Nancy Wood

REPORT FROM 2008 AECT CONFERENCE

ON THE HORIZON... RAYS OF CHANGE

* Association for Educational Communication and Technology
* http://www.aect.org/About/default.asp

* "a professional association of thousands of educators and others whose activities are directed towards improving instruction through technology..."

  "...Technology is interpreted as process, not merely in terms of hardware (such as computers or television or projectors), but in terms of learners and their relationship to the people, events, places, and things through which they learn..."

EVENTS

- Field trips to Florida Interactive Entertainment Academy and Florida Institute for Simulation and Training
- Keynote Address by **Dr. George Strawn**

  Chief Information Officer

  National Science Foundation
- AECT in Second Life
- Ideas for teaching

FIELD TRIPS

FLORIDA INTERACTIVE ENTERTAINMENT ACADEMY

- http://www.fiea.ucf.edu/shield/showpage.php?page_id=1

- a graduate video game design school at the University of Central Florida offering an accredited master's degree in interactive entertainment. Areas of study include game design, development, art, programming and production.

- 3 Tracks- Art, Programming, Production

- Toured MoCap studio

FLORIDA INSTITUTE FOR SIMULATION AND TRAINING

- http://www.ist.ucf.edu/

- University of Central Florida research facility that combines graduate research with industry contracts.
  Projects include: Robotics, Haptic Simulators, Surgical Simulators, Media Convergence
  http://www.mcl.ucf.edu/

- Modeling and Simulation, Spaceport Module Simulation,Self- Directed Learning

KEYNOTE ADDRESS

KEYNOTE SPEAKER

* Dr. George Strawn
* Chief Information Officer
* National Science Foundation
* http://www.nsf.gov/oirm/cio.jsp

DISRUPTING CLASS

* Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns

* by Clayton Christensen (Author), Curtis W. Johnson (Author), Michael B. Horn (Author)

* Clayton M. Christensen is the Robert and Jane Cizik Professor of Business Administration at the Harvard Business School. He is co-founder of Innosight, a management consultancy, Rose Park Advisors, an investment firm, and Innosight Institute, a non-profit think tank. Christenen is the author or coauthor of five books including the New York Times bestsellers The Innovator's Dilemma and The Innovator's Solution

DEVELOPMENT OF TECHNOLOGY

- 1800 Agriculture age

  1900
  Industrial age

  2000
  Post-industrial age

SUSTAINING TECHNOLOGY AND DISRUPTIVE INNOVATION

* Sustaining technology adds incremental improvements to existing technologies.
* Disruptive innovation initially provides a poorer solution to a known problem.
  But over time, it is refined and eventually replaces the previously dominant technology.

  Examples of Disruptive Technology

  vaccum tubes to transistors
  transistors to chips
  mainframes to PC's
  telephone lines to Internet

  The "Cloud" may disrupt PCs

EXAMPLES OF DISRUPTIVE TECHNOLOGIES

* : "Telephone companies tried to use fiber optics to improve telephone long distance service, but its disruptive use was to enable the Internet."

* High capacity, low cost disk storage is disrupting the publishing industry"

RELEVANT TECHNOLOGY

* 1970
  preChip at $1,000,000
  CPU at 1 mps
  Disk $1/kC
  Net 10 kbps

  2000
  Chip $1000
  1 gps
  $1/gC
  10 gbps

* projections for 2030

  post chip at $1
  1 tips
  $1 /pC
  10 pbps   (petabytes will be a 1000 more than a gigabyte)

* 10 petabytes /sec in 10 yrs - Strawn's projection

*

WHY INSTRUCTIONAL TECHNOLOGY (IT) BASED LEARNING MAY DISRUPT AND DISPLACE CLASSROOM LEARNING

budget crisis- expense of maintaining buildings, transportation costs, etc

teacher retirements – Nationwide 50% are over 50

In Virginia- 70% of K-12 teachers are scheduled to retire in 5 years- impossible to hire and train enough new teachers

technical improvements in distance education

scientific advances in technology

WHY IT BASED LEARNING?

there are multiple intelligences (Gardner)
different people have different learning styles
Current classroom practices are necessarily monolithic- one size fits all
IT-based learning offers the opportunity for individualized learning

×

IT-based learning currently provides a poorer solution to teaching students – (according to Strawn- IMO he's talking to all those teachers who use Blackboard-we know it can be better!)

It may flourish and improve

if improvement is good enough - it may end up disrupting/displacing classroom learning

LIFE IN 2050

autopilots in cars, space planes?

115 year life expectancy?- more people engaging in life-long learning and enrichment learning

post work-age- Most work will be done by robots- people won't have to work

✖ perhaps education won't be for job training anymore, but instead for personal enrichment, sharing philosophies and for quality of life -- Strawn

AECT IN SECOND LIFE

LINDEN LAB PRESNTATION

- [On the Horizon: Web 3D](#)

- *Description: An in-world panel of leading virtual world developers and educators will discuss designing*

EDUCATIONAL PROJECTS IN SECOND LIFE

- ✖ [Really Engaging Accounting](#)

AECT IN SECOND LIFE

- Headquarters

http://slurl.com/secondlife/Eduisland/110/171/34

- http://slurl.com/secondlife/EdTech/163/141/25

- New exhibit- tools for educators in Second Life

- Archives

- http://www.aect.org/events/

TEACHING IDEAS

- ✖ scaffolding

TEACHING STRATEGIES: SCAFFOLDING

* "**Instructional scaffolding** is the provision of sufficient support to promote <u>learning</u> when <u>concepts</u> and <u>skills</u> are being first introduced to students. These supports may include the following:
* Resources
* A compelling task
* Templates and guides
* Guidance on the development of <u>cognitive</u> and <u>social skills</u> " (Wikipedia, 2009)

TEACHING STRATEGIES: SCAFFOLDING

- Introduced by Bruner in the 1950's to describe a temporary support used to support access to meaning that is taken away as the learner begins to gain control of the task

TEACHING STRATEGIES: SCAFFOLDING

Scaffolding can help students:

- stay on task,

- understand the assignment objectives

- boost confidence

- become more independent

- Scaffolding clarifies instructions and purpose of the assignment.

TEACHING STRATEGIES: SCAFFOLDING

In our classes – scaffolding may take the form of

* Software video demos

* Examples of completed assignments

* Links to web resources that provide additional

information about the topic

Additional info from instructor in assignment descriptions or starter threads
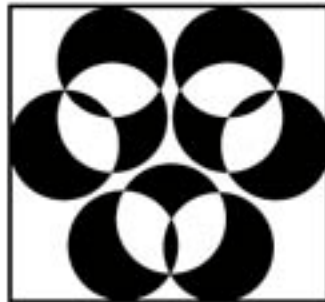
TEACHING STRATEGIES: SCAFFOLDING

Example: FND 112Wk 2

Software Tutorials

For assistance in completing this assignment, please review the following tutorials:

- Applying Transformations (Illustrator)
  - Rotating Objects
  - Reflecting Objects
  - Scaling Objects
  - Repeating Transformations
- Applying Transformations (Photoshop)
  - Rotating Objects
  - Scaling Objects

Example

Maximum

- **Assignment 2: Design Exercise**
- Create a form group using 2-4 black and/or white circles of the same size. Then, duplicate the form group 2-4 more times, utilizing translation, rotation, and/or reflection to create a black and white design. Experiment with different form groups and layouts to generate a visually appealing composition.

AUTOMATED SCAFFOLDING THROUGH SELF-ASSESSMENT- FND 112 WK 2 A2

* Problem: Students post designs that do not meet assignment criteria. They may need help with :

* understanding the assignment objectives, and

* comprehending visual design assignment instructions

AUTOMATED SCAFFOLDING THROUGH SELF-ASSESSMENT- FND 112 WK 2 A2

Before posting your design- Stop- Read this!

This is an exercise in creating an attractive design while working within strict limitations. Please keep your design within the assignment parameters. Before you turn in your assignment- ask yourself these questions.

* How many circles are in my base circle group?
Answer- 2 to 4.

* How many times did I use my circle group?
Answer: circle group is repeated 2 to 4 times.

* Are my circles round circles or are they ovals or ellipses?
* Answer: all are round circles.

* Are all my circles the same size?
Answer: Yes- circles are all the same size. This exercise does not use dilation.

* Are my circle groups all the same size?
Answer: Yes- circle groups may be translated (moved), overlapped and rotated. The size remains the same.

If your answer to any of these questions is different from the answer given, you must correct your design before posting to avoid losing points.

AUTOMATED SCAFFOLDING THROUGH SELF-ASSESSMENT-DESIGN ASSIGNMENTS- TYPICALLY A3:

Sample self-critique questions:

Before posting your design- Stop- Ask yourself these questions- include your answers in your description of the design with your post.

What type of balance does your design use?

What is the focal point?

What elements have you emphasized or de-emphasized- why and how?

What principles of design have you used to give the design unity?

AUTOMATED SCAFFOLDING THROUGH SELF-ASSESSMENT-CRITIQUE ASSIGNMENTS

Before posting your design- Stop- Review the suggested discussion topics at the beginning of the assignment instructions.

Have you discussed 2 to 3 of the listed topics in each of your critiques?

Have you used course concepts and terminology in describing the designs?

Have you made suggestions for alternate approaches, even if you thnk the design is successful as it is?

OTHER TYPES OF SCAFFOLDS

* Links to external resources

* Additional student examples

* Powerpoint lectures from textbook CD

* Tutorials on specific topics

LINKS

- http://www.aect.org/About/default.asp
- http://www.fiea.ucf.edu/shield/showpage.php?page_id=1
- http://www.ist.ucf.edu/
- http://www.mcl.ucf.edu/
- http://www.nsf.gov/oirm/cio.jsp
- AECT Headquarters in Second Life
- http://slurl.com/secondlife/EdTech/163/141/25
-

  Scaffolding Links
- http://en.wikipedia.org/wiki/Instructional_scaffolding
- http://www.fno.org/dec99/scaffold.html
- http://www2.ncsu.edu/ncsu/cep/midlink/rub.multi.htm
- http://wwwsil.bham.wednet.edu/Curriculum/homeport.htm
- http://fromnowon.org/module/module.html

THANK YOU!

- For questions contact Nancy Wood nwood@aii.edu