

Using the Digital Toolbox: Web 2.0 for the Classroom Teacher

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10:00am-1:00pm**

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Using the Digital Toolbox: Web 2.0 for the Classroom Teacher

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Objectives

- ▶ Discuss the importance of creating a learner-centered environment.
- ▶ Explain the necessity for curricular change based upon the characteristics of today's students.
- ▶ Discuss the various Web 2.0 collaborative technologies.
- ▶ Explore how the incorporation of current technology can assist educators in making curricular changes to better meet the needs of today's student.

What is Web 1.0?

- ▶ Read-only web
- ▶ Allowed us to search for information and read it.
- ▶ There was very little in the way of user interaction or content contribution.

Source: <http://www.practicalecommerce.com/articles/464-Basic-Definitions-Web-1-0-Web-2-0-Web-3-0>

Characteristics of Web 1.0

- ▶ Web 1.0 sites are static
- ▶ They contain information that might be useful, but there is no reason for a visitor to return to the site later.
- ▶ An example might be a personal Web page that gives information about the site's owner, but never changes.

Source: http://en.wikipedia.org/wiki/Web_1.0

Characteristics of Web 1.0

- ▶ Non-interactive websites
- ▶ Visitors can only visit these sites
- ▶ They can't impact or contribute to the sites
- ▶ Most organizations have profile pages that visitors can look at but not impact or alter, whereas a wiki allows anyone to visit and make changes.

Source: http://en.wikipedia.org/wiki/Web_1.0

Characteristics of Web 1.0

- ▶ Web 1.0 applications are proprietary
- ▶ Under the Web 1.0 philosophy, companies develop software applications that users can download, but they can't see how the application works or change it.
- ▶ A Web 2.0 application is an open source program, which means the source code for the program is freely available.
- ▶ Users can see how the application works and make modifications or even build new applications based on earlier programs.
- ▶ Source: <http://computer.howstuffworks.com/web-101.htm>



What is Web 2.0?

- ▶ Is commonly associated with web applications that facilitate:
 - Interactive information sharing
 - User-centered design
 - Collaboration
- ▶ Examples of Web 2.0 include:
 - Web-based communities
 - Hosted services
 - Web applications
 - Social-networking sites
 - Video-sharing sites
 - Wikis
 - Blogs



Source: <http://www.practicalecommerce.com/articles/464-Basic-Definitions-Web-1.0-Web-2.0-Web-3.0>



Characteristics of Web 2.0

- ▶ A Web 2.0 site allows its users to **interact** with each other as contributors to the website's content.
- ▶ In contrast to non-interactive websites where users are limited to the passive viewing of information that is provided to them.



Source: <http://www.practicalecommerce.com/articles/464-Basic-Definitions-Web-1.0-Web-2.0-Web-3.0>



Web 3.0!!

- ▶ Internet experts think Web 3.0 is going to be like having a personal assistant who knows practically everything about you and can access all the information on the Internet to answer any question.
- ▶ Many compare Web 3.0 to a giant database.
- ▶ Source: <http://computer.howstuffworks.com/web-302.htm>



Characteristics of Web 3.0

- ▶ While Web 2.0 uses the Internet to make connections between people, Web 3.0 will use the Internet to make connections with information.
- ▶ Some experts see Web 3.0 replacing the current Web while others believe it will exist as a separate network.
- ▶ Example: "I want to see a funny movie and then eat at a good Mexican restaurant. What are my options?"
- ▶ The Web 3.0 browser will analyze your response, search the Internet for all possible answers, and then organize the results for you.

▶ Source: <http://computer.howstuffworks.com/web-302.htm>



Learner-Centered Teaching

- ▶ Cognitive constructivist theory of knowledge acquisition emphasizes the need for learners to construct their own learning as they build on previously obtained knowledge in order for learning to be meaningful and retained.
- ▶ The constructivist theory views the educator as an integral part of the learning process by **“coaching”** students towards meaningful learning and **“facilitating”** learning.



Cognitive Psychology

- ▶ Piaget (1896-1980) believed that knowledge is actively constructed and learning is a process of discovery
- ▶ Vygotsky's (1896-1934) works emphasized the importance of social environments and collaboration



The Junction of Constructivism and Web 2.0!

- ▶ The impact of Web 2.0 technology and social networking applications are increasing and adding yet another dimension for teaching and technology (Maloney).



“Technology **alone** does not enhance instruction-never has and never will. Pedagogy is what matters-always has and always will.”

Diamond, 2008

Wimba - Podcasting

- ▶ Platform used is Blackboard
 - ▶ www.umkc.edu/blackboard
 - ▶ Houses our learning modules
- ▶ Online conferencing is accomplished through Wimba – a collaboration tool
 - ▶ Accessed through Blackboard site

Tegrity - Podcasting

Examples of Podcast Incorporation

- ▶ Local Anesthesia
 - ▶ Professor Nancy Keselyak & Dr. Bill Brockmann
- ▶ HINI
 - ▶ University Policy

Podcasts

- ▶ Advantages – Students have access to content 24/7, when faculty are away class can still go on (L.A CE), potentially if weather is bad etc. can still load content for class, next slide
- ▶ Disadvantages - Technology doesn't always work – classrooms underwent redesign, faculty controls the settings for download but if a student had the skills they could probably break the code

What does research tell us?

- ▶ Mostly descriptive, reporting whether students use or like it
- ▶ Students do need to be instructed on use (French et al. 2003).
- ▶ Dual encoding theory supports information received from more than one sensory channel is retained better. (Paivio 1986; Mayer and Moreno 2003)

Social Presence

- ▶ Social presence is defined as “the degree to which participants are able to project themselves affectively within a medium” (Garrison, 1997, p. 6).
- ▶ Social presence has been found to be a strong predictor of satisfaction in online environments (Gunawardena, 1997)
- ▶ Students perceive that social presence positively influences learning (Hackman and Walker, 1990)

Wikis

- ▶ Group Projects
 - ▶ Use Wikis – a collaboration tool
 - ▶ Accessed through Blackboard site

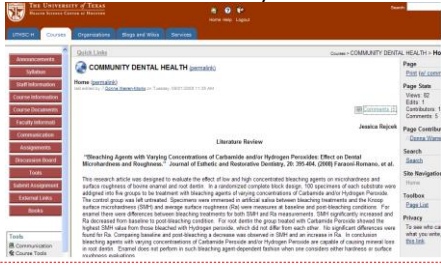
Another collaboration tool...Wikis!

- ▶ **Build knowledge by building wikis** (a collaboratively built website). Use the Wiki Tool to collaboratively author content, research and group projects within the context of a website. This is a great way for instructors to create group assignments. Students work cooperatively to formulate, write, and publish their solutions in the form of websites. This task encourages students to think critically and analytically as they evaluate and organize relevant content.

Referenced from UMKC Blackboard, I-10

Wikis

- ▶ Used for Table Clinic Collaborations in DHCT 3303 Community Dental Health

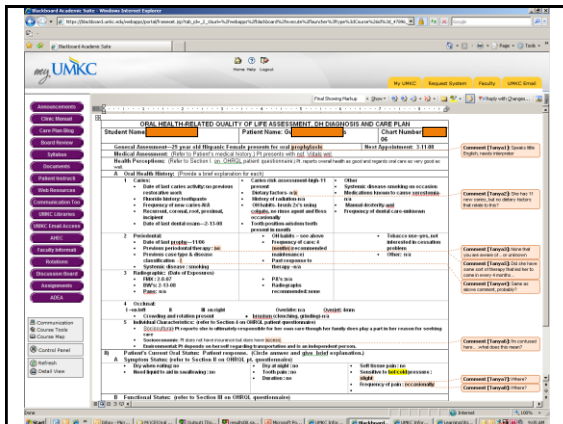
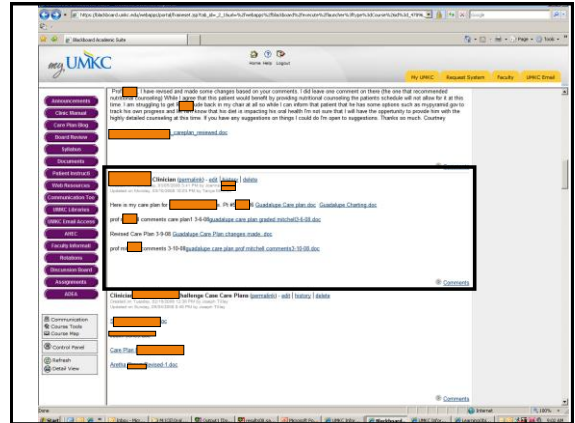


Wikis

- ▶ Advantages – Students are able to work collaboratively and post large items w/o crashing emails, etc; these are closed and controlled w/ Bb as users must be enrolled and then assigned to the wiki; Ease of use of the wiki/blog software makes it a simple matter for an editor (faculty) to delete/revert or modify material that violates patient privacy.
- ▶ Disadvantages – faculty and student development

Blogs

- ▶ UMKC SOD Dental Hygiene Clinic (DH4260C)
 - ▶ Use the blog feature of Bb for care plans
 - ▶ Blog - (a "web log") or online journal designed to be updated frequently.
 - The Blog Tool allows instructors and students to create public or private blogs. Students post their treatment plans, and instructors participate with students in the evolving dialog. Students can revise treatment plans based on faculty feedback. Through the Blogs the instructor gains ready insight into students' experiences in clinic, and can efficiently provide individualized feedback



DHCT 2101/DHBS 3101 Pre-Clinical Blogs



Journal Entry #5
 On 10/14/2009 in clinic lab, we had the opportunity to practice with our SRPG 10/10 and GIG 17/18 instruments on our patient patients. I had a story to know exactly which working end of the instruments to use, but still need to practice on pulling my patient in the perfect seating position. I noticed today that once seated for me to perform an extra step between, on the temporary right back on my position in the simulation center on Monitor that on my first patient entry. Then on the day 17/18 has been the hardest instrument to work with so far, since we only need to take about 7 passes and from the distal end of the engine to the distal of the tooth. Also, the instrument separator on the lower arch on this instrument makes it easier for the clinician to position the lower arch parallel to the posterior teeth. Overall, I need to practice this weekend with my typodont in preparation for our skill evaluation #2 on Monday!

Journal Entry #6
 On 9/23/2009 we had the opportunity to practice in preparation for our Camp #1 exam in clinic. The instruments we were to get tested on were the SRPG 10/10 and the GIG 17/18. We got the chance to work our student partners and work the practice simulation. This experience allowed us to practice getting to work on a different type of tooth since everyone's tooth vary in some way. I practiced with the SRPG 10/10 extra first because that the instrument that I was having the most difficulty with. It was the most to use on the distal and the mesial but when I tried to use the SRPG 10/10 between the mesial and distal of the tooth, my blade sometimes didn't go on the tooth and I had that I have been correct. Next time finding the product SRPG 10/10 seems to be the best and I need to work on my SRPG 10/10. I had myself doing a good job but not feeling and being spend any patient with the

Blogs

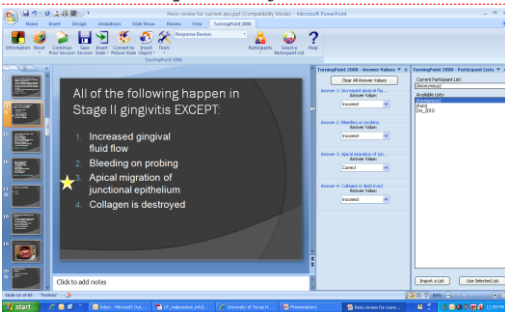
- ▶ Advantages – Digital care plans reduce paper and make it much easier for students to make changes and repost; Part-time faculty have access 24/7; Continuity of care for patients when blogs can be used for care plans (different faculty easily able to see what have taken place prior); Wikis allow students to not clog up email with powerpoints and other large documents; Wikis allow students to work in groups w/o others seeing their progress along the way;
- ▶ Disadvantages – Faculty and student adoption and training

Audience Response System (ARS)

- ▶ Used in classroom settings to provide instant feedback
- ▶ PowerPoint presentations become powerful data collection and assessment tools that collect real-time audience responses.



Audience Response System



ARS Research

- ▶ Elashivili (2008) et al. found the following:
 1. ARS help student understand the main concept of the lecture.
 2. Identifies the student's strengths and weaknesses of the given material.
 3. Keeps the students fully engaged but provides anonymity in a large classroom and at the same time students receive an honest answer.
 4. Teacher-student and student-student interactions make a lecture productive and enjoyable to attend.

ARS Research - Continued

- ▶ Elashivili (2008) et al. found the following:
 5. The results found this to be a promising teaching tool.
 6. Can turn a classroom into an active, enjoyable, and informative environment.
 7. Has the potential to increase student knowledge retention.

ARS Research

- ▶ Holmes (2006) et al.
 1. Engages students in the "Socratic Method".
 2. Enhances the educational experience through interaction.
 3. Increases the level of student participation through inquiry based learning and cooperative learning.

Advantages of a ARS

- ▶ Advantages:
 - ❑ Improve attentiveness
 - ❑ Increase knowledge retention
 - ❑ Poll anonymously
 - ❑ Track individual responses
 - ❑ Display polling results immediately
 - ❑ Create an interactive and fun learning environment
 - ❑ Confirm audience understanding of key points immediately
 - ❑ Gather data for reporting and analysis

Disadvantages of a ARS

- ▶ Disadvantages:
 - ❑ Per-unit purchase price
 - ❑ The maintenance and repair of devices when owned by a central unit or organization
 - ❑ The configuration, troubleshooting and support of the related presentation software
 - ❑ The reliability and performance of the devices under non-optimal conditions, i.e., Transmitter/receiver location

Web Lesson Builder

also known as Embedded Prerequisite Information (EPI)

- ▶ Lets you easily create engaging, interactive web lessons for your e-learning classroom.



Web Lesson Builder

- ▶ Create interactive learning games, including customizable flashcards, image labeling, image hotspot activities, matching games, and crosswords.
- ▶ Six question types: multiple choice, multiple answer (more than one correct answer), short answer, true/false, matching, and ordering.
- ▶ Pop-up text annotations to define terminology, or enhance the interactivity of your lesson content

Soft Chalk: Intro to Dental Terminology

<http://softchalk.com/lessonchallenge/lesson/?c%20final/Dental%20terminology/intro2dental/index.html>
Author: Richard Poster, Guilford Technical Community College

The screenshot shows a web browser window with the title 'Introduction to Dental Terminology'. The page content includes a 'Next' button, a 'Comments' section, and a list of objectives. A small image of a dental chair is visible on the right side of the page.

Introduction to Dental Terminology

Ok, so you're here wanting to get an early start with some of the terminology you'll be using in the program you're about to start or thinking about entering. Or maybe you want to have a little more understanding of the language that they are speaking when you go to the dentist. Well, you have come to the right place! This lesson will give you a little insight into some of the terms that will use in the program, as well as in the field of dentistry.

Objectives: I have some things for us to go over, so here are the objectives of this lesson:

1. Distinguish between the primary, secondary and mixed dentitions.
2. Describe the arrangement of the teeth in each dentition, arch and quadrant.
3. Identify any tooth in either dental arch by name and / or tooth letter or number.
4. Demonstrate a use of the universal numbering system for deciduous and permanent teeth.
5. Identify each tooth surface that is found on anterior and posterior teeth.

In order to meet these objectives, this lesson will contain a variety of instructional materials. As you go through the pages of this research, you may come across one of these: If you click on this sound icon, you will be able to hear how a specific word is pronounced.

SoftChalk Research

- ▶ Alsharif and Henriksen (2009) found the following:
 1. Aids in curriculum mapping
 2. Optimize sequencing of content
 3. Reiterate and integrate critical knowledge
 4. Ensure educational outcomes by:
 - ❖ Appropriate sequencing of courses
 - ❖ Integrate at progressively higher cognitive levels
 - ❖ Enhanced faculty communication
 - ❖ Contributes to faculty collaboration within and outside the school for joint scholarly activities

Advantages and Disadvantages

- ▶ Advantages:
 - ❑ No programming or HTML required
 - ❑ Content portability
 - ❑ Student engagement
- ▶ Disadvantages:
 - ❑ Need time to build lesson activity

Seven Principles for Good Practice in Undergraduate Education

- ▶ Good practice encourages student-faculty contact
- ▶ Good practice encourages cooperation among students
- ▶ Good practice encourages active learning
- ▶ Good practice gives prompt feedback
- ▶ Good practice emphasizes time on task
- ▶ Good practice communicates high expectations
- ▶ Good practice respects diverse talents and ways of learning

Chickering & Gamson, 1991; <http://www.ftrgroup.org/programs/seven.html>

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