"Understanding Pedagogy and Instructional Design Moving Courses Online"

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ARCHITECTS OF EDUCATION

Chicago, Illinois
July 11 through 16, 2010
Marriott Hotel and Conference Centre

FUSION 2010 Desire2Learn Users Conference
Desire2Learn Innovative Learning Technology

When students are confused – it means that YOU failed to design the course well.

Subtitle:

You can't read body language online!

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Our Responsibility

We should ensure that students

- Understand and can apply and build from the information they learn
- Practice and perform the skills in order to solve problems in new environments
- Participate and communicate in a professional and collegial manner

- These are OUTCOMES on which WE should self-assess our courses.

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Session Overview

Key processes in online education:

- Presentation
- Demonstration
- Documentation
- Communication
- Collaboration
- Remediation
- Evaluation

Key Learning Domains

- Cognitive
- Psychomotor
- Affective

Instructional Design Frameworks

- ADDIE
- ASSURE
- ARCS

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Take-Aways

Strategies

- Alignment of learning objectives and assessments
- Assignment instructions and grading
- Engaging students in learning activities

Tips and Tricks

- Reducing development and maintenance of your course materials
- Keeping content fresh
- Incorporating media appropriately

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Door Prizes

Templates

- Syllabi, Course Modules, Course Schedule
- Course Introduction
- Orientation Exercises

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Becoming a better teacher

In an Online Class…

You can't see the body language
You can't see if they "showed up"
You can't see the puzzled looks

AND…
You SHOULD NOT use the same content and assignments you normally use face-to-face

Primary Benefits of Online Courses

Time Shifting – Study Anytime / Anywhere
Self-Paced – Presentation adapts to student
Repeatability – "Rewind" the Presentation of Content
Multiple Trials / Attempts (skill drills, quizzes, tests)
Alternative Activities and Assessments (ADA)
Interpersonal Communication
Collaborations (group projects / papers / teamwork)
Critical Thinking (locating and assessing the quality of information, experimenting, reviewing and editing work by others)
Improved Computer Literacy

Leveraging the Benefits

Encourage Multiple Attempts:
if the computer is scoring the material, and the students are motivated to try to improve their scores, let them!

Students Help Build the Content:
let your students know where you are heading, and why, and how, and then give students "ownership" in the process by having them locate and share current and relevant materials

Nurture The Relationship:
in an online class, you have greater opportunities to interact privately and personally with each student

Assignment Options:
encourage students to meet the learning objectives while giving them some "ownership" in the process

Challenges in Online Courses

Procrastination
"Attendance" / Time Management
Confusion
Misunderstanding / Miscommunication

Mitigating the Challenges

Very frequent assessments
have lots of small-points assignments (several each week) to force students to keep on task

Require student conferences
several times during the semester you can meet with each student for a couple minutes (online: texting, web-conference, phone)

Surveys
How is it going? What is beneficial? What is unclear? How can this be improved?

And most importantly…

Over-Explain Everything!

Anticipate and answer all the questions up-front.

Smart students will skim.

Nervous students will study carefully and not pester you with basic questions.

"Challenging" students will have "no excuses."

Quick and Dirty Pedagogy (Trip Abroad Analogy)

Identifying the destination
(where does the trip lead for students?)

Inspiring the learner
(how can the trip and activities be promoted?)

Sharing the Language
(what words will we use, and what do they mean?)

Providing the tools
(which resources, texts, instructions, maps, checklists, guides?)

Focusing the context
(how and when to use what we've learned)

Assessing the arrival
(how safely and completely did the journey end?)

Quick Review of Basics

Models for Instruction Design
ADDIE, ASSURE, ARCS

Multiple Intelligences (Gardner's)

Learning Domains

- Cognitive
- Psychomotor
- Affective

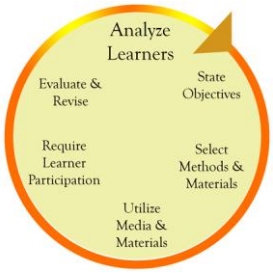
ADDIE Model

Analysis
Design
Development
Implementation
Analysis

Adopted by MnSCU
for eLearning
Instructional Design
http://vfc3.project.mnscu.edu/index.asp

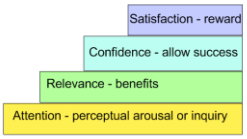
ASSURE Model

Analyze
State
Select
Utilize
Require
Evaluate



ARCS – Motivational Design

ARCS Steps
John Keller's ARCS Model of Motivational Design



Satisfaction
Confidence
Relevance
Attention

It is ALWAYS more painful to Remodel!

Think big! If you had the ideal course, what would it be?

Create the blueprint. Map out where everything would be located, what features and tools would be available, and what the functions of each space would be.

Make it Modular. In case you change your mind, allow for flexible design (small parts which form a larger functional unit)

Falkofske's Garden Analogy

Perennials - survive year-after-year

Annuals – require "re-planting" each year

Cut Flowers – only briefly survive

Transplanting – easier to move and maintain small pieces

Perennials - PERMANENT

Policies, Procedures, and "Proofs" (well ascribed theories)

Write once… revise "never."

The same "chunks" can be used in multiple courses (have one "standard group" of policies and preferences which all courses utilize)

Annuals – APPLICATIONS

Applications of theories and root knowledge

Assessments and Activities (students applications)

Articles and readings

Update on an annual basis to ensure recent and relevant content

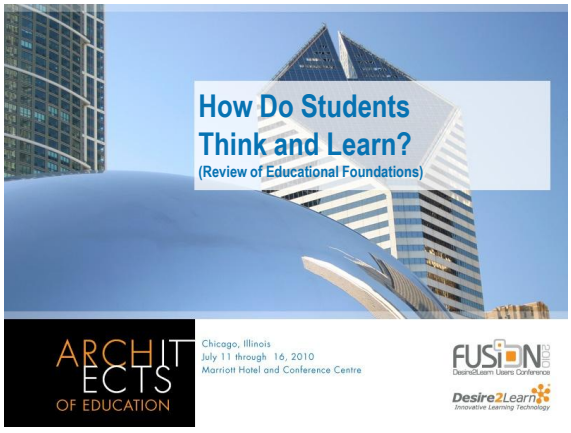
Cut Flowers – CURRENT

Current news and sites controlled by others

Hyperlinks (isolate as a "cut flower" to news pages and supplemental links)

If you don't "own it" – they might change or delete it; so… find the suitable "hyperlinks" right before they are needed… OR… task students with finding them.

FAIR USE: requires limited duration of use



Multiple Intelligences – Howard Gardner "Frames of Mind"

Verbal / Linguistic (word smart)
Interpersonal (people smart)
Logical / Mathematical (logic smart)
Visual / Spatial (picture smart)
Intrapersonal (self smart)
Existential (deep-question smart)
Bodily / Kinesthetic (body smart)
Musical (music smart)
Naturalist (nature smart)

Learning Domains

Knowledge (cognitive)
Skills (psychomotor)
Attitudinal (affective)

Cognitive Domain (Bloom's Taxonomy)

Knowledge (describe, identify, name, point to, recognize, recall)
(1+1 = 2)

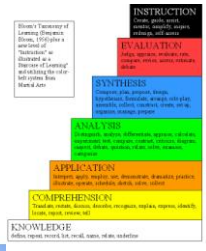
Comprehension (convert, explain, locate, report, restate, select)
why does 1+1 = 2

Application (compute, demonstrate, employ, operate, solve)
addition >> multiplication

Analysis (compare, discriminate, distinguish, separate) order of operations

Synthesis (compile, compose, design, reconstruct, formulate)
creating spreadsheet

Evaluation (assess, evaluate, interpret, judge, rate, score, write)
grade homework calculations



Psychomotor Domain

1. **Perception** (choose, detect, identify, isolate, or compare)
2. **Set** (begin, move, react, respond, start, or select)
3. **Guided Response** (assemble, build, calibrate, fix, grind, mend)
4. **Mechanism** (same as Guided– but with greater proficiency)
5. **Complex Overt Response** (more coordinated)
6. **Adaptation** (adapt, alter, change, rearrange, reorganize, revise)
7. **Origination** (combine, compose, construct, design, originate)

Affective Domain

1. **Receiving** (ask, choose, give, locate, select, rely, use)
2. **Responding** (conform, greet, help, perform, recite, write)
3. **Valuing** (appreciate, follow, join, justify, show concern, share)
4. **Organizing** (accept responsibility, adhere, defend, formulate)
5. **Characterizing** (assess, delegate, practice, influence, revise, maintain)

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Literacy – the ability to read, write, *communicate*, and understand

If students are unable to compose their messages in clear and attractive manners – they are not communicating effectively

Adult literacy will require basic skills in design and editing to produce effective visual (instead of written) communication

TAKING IT ONLINE

Online Processes in Courses

Presentation
Demonstration
Documentation
Communication
Collaboration
Remediation
Evaluation

Presentation – Unidirectional

Screen Recordings – "digital whiteboard"

RSS feeds – "automatically updated" content from "industry" websites and articles

Voice Narrated Presentations / Slideshows

Videos of skills, history, context, background, overview, details

Virtual Tours – video, narrated slide shows

Presentation – Omni-Directional

Web Conferencing for guest lectures / interviews / tutoring sessions

Blogs - content and resource links allowing students to "comment" on content (moderated?) and search related tags/articles

RSS Page Readers linked to individual/group blogs (individual student posts are consolidated into a "quick read" of blog sites)

Course Wiki – students able to append, edit, comment on content

Demonstration

Video to show actual processes and procedures

Narrated Photos Series showing step-by-step processes

Screen Recording (software applications use, editing process of Documents,)

Digital Whiteboard recordings (solving formulas and equations)

Communication

Web / Voice Conferencing for student conferences, virtual office hours, study and review sessions, advising

Social Networking and Virtual World environments (MySpace, Facebook, SecondLife)

Wikis – content and commentary on content

Blogs – content with viewer comments

Collaboration

Web / Voice Conferencing for group project work

Voice chat for student discussions (with "note-taker" appointed)

Collaborative Document authoring (Google-docs, Zoho)

Wikis for collaborative document authoring and course resource sites (links to articles)

Remediation

Pre-Tests / Practice-Tests (non-graded)

Links to other "practice/review" content (MERLOT.org, publisher websites)

Web Conferencing for online study/test-prep sessions

Screen Recording – for comments on papers and projects

Learning Games (LodeStar, StudyMate, etc.)

- SCORM compliant, to track progress through each learning module

Evaluation

Audio recordings for comments on student papers / projects (ADA considerations)

Web Conferencing for student and group presentations

Voice Conferencing for role-play (scheduled sessions)

Blogs / Wikis instead of research papers

Student Webpages / Videos instead of projects / reports

Multimedia Communication

Voice comments to students on papers and projects

Voice based discussions

Webpage Composition

- **"MySpace" type of profiles for social networking**
- **Design of project and information pages**
  - Literacy is no longer reading and writing, but also designing messages in a manner in which they will be viewed and understood. This literacy includes video, audio, graphics, and images.
  - Collaborative editing of content
- **Work environment / simulation**
  - Assessments to track what changes each participant made

Skill Drill / Self-Assessments

Interactive content-streams which help students diagnose the content areas needing more study; review by instructors to see which concepts provide greatest struggles for largest numbers of students

SCORM compliant, to track progress through each learning module

DEALING WITH SPECIAL ISSUES

Copyright

Disclose the "rules" to students

Encourage "original creations" in submitted works (photos, drawings, recordings)

Require credits adjacent to all media used (similar to citing text)

Intellectual Property on Collaborations

Syllabus should state that group work will be "**creative commons**" – since ownership rights are difficult to determine, share, and control.

Resources students wish to use can be found from Creative Commons content (photos, videos, audio, illustrations, animations, etc.)

"Bank" with CC – if you withdraw, also deposit

Info at: www.creativecommons.org

Accessibility (508 / WAI)

Online allows instructors to provide both "required" as well as "supplemental" content in courses

Multiple types of assessments can be developed to measure the same learning objective (write a paper, design a webpage, create a game, etc.).

Provide information to students on how to "design for accessibility" (text transcripts, captions on images, etc.)

Usability

Notify students of tools and any needed media plugins

Provide demo-content so that tools can be verified as "working"

Link to tutorials where available

State the "acceptable" file formats

Notify which sites and tools require special hardware, software, or Internet capabilities

Learning and Sharing

As you learn, share your experiences, your frustrations, and your successes with students and peers

Do NOT feel you need to be the "technology" expert and be willing to admit this; encourage students to share their tips and techniques

Request feedback from students on what went well, what could be improved, and what activities/resources provided the best learning opportunities

Templates

Syllabus

Learning Module

Class Schedule

Course Introduction (Welcome to the Course)

"First Week" Orientation Exercises

NOW…

TIME TO SHARE!

Resource Links

http://www.PedagogyOnline.com
http://TechnologyBites.blogspot.com
http://www.wordle.net

http://www.learning-theories.com/kellers-arcs-model-of-motivational-design.html
http://www2.unca.edu/education/edtech/techcourse/assure.htm