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THINKING OF THE WORLD

Enhancing Student Engagement in eLearning: A Theoretical Perspective

Dr. David M. Kaufman, Professor
Faculty of Education, Simon Fraser University
Presented April, 2012 at CSEDU
Porto, Portugal
dkaufman@sfu.ca

Outline

- Rationale
- Theory
- Practical examples

==========

- Breadth rather than depth
- Two parts to this presentation:
  1. This talk
  2. Your self-directed learning after the talk

About this Presentation

Why change our current teaching approaches?

1. Critiques of ‘traditional’ teaching
2. Net generation learners
3. Learning theories
4. Research evidence

Many examples will be given

Four Critiques of Traditional Teaching

1. Learners are dissatisfied

"My greatest concern is that the courses I teach will be as boring as the courses I took."

- A faculty member

2. Learners skip through courses

"Students strive to finish their coursework as quickly as possible, with little attention to mastery of the actual course material and most attention on their final grades."

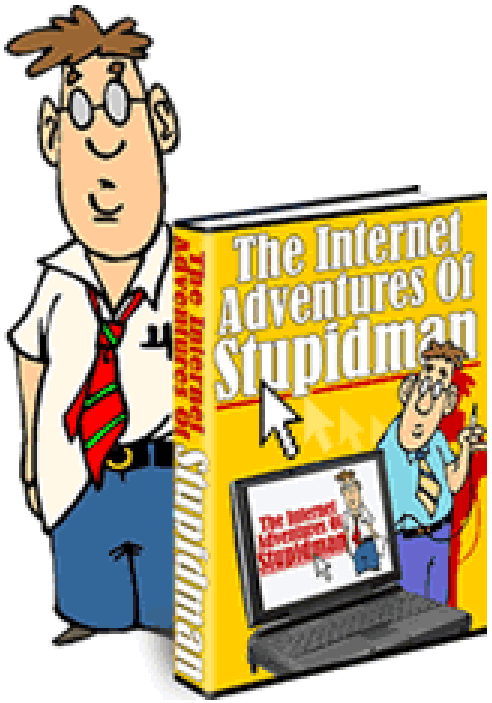
– a faculty member

3. Traditional teaching is not active nor interactive

"What keeps me up at night is the rush to write out my lectures, so that I can 'cover' as much material as possible."
– a faculty member

4. Traditional teaching ignores what we know about effective learning

"I'm not a psychologist so I don't know much about how people learn. I teach the way I was taught"
– a faculty member



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Engagement

Engagement

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If engagement *in learning* is our goal, then…

Student activities should involve active cognitive processes:

- problem-solving
- reasoning
- decision-making
- evaluation

Students should be intrinsically motivated to learn from activities that are meaningful to them

But who are today's students?

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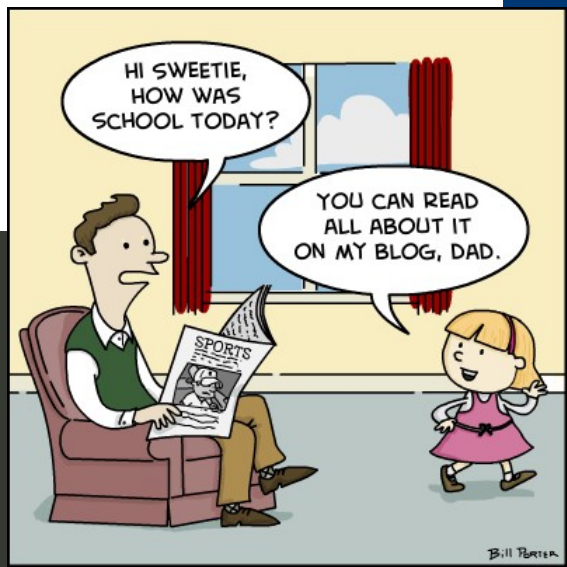
Who are today's learners?

Net Generation Learners

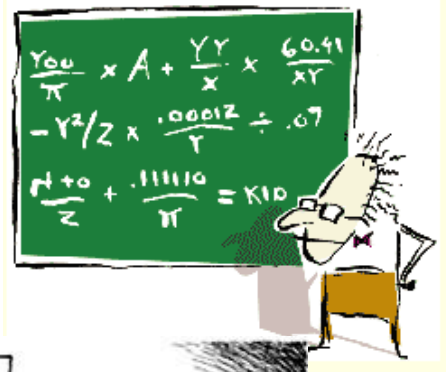
1. **Millennials**: Howe and Strauss (2000)
2. **Generation Y**: (or Gen Y): Nader (2003)
3. **Generation Z**: Tapscott (2009].)
3. **Echo Boomers**: Tapscott (1997, 2009).
4. **Net Generation** (or **Net Geners**): Tapscott (1997).
5. **Trophy Generation** (or **Trophy Kids**): Alsop (2008b; Tulgan (2009)
7. **Dot.Com Generation**: Stein & Craig (2000).
8. **Digital Aboriginals**: Tarlow and Tarlow (2002).
9. **Nexters**: Zemke: Raines, and Filipczak: (1999).
10. **Digital Natives**: Prensky (2001a, 2001b, 2006).



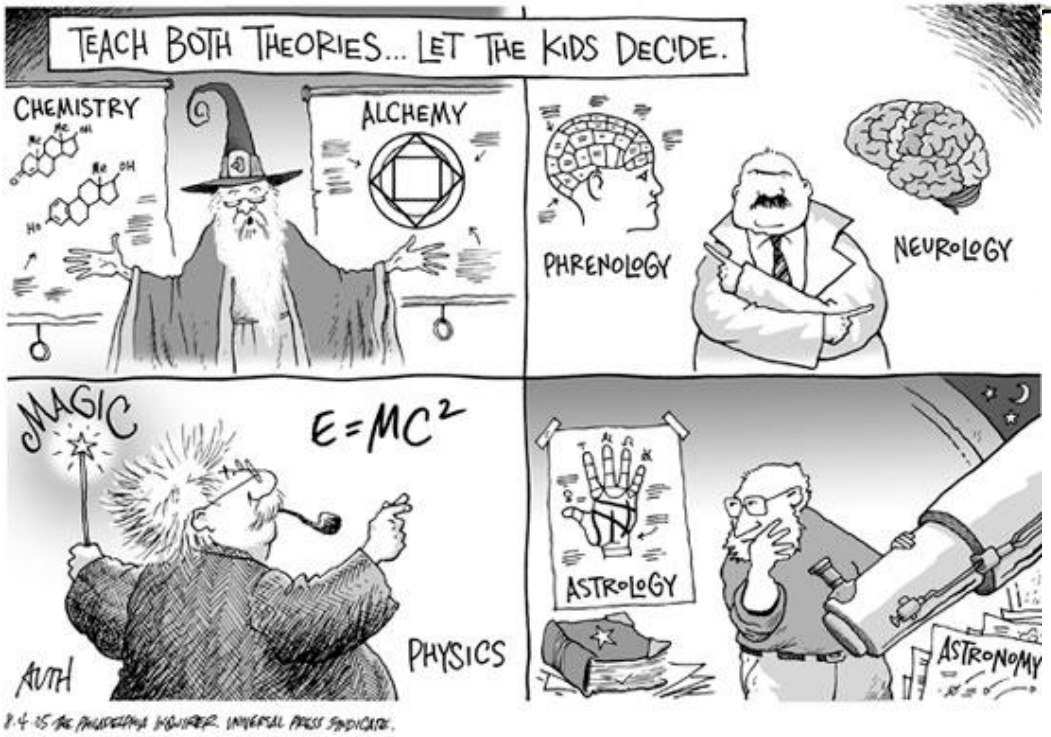
Some Characteristics of Net Geners

1. Technology skilled
2. Rely on search engines for information
3. Interested in multimedia
4. Like to create Internet content
5. Learn by discovery / trial and error
6. Multitask on everything and have short attention span
7. Crave social interaction and prefer teamwork and collaboration.

9)



Learning Theory



Elements of Motivation

- Curiosity
- Relevance
- Expectancy of success (confidence)
- Satisfaction

Adapted from John Keller

www.arcsmodel.com/doc/Shellnut.pdf

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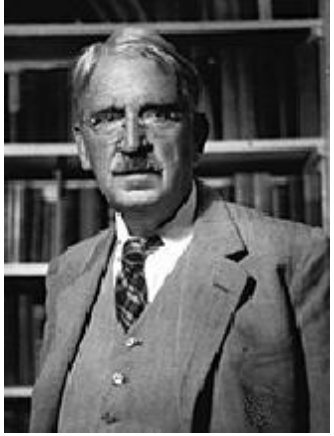
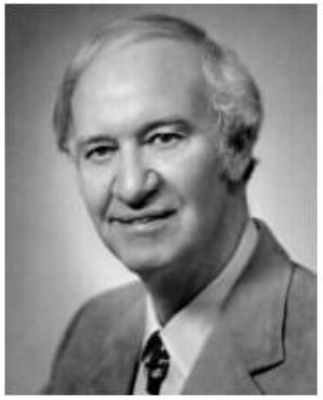
Some Learning Theories Applied in Education

- Social Constructivism
- Experiential Learning
- Adult Learning Principles
- Reflective Practice
- Social Cognitive Theory/Self-Efficacy
- Communities of Practice

Kaufman, DM & Mann, KV (2007; 2010)



John Dewey

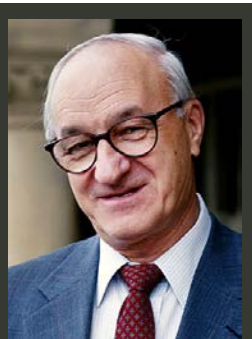


Malcolm Knowles

Lev Vygotsky

Maxine Green

Albert Bandura



Some Principles Derived from Theories (1/2)

1. Learning is an active, rather than a passive mental process.

2. Learners should develop their own understanding through self-directed learning, combined with dialogue with their teachers and peers.

3. Learners should be given some challenging tasks they can't solve independently, and then work on these with more capable teachers or peers.

Some Principles Derived from Theories (2/2)

4. Learning should be closely related to the understanding and solution of real-world problems.

5. Learners should practice, accompanied by reflection, self-assessment and constructive feedback from their teachers and peers.

6. Learners should be included in a ‘Community of Practice’ (CoP) involving their peers, more senior learners, teachers and others.

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Research Evidence about Learning-Centered Teaching

American Psychological Association's

Learning-centered psychological principles

www.apa.org/ed/governance/bea/learner-centered.pdf

Research Evidence

APA Learning-Centered Psychological Principles (1997)
(2 key ones)

1. Nature of the learning process.

The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.

2. Social influences on learning.

Learning is influenced by social interactions, interpersonal relations, and communication with others.

www.apa.org/ed/governance/bea/learner-centered.pdf

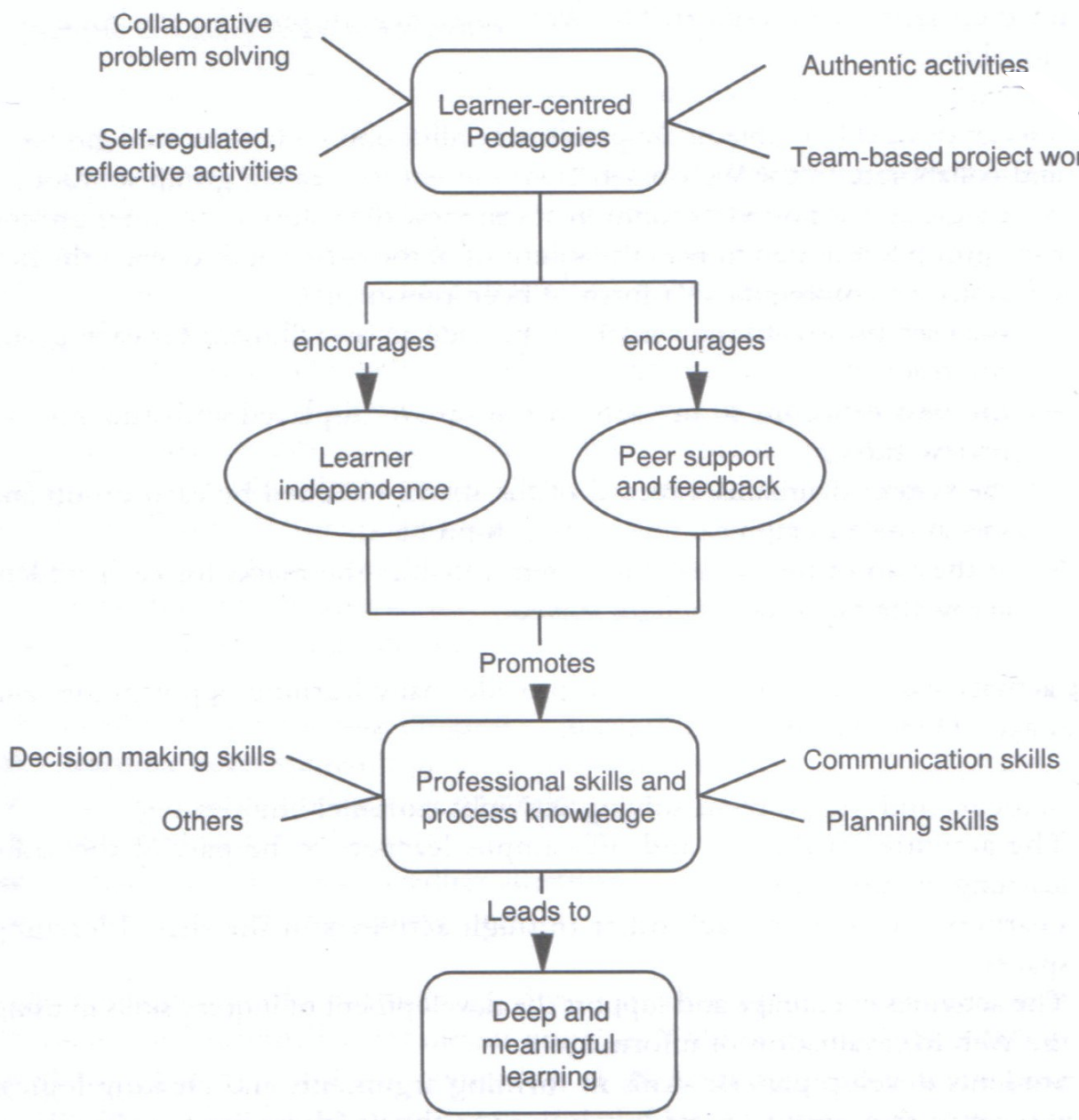


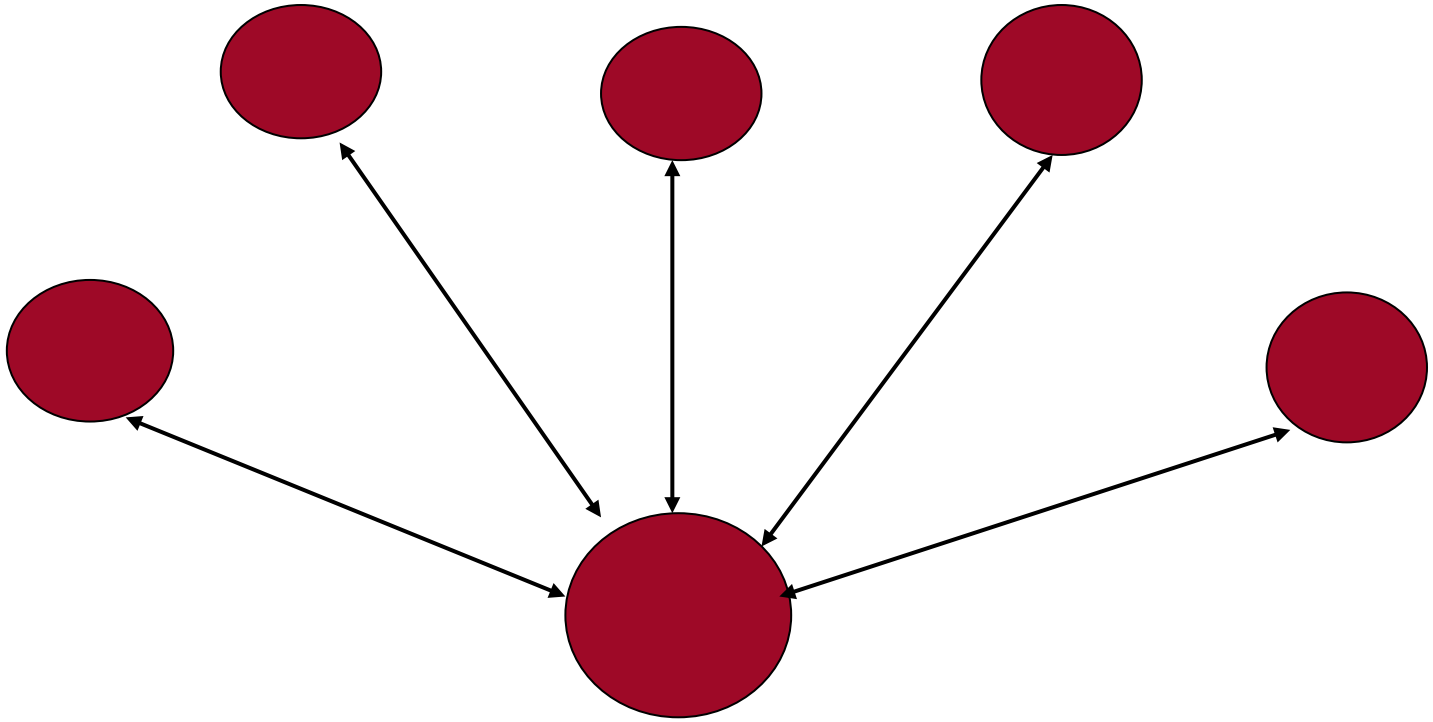
Figure 13.4 *Student assessment process in a networked peer learning task (McLoughlin and Luca, 2001)*

A Nice Overview

- **Use collaborative activities**
  e.g., cooperative learning structures such as think-pair-share, jigsaw, roundtable, value line
  www.literacynet.org/icans/chapter01/overview.html
- **Assign group and individual challenges**
  e.g., Cases, problems, team projects, competitions
- **Integrate technology appropriately**

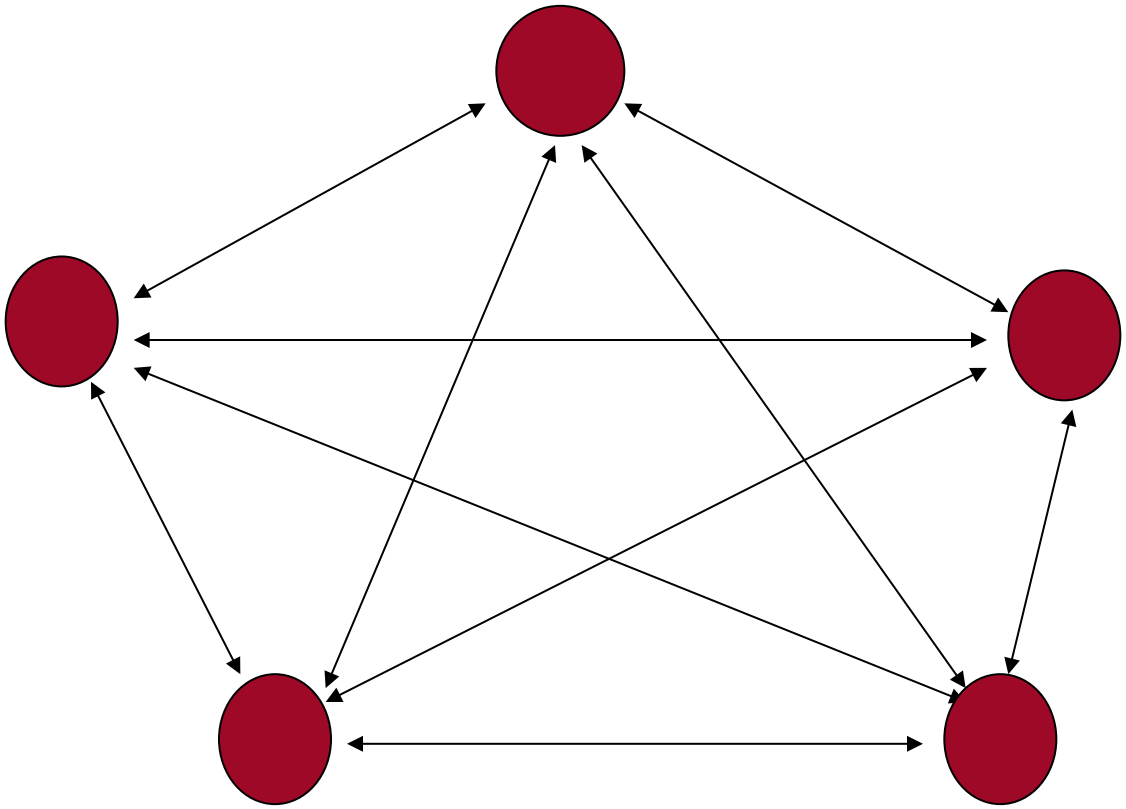
What is 21st century eLearning?

Teacher-directed



Teacher-directed vs student-centered teaching

Student-centered



Teacher-directed vs student-centered teaching

Don’t discard lectures…

Discuss the question below for one minute with your partner

I will ask a few of you for your answer

What’s the benefit of a good lecture?

1. Provide an overview of your field
2. Explain difficult concepts
3. Model your thinking
4. Inspire students

But keep your lectures short or interactive!

What's the benefit of a good lecture?

Use collaborative activities

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Write down one or two questions

"I'd like you to write down one or two questions you have at this point. Get the question exactly right so that it addresses what you are really interested in or confused about."

"Take the questions you have written down and ask them to other students in the forum until you have satisfactory answers."

- **Discuss a question**

"In pairs, discuss the following question online."

Collaborative activities you can easily use in your online teaching

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Think-Pair Share (online)

1. Think about the following question
2. Discuss the question with your online partner(s)
3. Post your answers in the class forum

Easy collaborative activities you can use in your online teaching (2)

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- Kagan and Kagan (1998) developed roughly 200 classroom "structures", which may be thought of as steps to classroom activities.
- The structures have various aims, such as: building team cohesion and positive relationships among students; information sharing; critical thinking; communication skills; and mastery (learning/remembering) of specified material.
- Many of the structures can fulfill a number of aims simultaneously, depending on how the teacher uses them.

Cooperative Learning Structures

Structure	Brief Description	Functions (Academic & Social)
Roundrobin	**Teambuilding** Each student shares something with his or her teammates, by going around in a circle.	Expressing ideas and opinions, creation of stories. *Equal participation getting acquainted with teammates.*
Jigsaw	Each student on the team becomes an "expert" on one topic by working with members from other teams assigned the corresponding expert topic. Upon returning to their teams, each one in turn teaches the group; and students are all assessed on all aspects of the topic.	Acquisition and presentation of new material, review, informed debate. *Interdependence, status equalization.*

Selected **Cooperative** Learning Structures

Assign Group Challenges

Problem-Based Learning

PBL

One example

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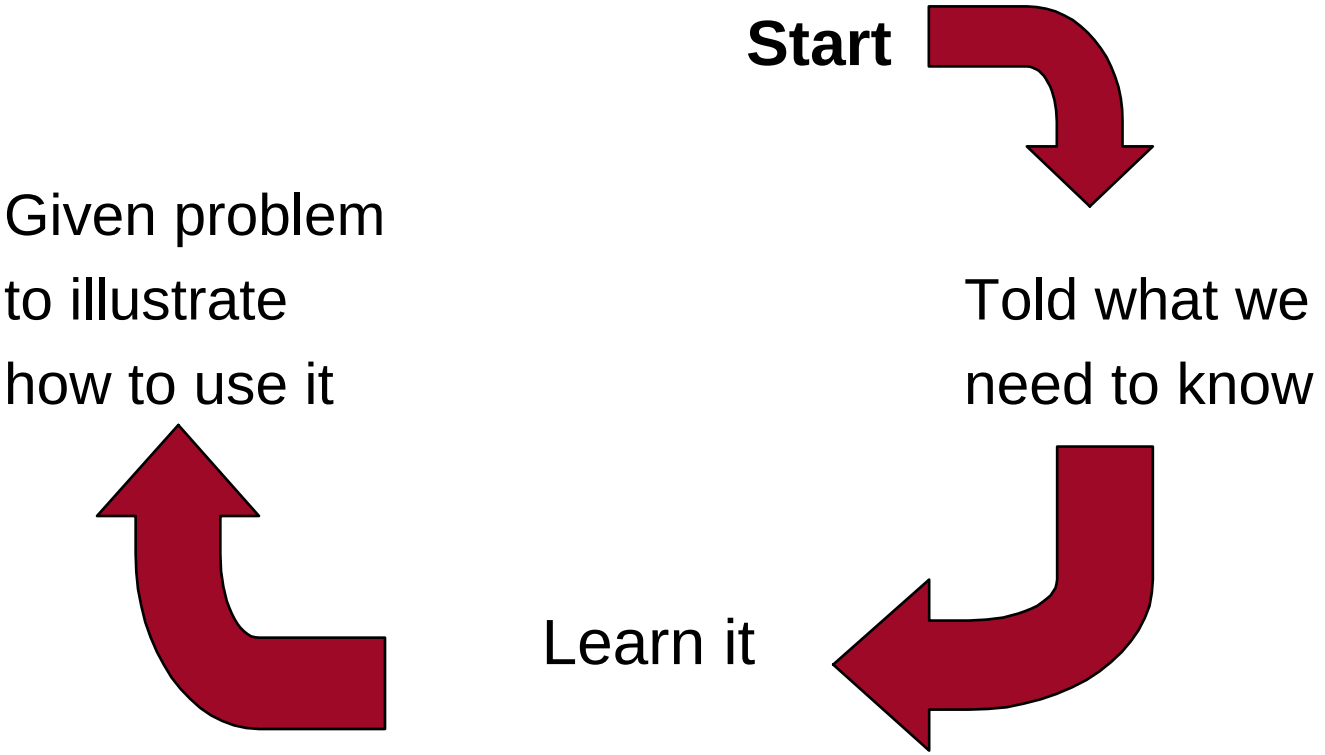
Subject-Based Learning: SBL



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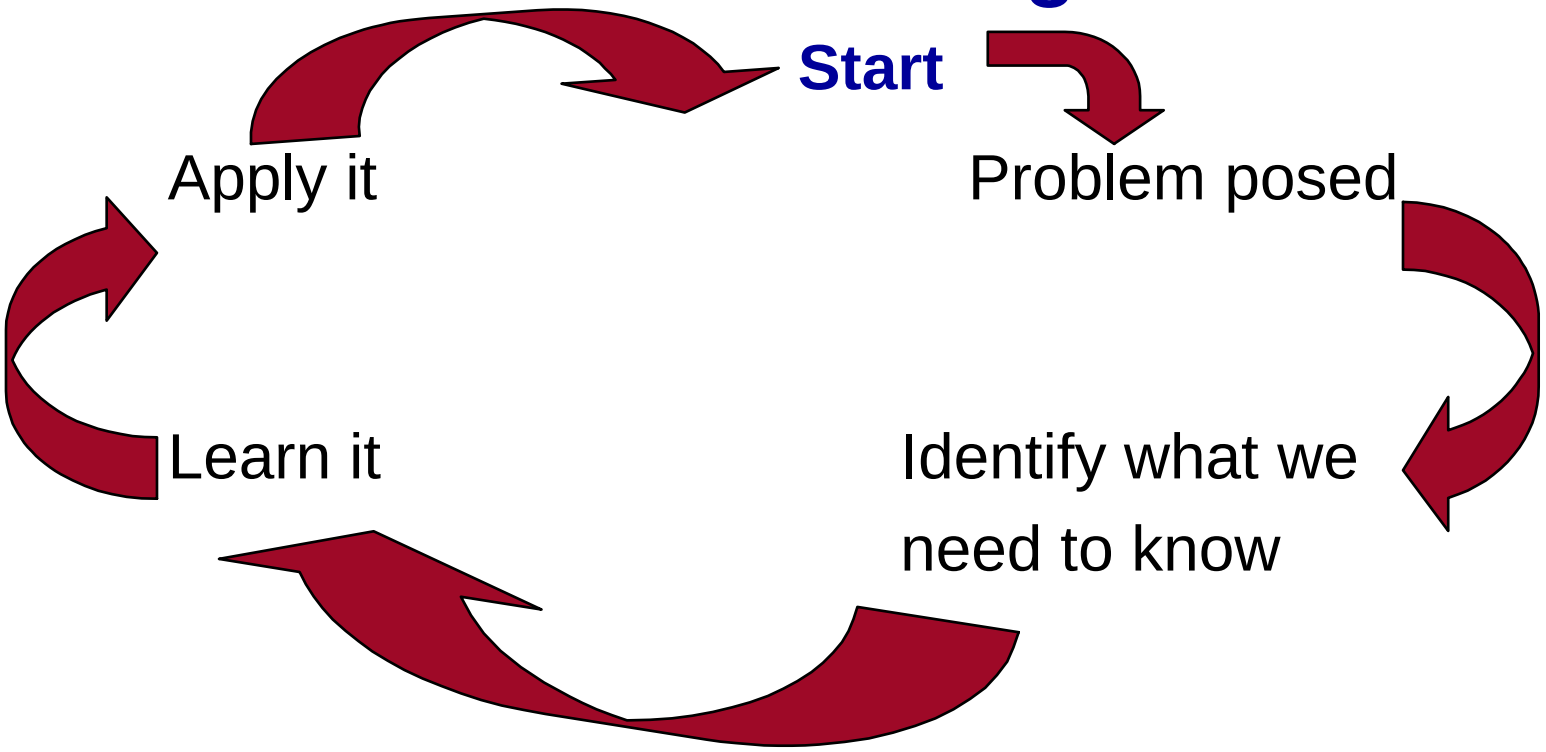
Problem-Based Learning: PBL



Many other examples will be shown later

Use Technology Appropriately

Use technology in lectures, demos, activities, assignments

Examples:

1. Music, podcasts, video, games, blogs, wikis, search engines, databases
2. Consider multiplayer virtual environments
3. Include simulations & games

Adapted from Berk (2009)

How do we enhance engagement and learning for ‘net geners’?

http://cgi.sfu.ca/~lectures/pub_html_podcasts/cgi

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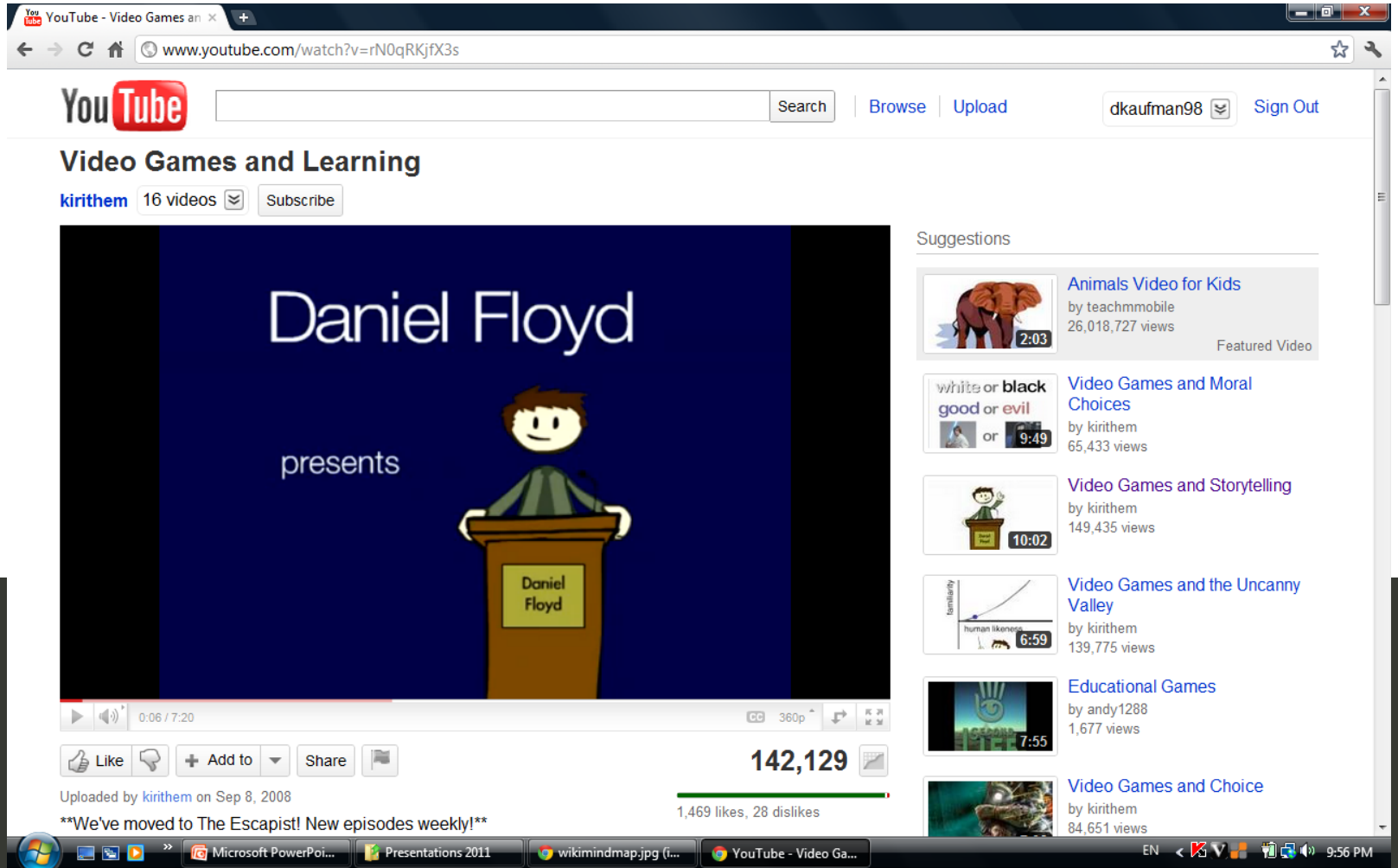
Videogames and Tangential Learning

www.youtube.com/watch?v=rN0qRKjfX3s



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Ted Talks

Ken Robinson; Changing Education paradigms

Creativity expert Sir Ken Robinson challenges the way we're educating our children. He champions a radical rethink of our school systems, to cultivate creativity and acknowledge multiple types of intelligence.

www.cccone.org/node/393

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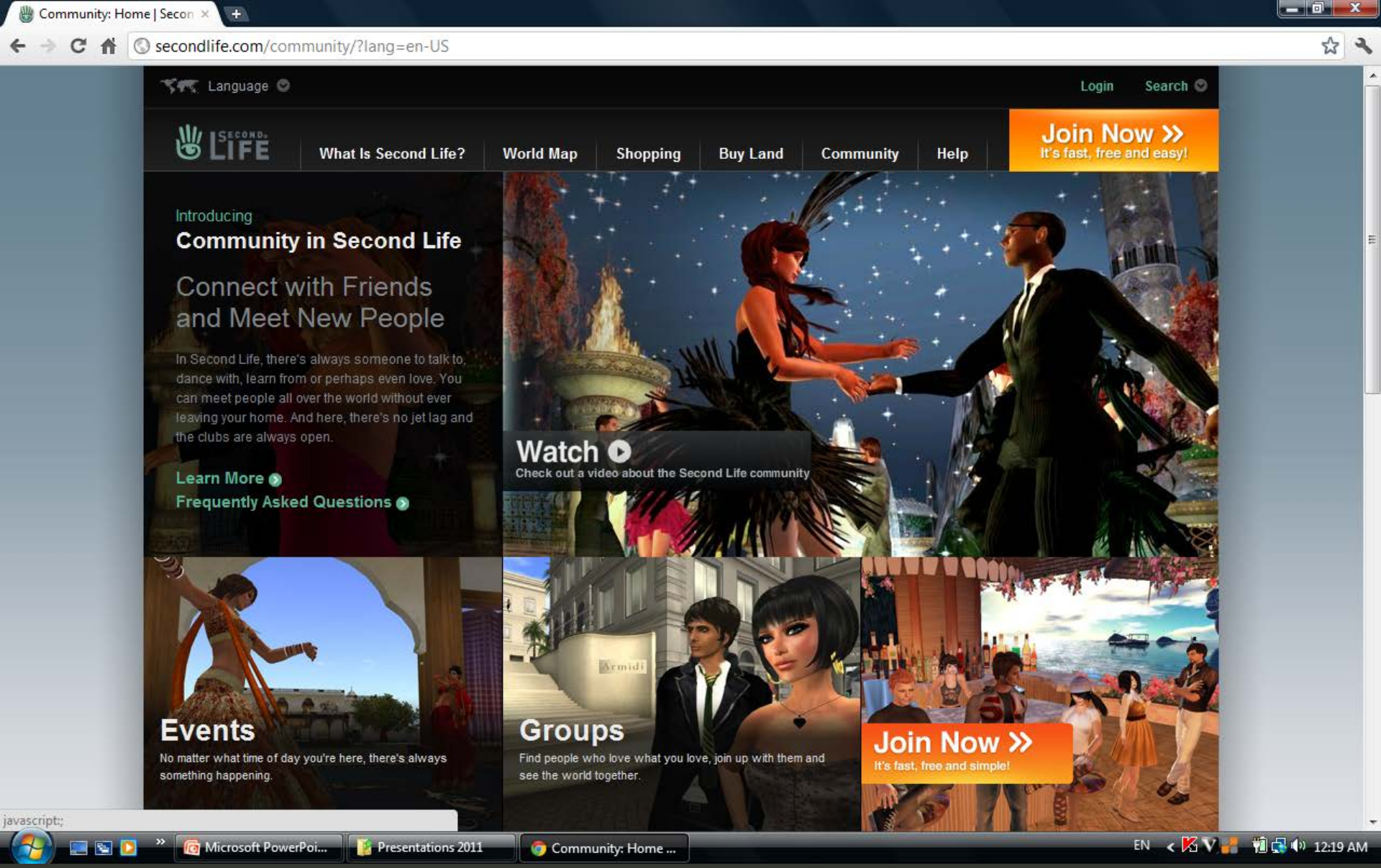
http://secondlife.com/

Avatar

What is an Avatar?

You may have heard the term "avatar" from friends, on the Web or in the news. For example, there's the James Cameron-directed movie "Avatar" and a popular animated TV show "Avatar: The Last Airbender." But, what exactly is an avatar in Second Life? In a virtual world, an avatar is a digital persona that you can create and customize. It's you — only in 3D. You can create an avatar that resembles your real life or create an alternate identity. The only limit is your imagination. Who do you want to be? **Create your avatar in Second Life by signing up now »**

https://join.secondlife.com/?lang=en-US



http://secondlife.com/community/?lang=en-US

Rely on Search Engines for Information

Provide assignments that rely on search engine skills

Give guidance on how to think critically and interpret the information (information literacy)

Examples:

1. **Webquests**
2. **Problem-solving**
3. **Writing papers requiring online searching**

How do we Enhance Engagement for Net Geners?

Information literacy is important

Webquests: A Taxonomy of Tasks

Design tasks	Powerpoint or report
Compiling tasks	Virtual exhibition
Mystery tasks	Solve a mystery
Journalistic tasks	Report on an event
Scientific tasks	Design a home
Study a webcam site	

Many others

See http://webquest.sdsu.edu/taskonomy.html

Porto facts

http://en.wikipedia.org/wiki/Porto

Porto video

http://www.youtube.com/watch?v=re4_9blE4ts

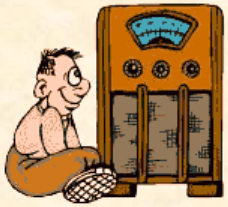
Porto information

http://www.travel-in-portugal.com/Porto/

Webcam for Porto

http://www.truelookcams.com/portugal/porto/32359-porto-portugal

Porto Resources



Radio Days: A WebQuest

http://www.thematzats.com/radio/index.html

By Cynthia Matzat

Introduction | Task | Resources | Process | Evaluation | Conclusion

Introduction

Back before there were televisions and computers, there was radio. Families of the 1930s and 1940s would gather around the radio and listen to their favorite programs such as *Little Orphan Annie, Amos and Andy, The Guiding Light*, and *The Shadow*. Millions of Americans tuned in daily to their favorite programs, just as today we tune in to our favorite television shows. Radio allowed the listener to create their own images of characters and settings, a luxury that we no longer have in these days of television. Take a journey back to the "Golden Age of Radio" as you learn about Radio Days.

Top

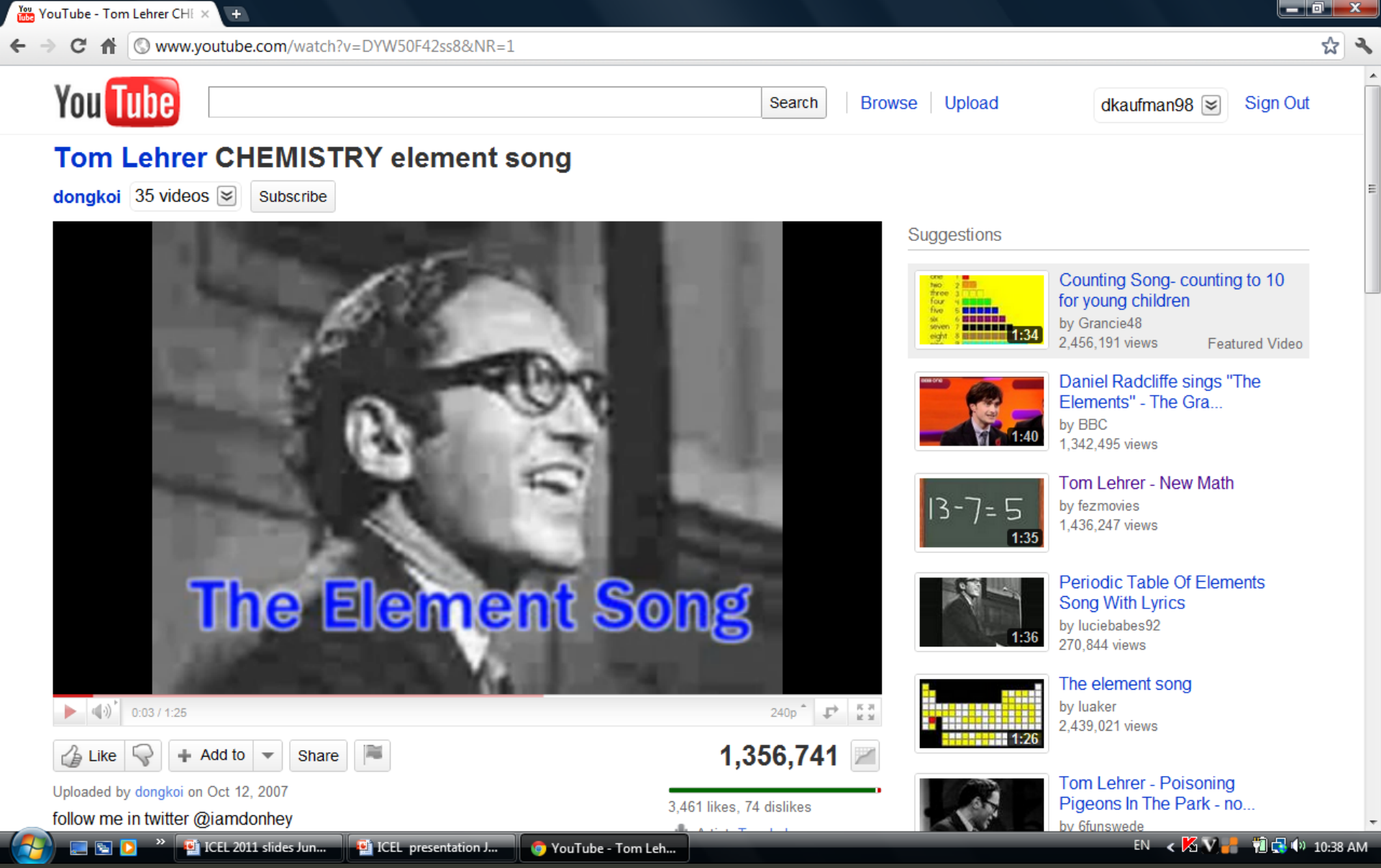
The Task You are an employee of a local radio station. Your boss, who grew up during the "Golden Age" of radio, has decided to add new programming to the station. He has assigned you and your co-workers the task of writing and producing a new radio drama. Your boss expects you and your co-workers to research the history of radio drama and use this knowledge to create a script for a new radio mystery/suspense series. He wants the script to contain references to sound effects as well as the actors' dialogue. In addition to the script,

www.thematzats.com/radio/index.html

- **Use multimedia in your presentations and activities**
- **Get students to share their favorites**

Examples: music, images, video, games,

How do we enhance engagement for Net Geners?



Music

Tom Lehrer Chemistry elements song

www.youtube.com/watch?v=DYW50F42ss8&NR=1

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Use interesting images in your presentations

Online Games

Game board for Asthma: 1,2,3… Breath!

www.savie.qc.ca/carrefourjeux2/Accueil_content_an.asp

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Create Internet Content

- **Provide students with opportunities to contribute to websites**

Examples:

1. **Write their own blogs**
2. **Create team wikis**
3. **Create YouTube videos, podcast, vodcasts with appropriate content**
4. **Create an e-Portfolio**

How do we enhance engagement for Net Geners?

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Animations

http://mashable.com/2010/10/27/create-animatior mashable.com

File Edit View Favorites Tools Help

MoodleEdD eBay Customize Links Suggested Sites Get more Add-ons Yahoo! Mail

6 Free Sites for Creating Your Own Animations

October 27, 2010 by Sarah Kessler

33

1,622 Tweet 7 +1 395 13 Pin it 15 Share tumblr email

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Ads by Google

Computer Animation Course - Part time or full time courses. Get real experience & real results.
bcit.ca/Computer-Animation

The long and illustrious history of moving pictures all started with the zoetrope. Then there was the thaumatrope, the flip book, and my personal favorite, the phenakistoscope. And now we have (drumroll please): The Internet.

People have been excited about moving pictures for ages. But achieving a passable animation has never been as easy or required as little talent as it does today.

Previously, we made some suggestions for sites where you can get your webcomic on. This week, we're bringing you five excellent ways to tackle animation, the next step in your pseudo-artistic journey.

1. GoAnimate

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Follow @mashable 2.8M followers

LinkedIn YouTube Stumble RSS

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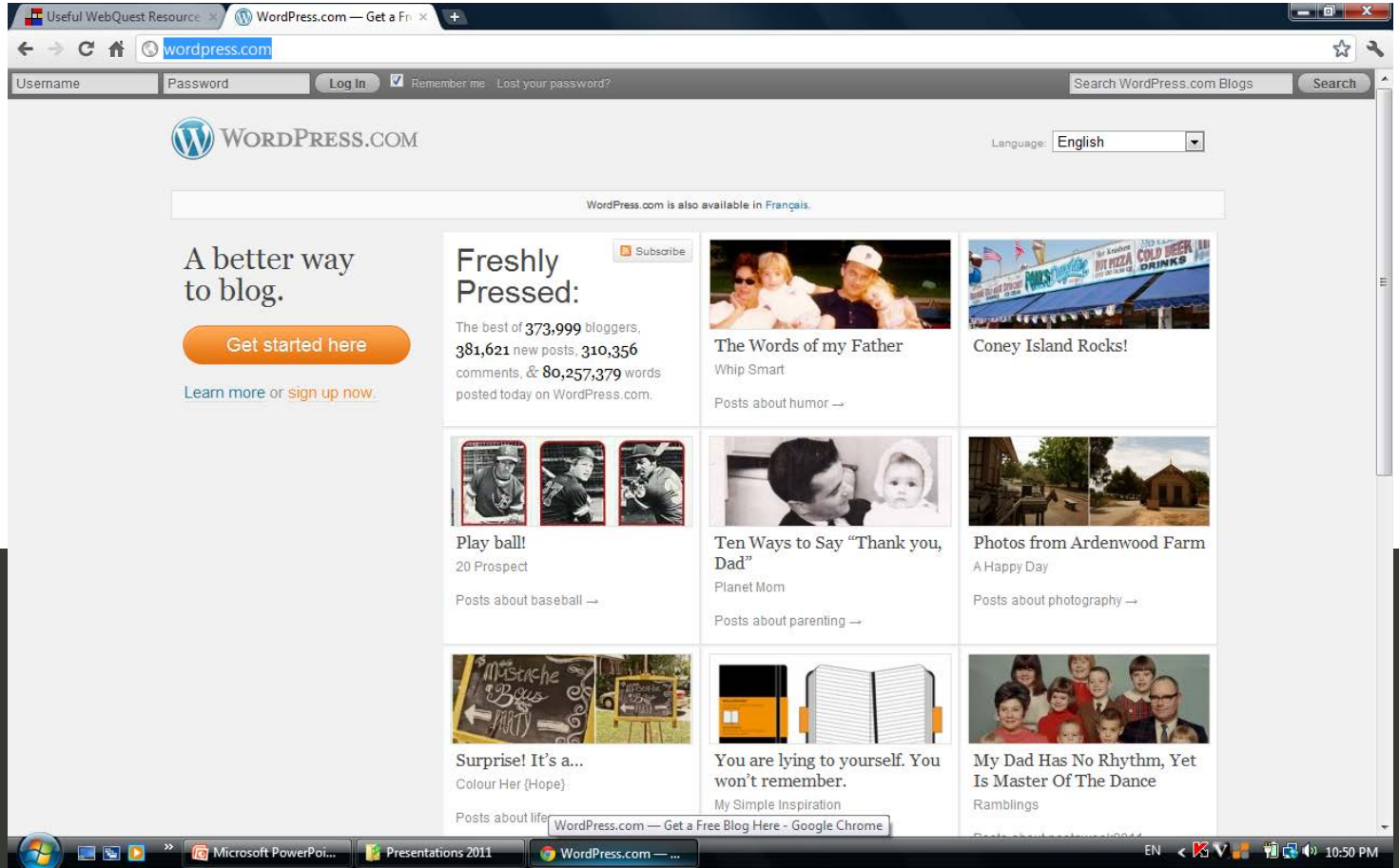
www.blogger.com

http://wordpress.com/



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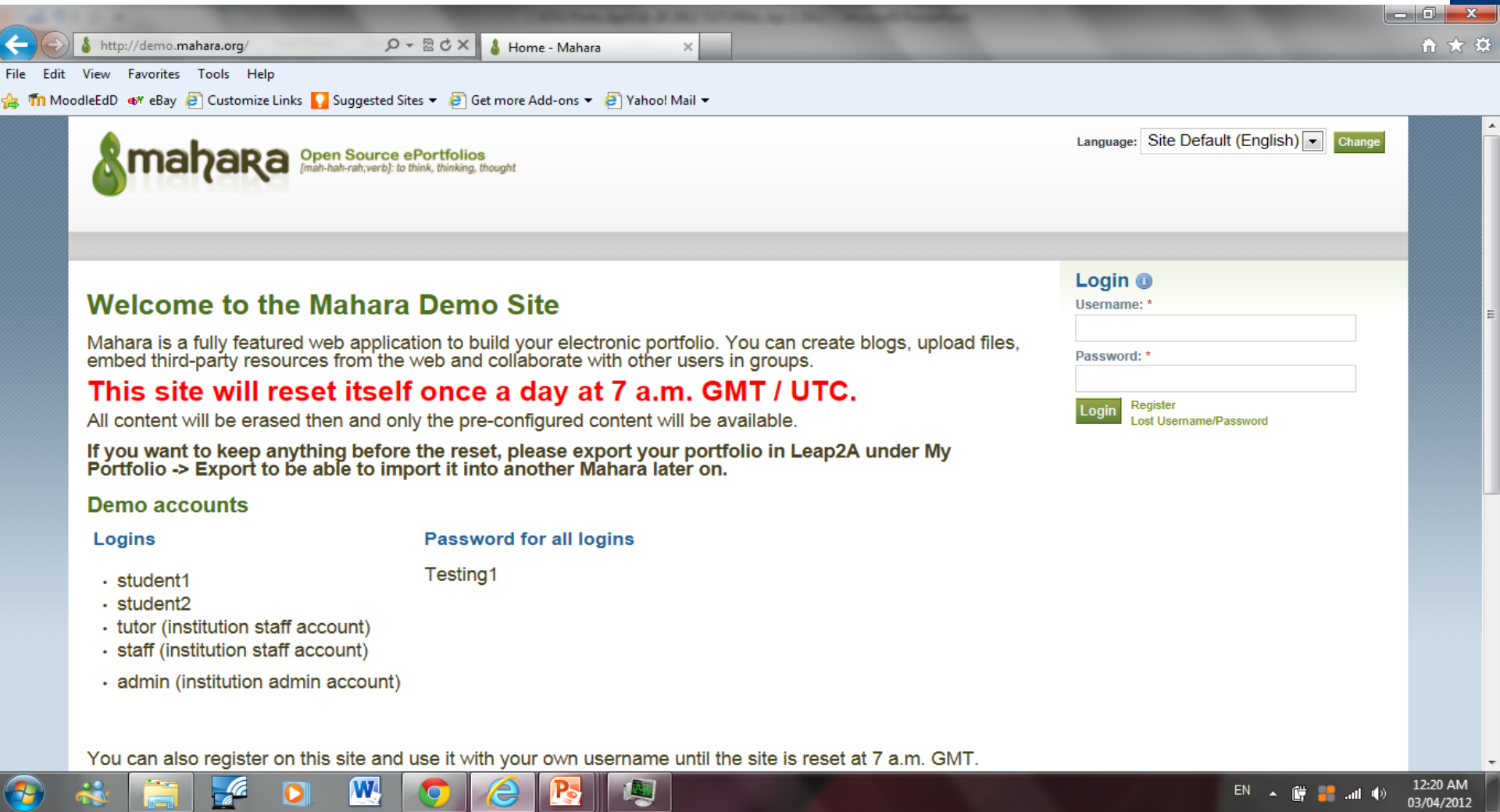
ePortfolios

http://demo.mahara.org/



Lady Gaga Music Blog | Far

www.ladygagamusicblog.com

LADYGAGA MUSIC BLOG

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Lady Gaga News

Lady Gaga becomes a 'billion-hit' artist

If you have watched any of Lady Gaga's online videos, you are part of this story. The controversial, and for some too racy, artist's online videos have recorded one billion hits making her a record breaker. The three videos on YouTube and Vevo that helped Lady Gaga set the record... [Read more]

Featured Music Video - Lady Gaga Bad Romance

Music - Lady Gaga Songs

ladygagamusicblog

Due to licensing restrictions, some or all tracks may be unavailable for playback in your country.

#	Title	Artist

www.ladygagamusicblog.com/lady-gaga-becomes-a-billion-hit-artist/

Microsoft PowerPoi... | Presentations 2011 | Lady Gaga Music Bl...

EN 10:11 PM

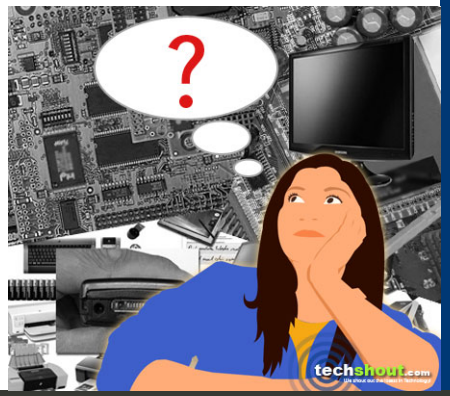
www.ladygagamusicblog.com

http://twitter.com/#!/BARACKOBAMA

- **Shorten your presentations and assign individual and group work**

Examples:

1. **Use cases and problems requiring problem-solving and/or decision-making**
2. **Use games and simulations**



How do we enhance engagement for Net Geners?

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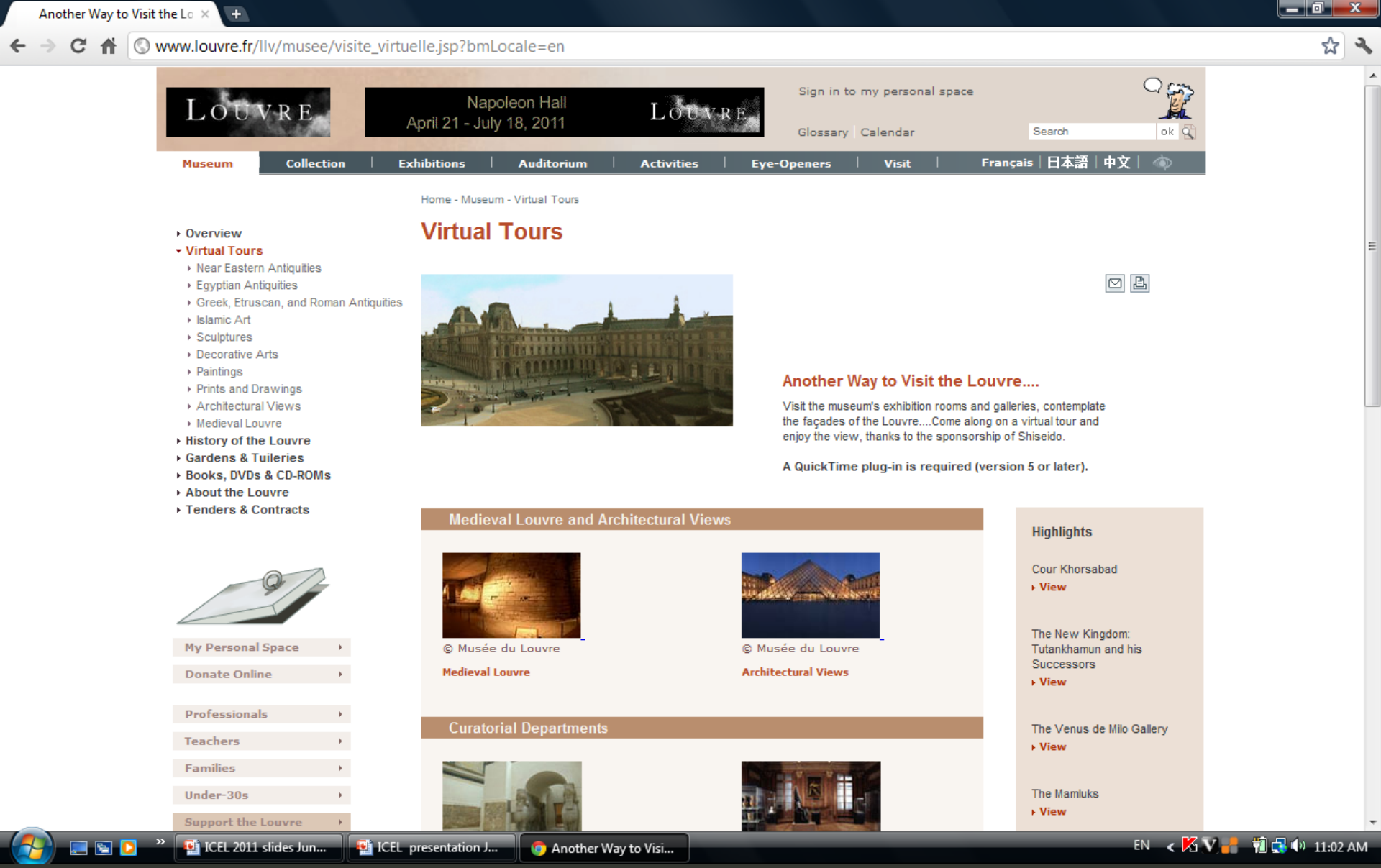
Online Simulations in Physics, Biology, Math, Chemistry- Virtual Labs

PHET at the University of Colorado

http://phet.colorado.edu/

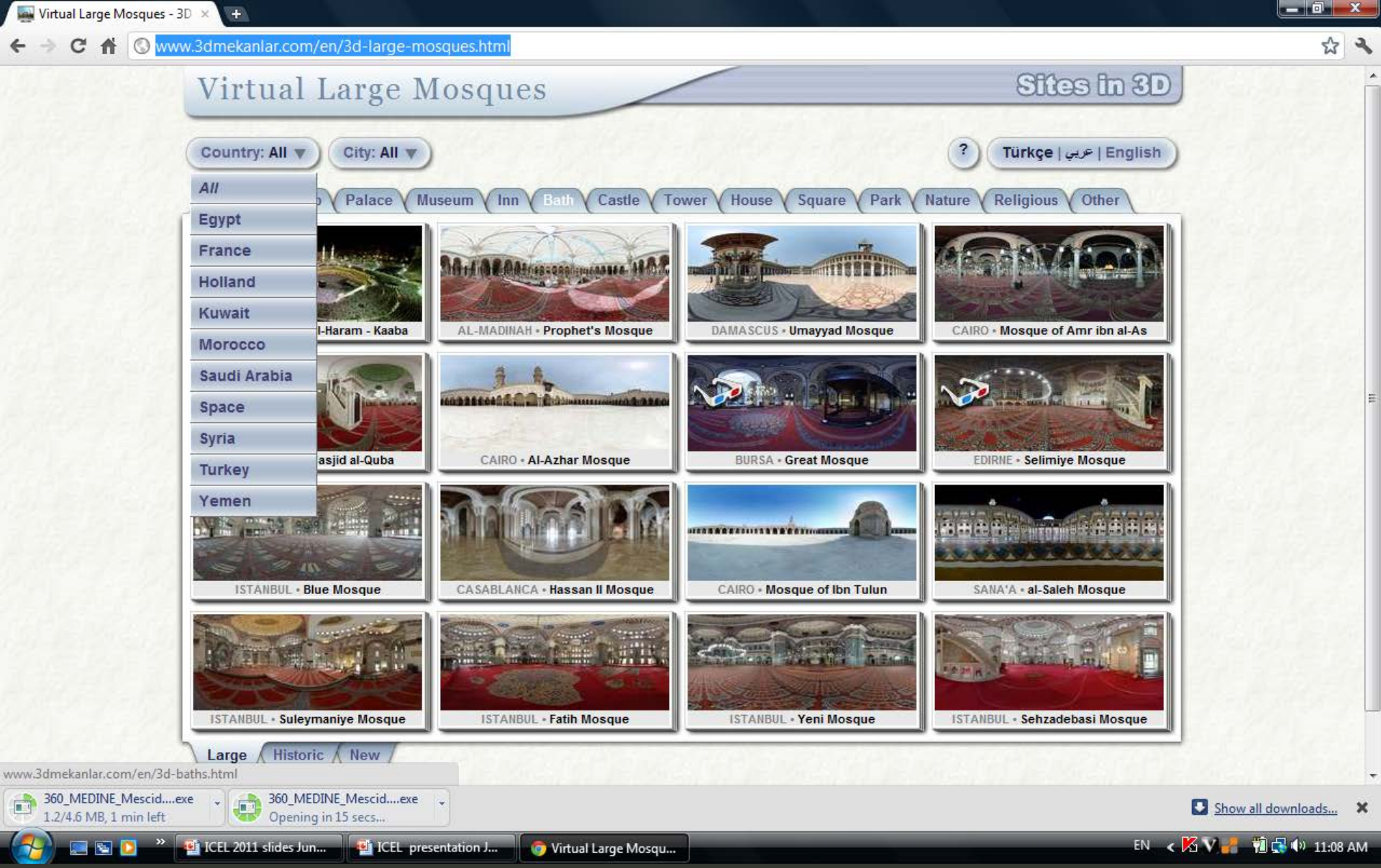


Virtual Tour of the Louvre

www.louvre.fr/llv/commun/home.jsp?bmLocale=en

Virtual Tour of Oxford

www.chem.ox.ac.uk/oxfordtour/



www.3dmekanlar.com/en/3d-large-mosques.html

- Digital storytelling

http://www.storycenter.org/

- Concept mapping

http://en.wikipedia.org/wiki/List_of_concept-_and_mind-mapping_software

Other Artifacts to Create

http://www.storycenter.org/ Center for Digital Storytellin...

File Edit View Favorites Tools Help

CENTER for DIGITAL STORY TELLING

We surface authentic voices around the world
through group process and participatory media creation.

Our programs support people in sharing and bearing witness to stories
that lead to learning, action, and positive change.

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What's New

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50% off in April and May

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Upcoming Workshop Highlights

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Digital Storytelling

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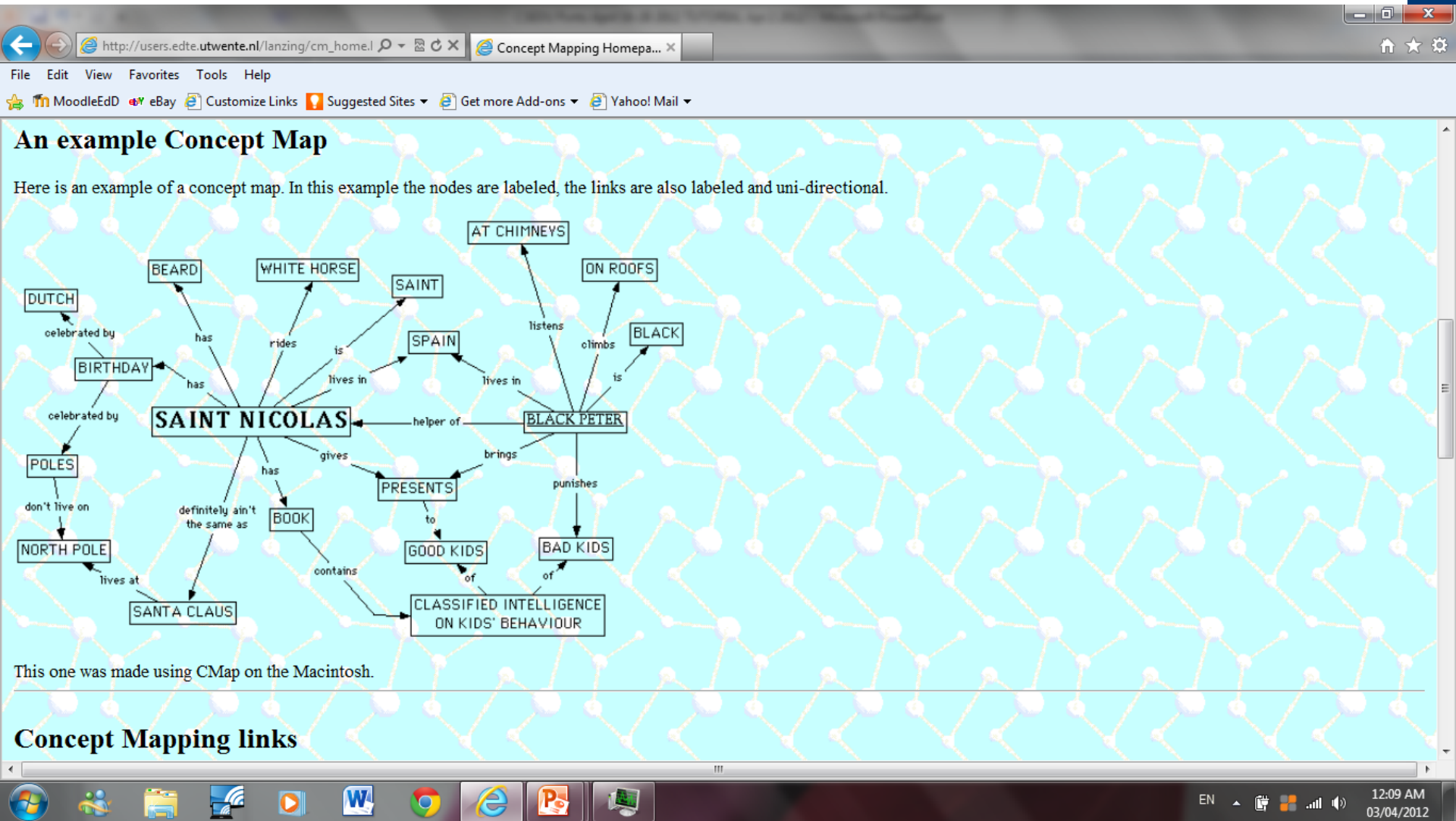
Concept Mapping

http://users.edte.utwente.nl/lanzing/cm_home.htm



Handheld game machines

http://mediadesign.sfu.ca/portfolio/?link=28

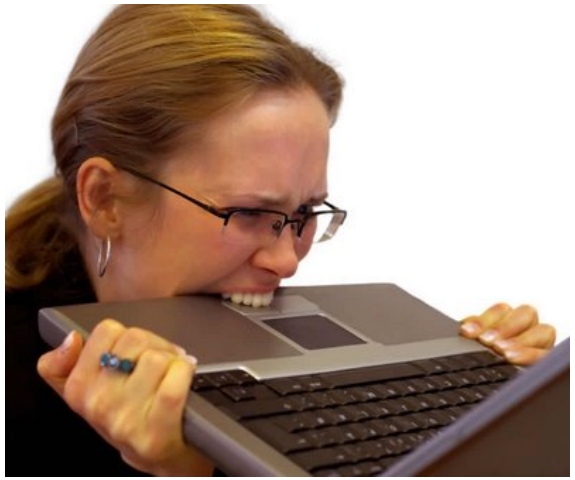
Biofeedback

http://mediadesign.sfu.ca/portfolio/?link=27

Mobile devices (e.g., smartphone, iPod)

www.youtube.com/watch?v=w7bsOdbhZWI&feature=related

Some New Technologies



The 21st Century Teacher

There are MANY possibilities for enhancing student engagement and learning

Podcasts, vodcasts, webquests, wikis, blogs, online surveys, online books and journals, synchronous chats, asynchronous discussions, e-portfolios, expert videos, digital storytelling, concept mapping, virtual field trips, tours, animations, debates, online games, simulations, moviemaking, role play, PBL, cases, ...on and on.....

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Teachers need to figure out how to apply these learning-centered methods effectively and efficiently

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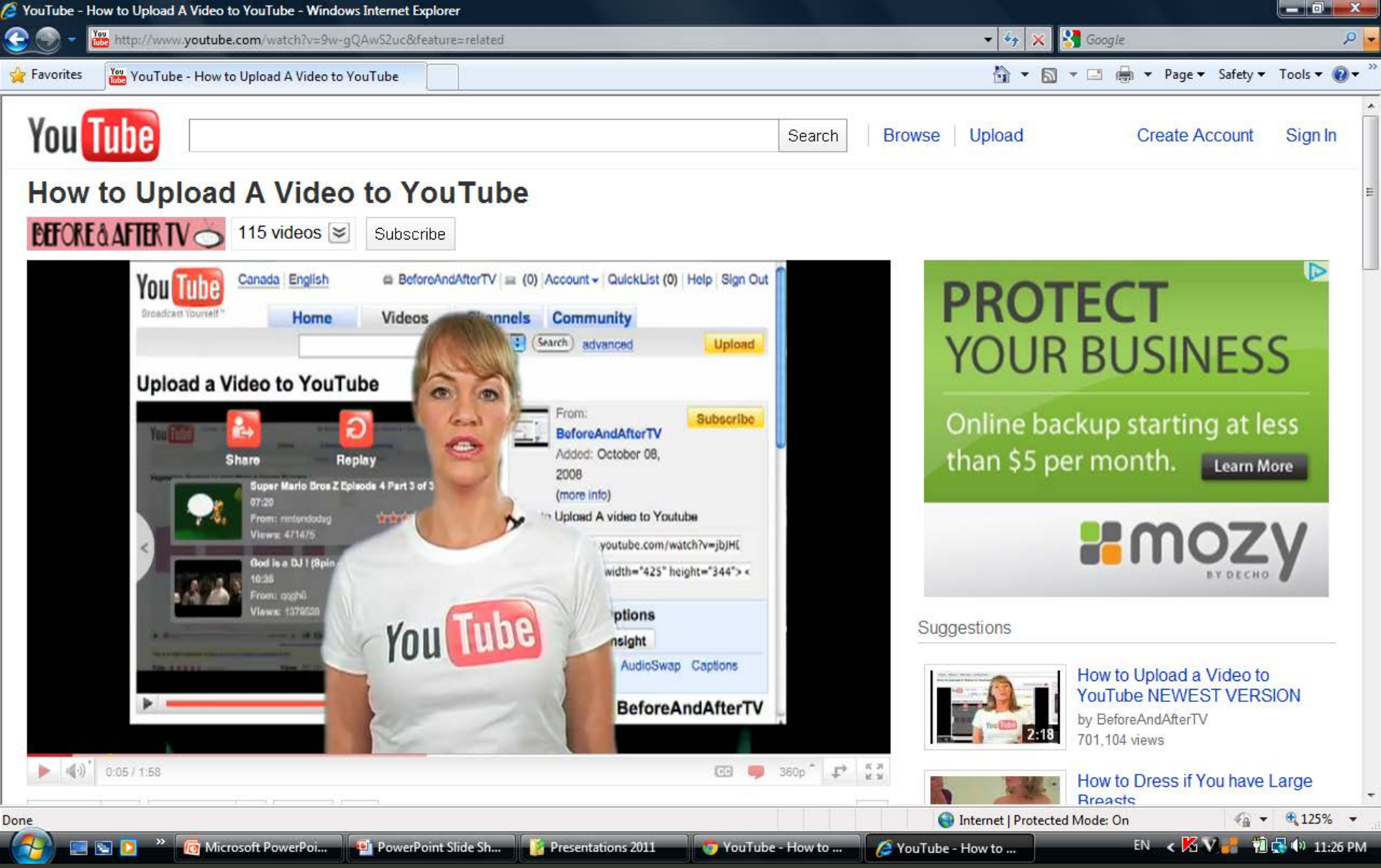
THERE ARE MANY ONLINE RESOURCES FOR TEACHERS



www.youtube.com/watch?v=9w-gQAwS2uc&feature=related

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Podcasting Software

http://podcast-software-review.toptenreviews.com/

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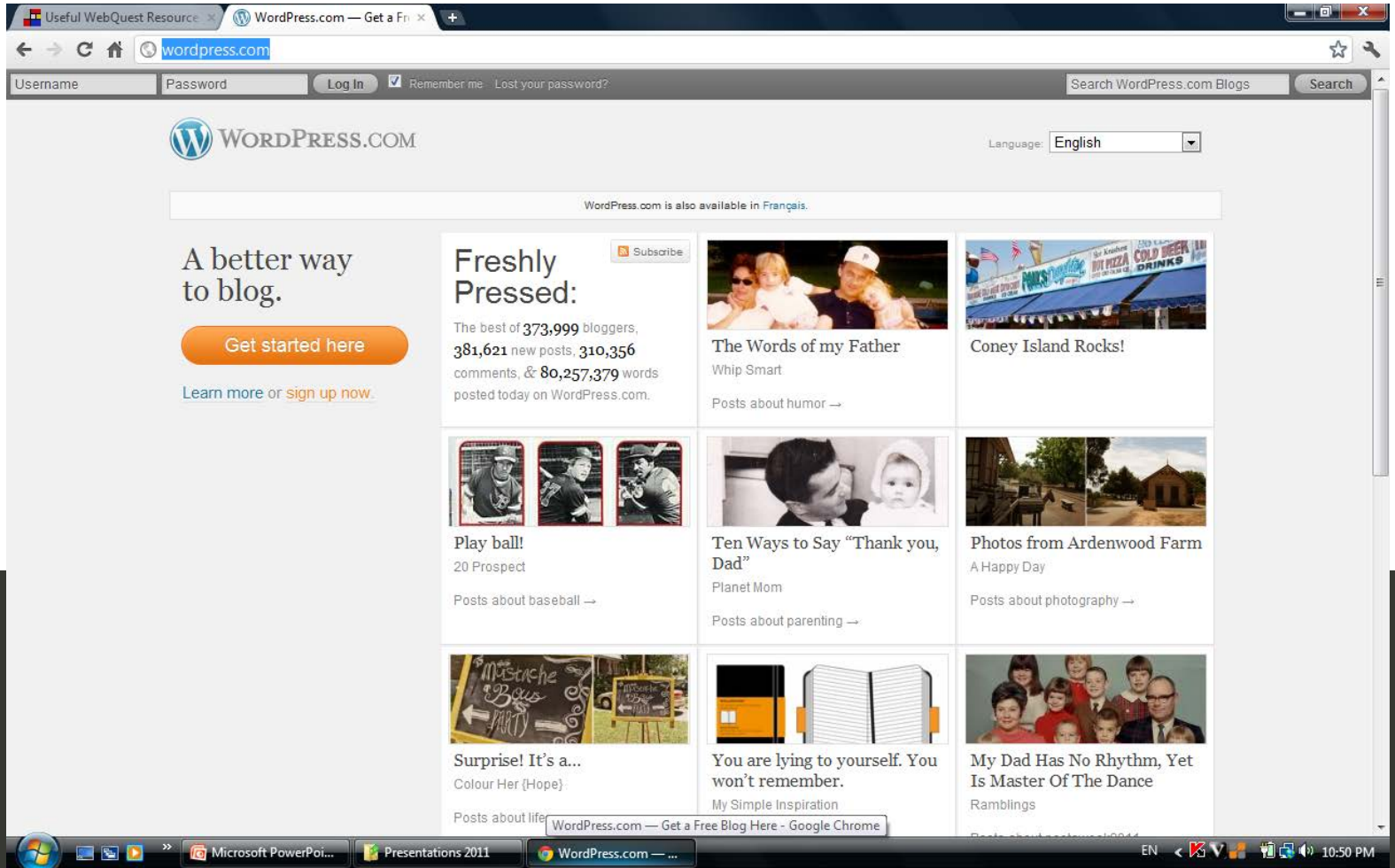
www.blogger.com

http://wordpress.com/



https://www.socialtext.net/medialiteracy/wiki_resources

Socialtext

Mobile | Desktop | Settings | Help | Log in

Search This Workspace:

Dashboard | People ▼ | Signals ▼ | Workspaces ▼

Public Workspace: **Participatory Media Literacy** | What's New | Blogs

57 Revisions | Print | Tools

Wiki Resources

▼ HIDE

Wikis

- Wikimatrix, extensive comparative list of wikis
- Wiki Engines, another extensive list, for sysadmins or anyone who can tinker with server-side software
- WikiIndex, a wiki of wiki, wiki people and wiki ideas
- Wikipedia's list of wikis
- Wikipedia's comparison of wiki software
- Google Sites Google's free wiki
- PBwiki, a free wiki service.
- Wetpaint, a free wiki service
- List of open-source wiki software applications
- A comparison of wiki software
- Media Wiki
- PMWiki
- Barewiki
- Moinmoin
- Socialtext Enterprise Wiki
- PhpWiki
- Swiki/CoWeb
- WikiWiki
- TikiWiki
- Seedwiki
- Editthis.info
- Wikidot

Tags

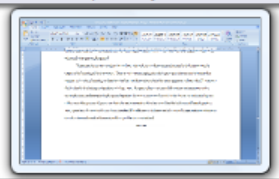
There are no tags for this page.

Incoming Links

Wiki

Attachments

Kaufman et al JECR Dec 1 2010 [Compatibility Mode] - Microsoft Word non-commerc



ICEL 2011 slides Jun... | ICEL presentation J... | Kaufman et al JECR ... | Wiki Resources / Par...

EN 10:16 AM

Social Resources

https://www.socialtext.net/medialiteracy/wiki_resources

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EMPOWERING ONLINE LEARNING: 100+ Activities for Reading, Reflecting, Displaying, and Doing

Curtis J. Bonk
Ke Zhang

2008
Jossey-Bass
A Wiley Imprint
www.josseybass.com

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Kaufman, D. M., & Mann, K.V. (2007). *Teaching and learning in medical education: How theory can inform practice (2nd ed.)* [Monograph]. London, England: Association for the Study of Medical Education (ASME).

CONTACT Dr. David Kaufman at dkaufman@sfu.ca

References