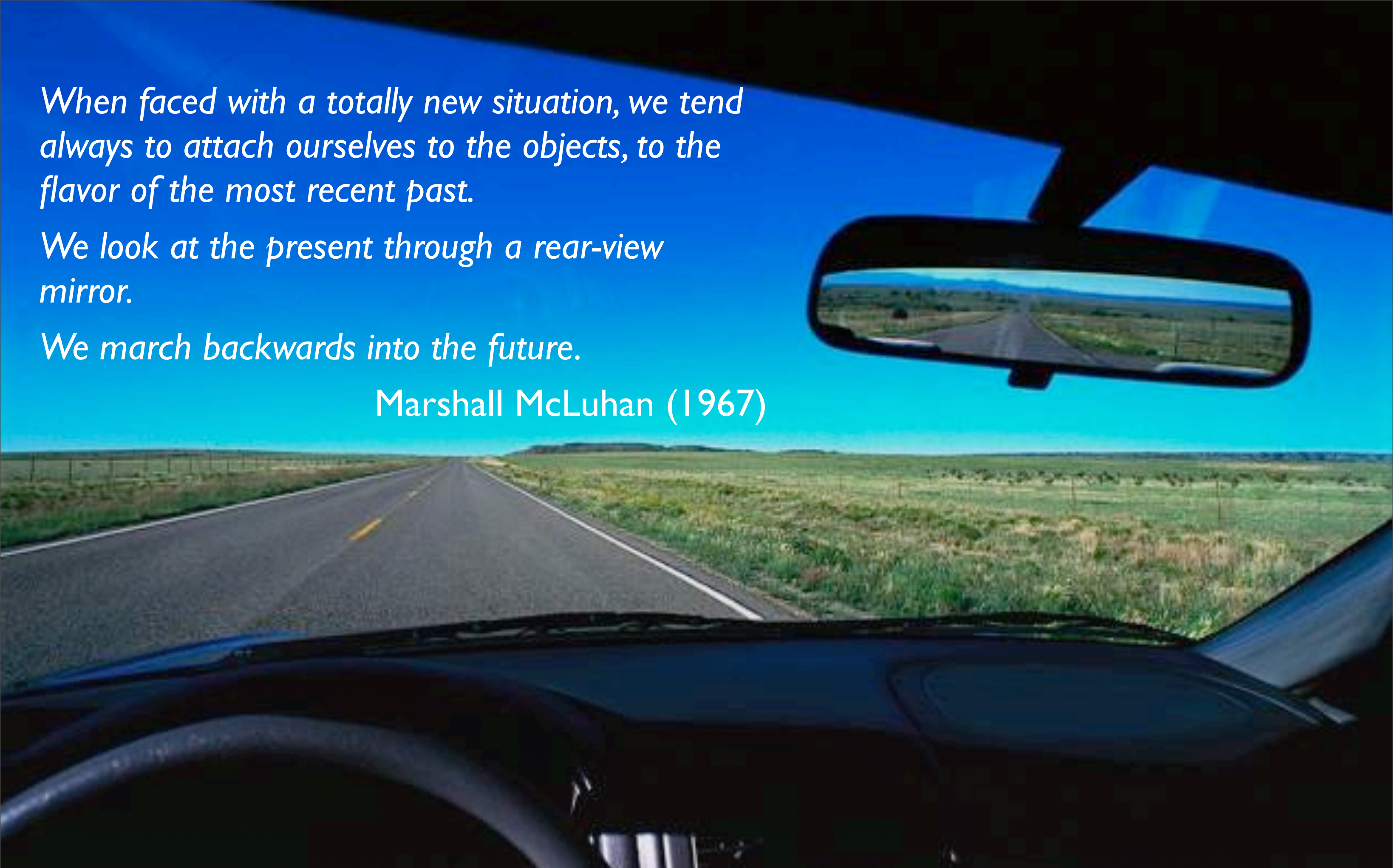
April 28, 2010

When faced with a totally new situation, we tend always to attach ourselves to the objects, to the flavor of the most recent past.

We look at the present through a rear-view mirror.

We march backwards into the future.

Marshall McLuhan (1967)



An Historical Perspective

- Similarities
- Differences
- Two Areas:
 - Knowledge Distribution
 - Learning Space

What are the Similarities to the Past?

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Pundits make hyperbolic claims about the efficacy of the new technologies promising improved instruction and radical reform of education



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It's Not about the Technology

Misconception:

Technology alone has the power to transform

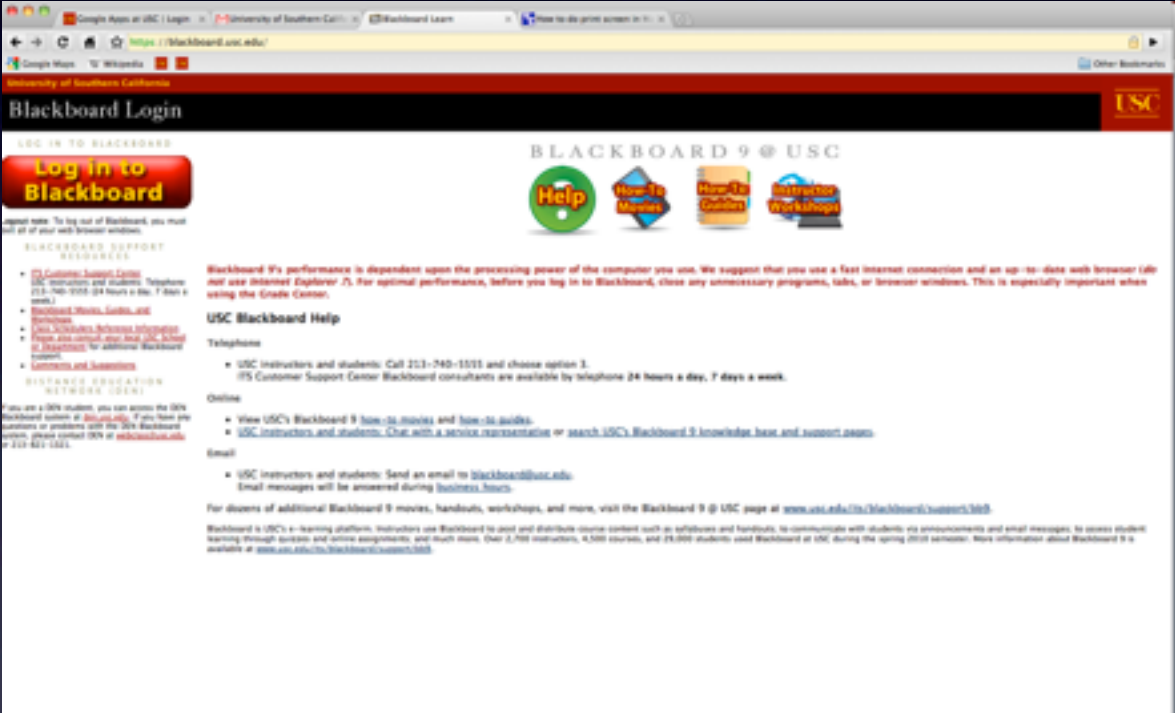
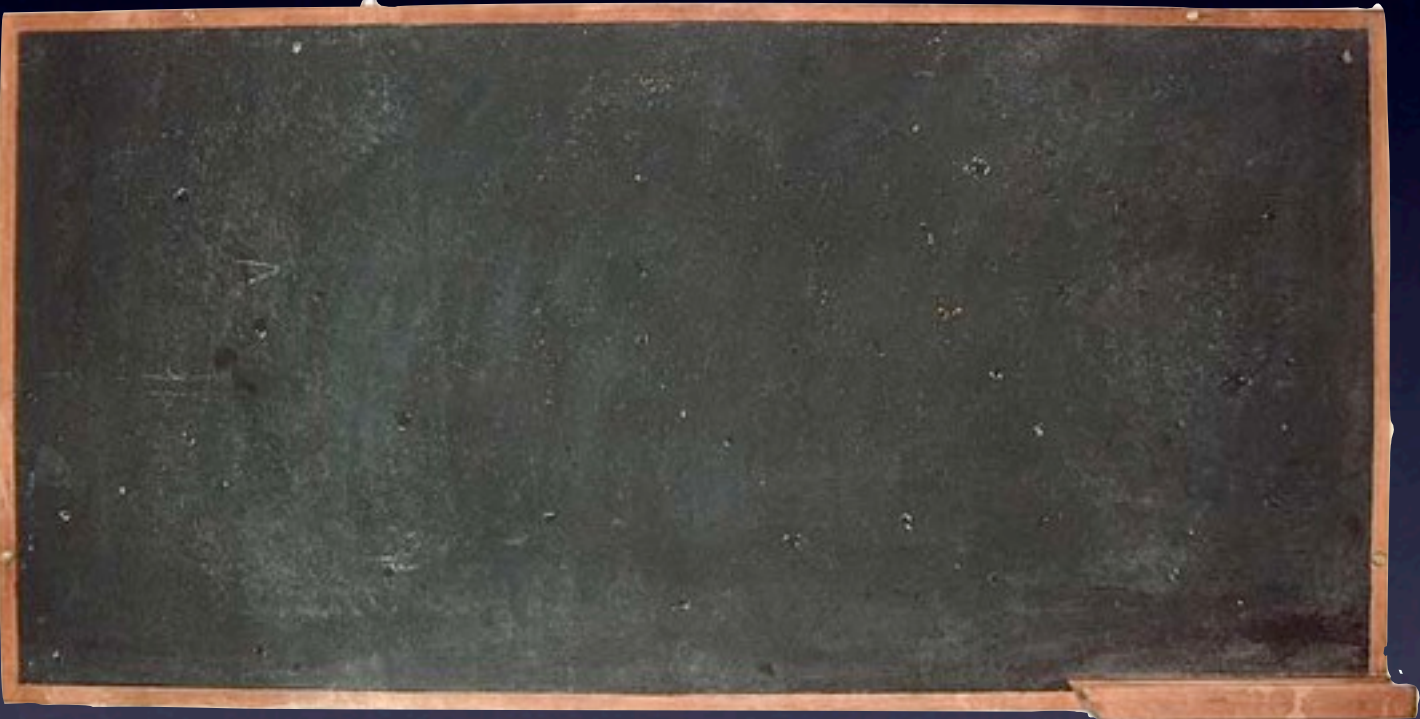
*For any successful technology implementation the **organizational** and **cultural** aspects of the environment in which the technology is introduced must be considered at least on an **even par** with the **technology**.*

Arnold Pacey

Evolution vs Revolution

- The most successful technology innovations have been evolutionary in nature.
- The "grammar of schooling" is tenacious and must be reckoned with. (Tyack/Cuban)
- The most successful educational reforms and innovations have been those that have been:
 - (1) structural add-ons to existing schooling;
 - (2) noncontroversial;
 - (3) supported by influential constituencies;
 - (4) required by law.

Consider



Knowledge is the Business of the University

- *Information Glut* - Neil Postman
- Information is not knowledge.
- Knowledge, understanding what it is, and how to create it, is the ultimate goal of the university.
- Technology should be focused on assisting in this activity.

Universities Serve a Social Function

- In 2005 3.1 million students enrolled in online learning courses, will triple to 9.8 million in 2012.
- Currently, there are 4276 institutions of higher education in the United States, 200 more than in 1998.
- In 1998, there were 14.5 million students enrolled in higher education; in 2008 16.1 million; in 2012 there will be 18 million.

Our central value is people and the human experience of faculty working with students in classrooms and laboratories, and students learning from each other in the kind of intensive environment we create in our residential university. Charles Vest

Content, Method, Media

- Content
 - What do I want my students to know?
- Method -
 - What type of knowledge do I want my students to have?
 - What activities need to occur to construct this knowledge?
 - How will I know when I have achieved it?

Methods/Strategies

Learner Centric Teaching

Distributed Learning

Democratized Classroom

Collaboration

Authentic Assessment

Constructivism

Problem Based Learning

Inquiry Based Learning

Lecture based teaching

Peer Assessment

Project Based Learning

Content, Method, Media

- Content
 - What do I want my students to know?
- Method -
 - What type of knowledge do I want my students to have?
 - What activities need to occur to construct this knowledge?
 - How will I know when I have achieved it?
- Medium -
 - In what environment can my method and content be communicated best?
 - What technologies can assist my instructional method and acquisition of knowledge?

Content, Method, Medium

Smart people have said for decades that personal computers, laptops, and hand-held devices are only vehicles for transporting instructional methods; machines are not what teachers do in classrooms. Teachers ask questions, give examples, lecture, guide discussion, drill, use small groups, individualize instruction, organize project-based learning, and craft blends of these teaching practices.

Larry Cuban

What Are the Similarities to the Past?

- It is not about the technology
- Evolution vs. revolution.
- Universities are in the knowledge creation business.
- Universities serve an important social function.
- Curriculum transformation = content, method, and medium

What *is* Different Today?

Digital Ubiquity or Singularity

- 83% of all US households have broadband Internet access
- Worldwide there are 300 million people who can access the Internet wirelessly
- Current global ownership of mobile computers is at 40%
- Currently, 53% of all United States households will own a laptop

Content Abundance

- OCW - One million viewers a month
- Google Book Search Project - 32 million books/eight years
- Harvard/Yale - Open access to faculty knowledge
- iTunes U - millions of unique viewers each month

Digital Native

- Technology *is* an environment
- Continuous *partial attention* or *attentional deployment*

The difference in how “digital natives” view, think, and interact with technology is perhaps the most profound change that today’s higher education institution must take into account.

Mark Prensky

Pew/Internet Online Video Study 2009

- 62% of the online public has used the Internet to watch or download video
- Three in four young viewers watch or download video on a typical day
- Three in four young viewers view video with others
- The majority of these viewers do not pay to access online video

ECAR Study on Undergrads and IT 2009

- 51% agree or strongly agree that IT in courses improves learning
- Respondents spend an average of 21 hours per week online
- 87% of all students report using a social networking site on a regular basis
- 91% of all students report using a CMS during their time at university

Today's Student

ECAR Study on Undergrads and IT 2009



98%

own computers

88%

own notebooks

27%

bring them to class

Why?

not necessary

not supported

ECAR E-Books in Higher Education

College Students	Research	Textbook	Leisure
Print Book	56.3%	67.5%	80.1%
eBook	24.5%	18.5%	2.6%
No Preference	13.2%	7.9%	11.3%
No Response	6%	6%	6%
College Faculty			
Print Book	80%	92%	92%
eBook	8%	0%	0%
No Preference	8%	4%	4%
No Response	4%	4%	4%

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From Scarcity to Abundance

Knowledge Distribution Pre-Post Internet

Pre-Internet	Post-Internet
Scarcity	Abundance
Limited Distribution	Limitless Distribution
Slow Process	Immediate Process
High Cost	Low Cost
Needs Dedicated Means of Production	Uses Widely Available Technology
Cedes Control	Retains Control
Text	Text, Audio, Video

What *is* Different Today?

- Digital technology is ubiquitous.
- The Internet provides a global platform with seemingly limitless access to information.
- Content is abundant; information and knowledge are plentiful; access is at little to no cost.
- Students are extremely comfortable and facile in the digital world, they are “native” to it, and expect it to permeate all aspects of their lives.

21st-Century Knowledge Distribution

University of Southern California






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SEARCH

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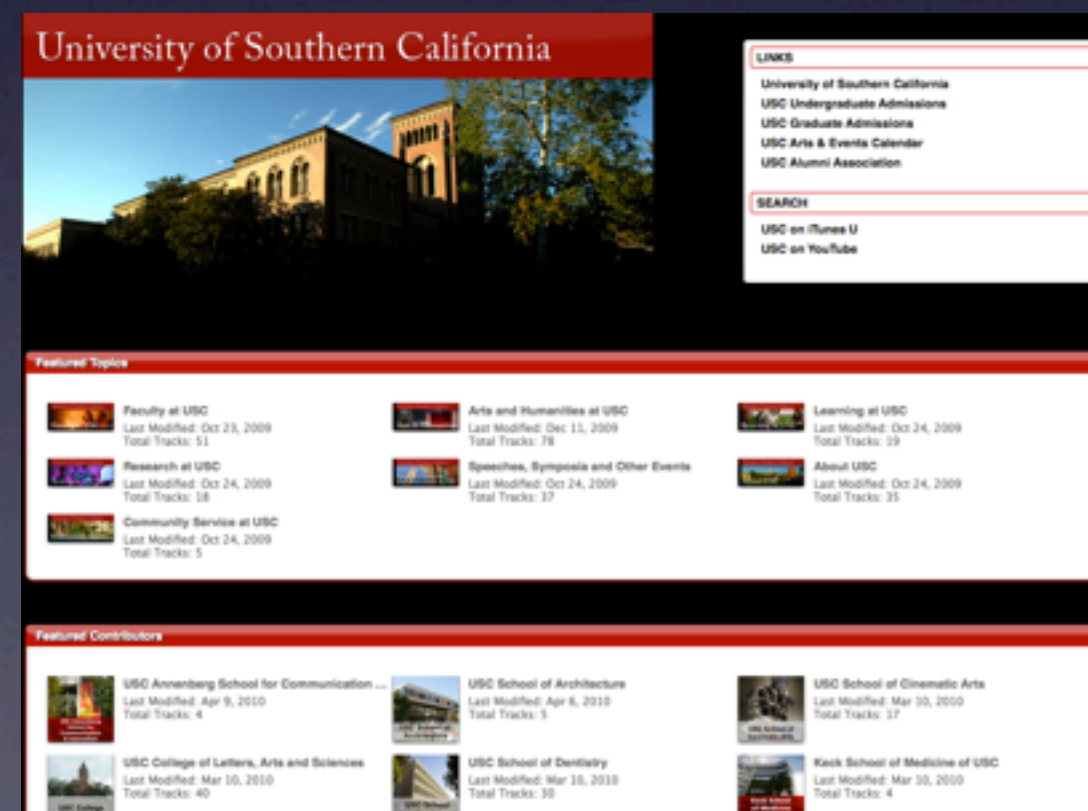
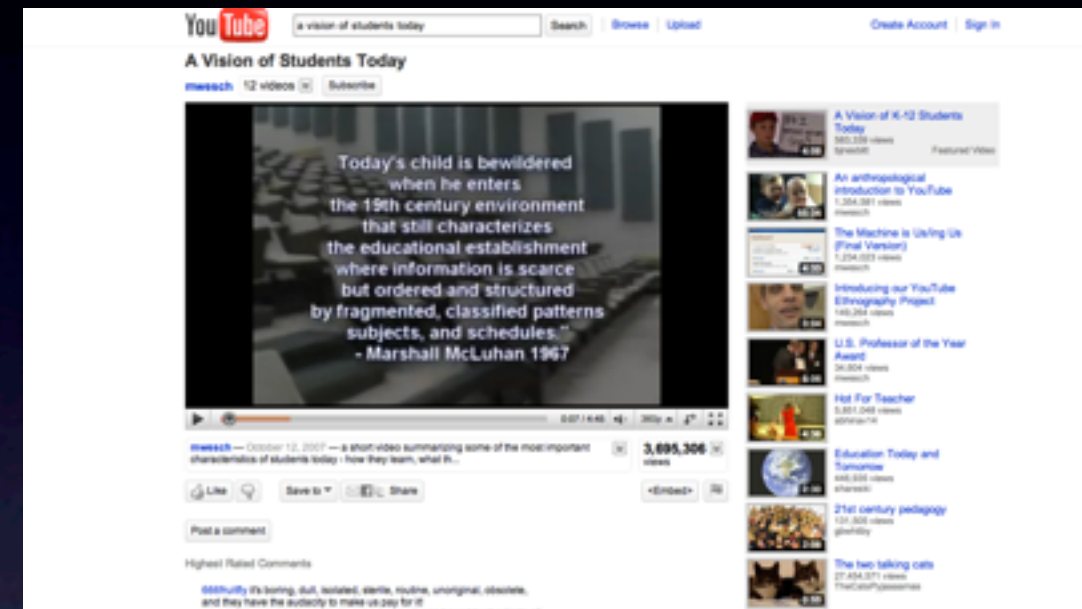
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The Medium is The Message?



The background of the slide is a photograph of an empty lecture hall. Rows of wooden seats with attached writing tablets are visible. The writing tablets have numbers written on them in a light-colored paint or chalk. Some of the visible numbers include 113, 118, 119, 117, 116, 115, 114, 113, 112, 111, 110, 109, 108, 107, 106, 105, 104, 103, 102, 101, 100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1. The text is overlaid on the image in a white, sans-serif font.

What is a learning space:
in an environment where students can interact
without being physically present in the same
space?
in a world where access to information is
ubiquitous?