Instructional Design and Content Development for E-learning

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Forms of E-Learning

1. E-Learning as computer-based training delivered via the web (asynchronous)
2. E-learning as providing a new channel of communication in distance learning (mixed)
3. E-Learning as a new type of classroom instruction (synchronous)

http://www.fastrak-consulting.co.uk/tactix/Features/basics.htm
E-Learning Trends

• **Gamification** - game with a specific learning goal or as elaborate as an extensive simulation/ case study.

• **Online video** - expert talking heads, screen casts, lectures etc. with inexpensive video capture tools and speed with which videos can now be captured and published.

• **M-Learning with smart phones & tablets** –BYOD (Bring Your Own Device) having information on demand and expectations of learning anywhere, anytime, on any device.

• **Digital Textbooks** - Apple iBooks, Google Books, Amazon Kindle, etc.
University of Phoenix iPhone App for Class Discussions

Students can view, draft, and reply to class discussions, learning and supporting each other in spite of busy schedules.

Source: Jeremiah Owyang
A “Vook” combines reading with video and social networking.

Consumers can read books or learn new skills interactively, with video and community.

More info on Vook: http://vook.com/what-is-a-vook.html
MOOC Pedagogy - Stanford

- Watch video lecture recordings, read course materials, complete assignments, take quizzes and an exam
- Simply migrated campus-based didactic methods of teaching to the online environment

Source: Paul Stacey
Pedagogy of Udacity

- Lecture videos, quizzes and homework assignments.
- Multiple short (~5 min.) video sections make up each course unit.
- Made up of distinct units = a week’s worth of instruction and homework.
- Discussion forums and a wiki for course notes, additional explanations, examples and extra materials.
- An area where instructors can make comments but the pedagogical emphasis is on self-study.
- Informal discussion forum where students can post any ideas and thoughts they have about the course, ask questions, and receive feedback from other students.

Source: Paul Stacey
Pedagogy of edX

- edX students generally don’t have interaction with faculty or earn credit toward an MIT degree.
- for a small fee students can take an assessment which, if successfully completed, will provide them with a certificate from edX.
- EdX offers honor code certificates, ID verified certificates, and XSeries certificates (successfully completing a series of courses)
- assessing course data, from mouse clicks to time spent on tasks, to evaluating how students respond to various assessments.

Source: Paul Stacey
Pedagogy of Coursera

• video lectures, mastery learning, and peer assessment.
• Interaction - the video frequently stops, and students are asked to answer a simple question to test whether they are tracking the material.
• Coursera provides university partners with a flipped classroom. MOOC handles the lecture, course reading, some assessment & peer-to-peer interaction for campus-based tuition paying students. On-campus activities focused more on active learning & instructor help.
• Non-tuition paying open participants have no active learning component. Social learning merely in the form of discussion forums.

Source: Paul Stacey
New Pedagogical Directions

- Rather than assignments created by faculty, ds106 course (University of Mary Washington) assignments are collectively created by course participants.
- The Assignment Bank is online and anyone can access it.
- Having course participants collectively build course assignments for use by students in future classes is a hugely significant pedagogical innovation.

http://assignments.ds106.us

As of Jan 23, 2019 this collection includes 1164 ds106 assignments and 15204 examples.

Source: Paul Stacey
4 Quadrant Learning Approach (Resources & Learner Support)

- **E-pub, E-textbooks**: Self Learning Material
  - Q 1: Self Learning Material

- **Video, Audio, Animation, Simulation etc.**: Multimedia
  - Q 2: Multimedia

- **Self Assessment Quiz, Activities, TMAs, Practical, etc.**: Continuous Assessment
  - Q 4: Continuous Assessment

- **E-Counselling/Mentoring, Discussion Forum, Web Conferencing, Webinar, Interactive Live TV (SWAYAM PRABHA), Interactive Radio etc.**: Interaction
  - Q 3: Interaction
Make your e-learning content engaging, relevant and effective
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

1. Setting Learning Outcomes
2. Emulate best classroom practices
3. Design from the learners’ perspective
4. Include hands on experience
5. Make it easy for the learner
6. Speak the learners’ language
7. Get expert opinion/Feedback
8. Content is King

Make it easy for the learner
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

01 Setting Learning Outcomes

- Identify the learning outcomes and structure the content accordingly
- Competency based
- Start from the basics and gradually move to the specifics
8 Tips For Instructional Design in E-learning Context

**Basic Instructional Designing Principles**

02 Design from the learners’ perspective

- Content need to be customized as per the learner/learning requirements
- Personalization with skill gap analysis
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

03 Emulate best classroom practices

- Make it participative (discussions through chat, forum etc.)
- Engage with activities
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

04 Content is King

- Use of multiple media as per requirement
- Rich content with text graphics, a/v, animations, simulations
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

05 Include hands on experience

- Scenarios, gaming, activities, projects etc.
- Simulations, Augmented Reality, Virtual Reality
- Immersive learning (Learning by Doing)
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

06 Make it easy for the learner

• Do not overload with information
• Break content into smaller chunks (attention span)
• Supplement with real life examples
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

07 Speak the learners’ language

• Make it simple and conversational
• Storytelling
8 Tips For Instructional Design in E-learning Context

Basic Instructional Designing Principles

08 Get expert opinion and feedback

- Get the content reviewed
- Test on a pilot basis, collect feedback and improve accordingly
Open Source Applications for Teachers

• Learning Management Systems
  Moodle

• Repository Development
  Dspace, Drupal, Joomla

• E-content development tools
  eXe, Xerte, CourseLab, Blender, Jahshaka (CineFX), Audacity

• MOOCs platform
  Open edX, OpenMOOC, MOOC.Org (Google + edX), Course Builder (Google), SWAYAM
eXe

Assist teachers and academics in the publishing of web content without the need to become proficient in HTML or XML markup. Resources authored in eXe can be exported in IMS Content Package, SCORM 1.2, or IMS Common Cartridge formats or as simple self-contained web pages.

Sample
- E-pub

http://localhost:51235/demo1
CAMSTUDIO

CamStudio is able to record all screen and audio activity on your computer and create industry-standard AVI video files and using its built-in SWF Producer can turn those AVIs into lean, mean, bandwidth-friendly Streaming videos.
Blender
A free and open source 3D animation suite. It supports the entirety of the 3D pipeline—modeling, animation, simulation, rendering, compositing and motion tracking, even video editing and game creation.
Audacity
A free cross-platform audio editor developed by a team of software developers, translators, documentation writers and other contributors around the world.
Jahshaka

Immersive digital content creation. It delivers a media management and playback platform that is accentuated by compositing, editing and effects modules.

ReInventing Hollywood

Welcome to Jahshaka, the virtual reality authoring toolkit that was created by artists, for artists. The only way to build and publish virtual worlds.

Download Jahshaka
amCharts Visual Editor - a set of JavaScript and flash cards for websites and Web-based products. An ideal tool for generating charts
Google Chart Tools for making data more comprehensible. Special URLs can be used to embed graph and chart images in users' own web.
Infogr.am- interactive infographics and charts with a few clicks
Piktochart is used to create more engaging presentations from data.
ChartsBin - Create your own interactive map

Create your own interactive map

It's free for now.

Please fill out the email address and click "Register".

E-Mail (required) [ ] Register

Visualizations below were generated using the "ChartsBin.com" tool:
Dipity - Create an interactive, visually engaging timeline in minutes. Use dynamic visualization tools to display photos, videos, news and blogs in chronological order.
Testing & Quizzing Tools

Hot Potatoes is a tool that allows teachers to create interactive quizzes. This one requires a download.

Yacapaca is a great web tool for educators. It allows teachers to have access to a plethora of already made quizzes. They can also make their own using the provided tools there.

SimpleVLE provides a set of tools for creating online tests, quizzes, exams, and other class content including presentations, lesson plans, and homework assignments with a focus on simplicity.

QuizStar to create online quizzes for your students, disseminate quizzes to students, automatically grade quizzes and view the quiz results online.
Testing & Quizzing Tools

Quizlet

A free and popular online quiz tool, Quizlet lets you easily build quizzes.

Create 16 types of learning activities quickly and easily. Give Web-based quizzes and let the computer do the grading. Quickly compile reports to improve understanding of students' performance.

ProProfs

ProProfs lets you create quizzes and automatically grades the quizzes.

Quiz Me Online

Quiz Me Online lets you easily create quizzes using the simple forms you’re used to. Some key features are the ability to make quizzes private, public, available to just a particular group, or just a class. You can make flashcards.
LAMS
Tool for designing, managing and delivering online collaborative learning activities. Activities can include a range of individual tasks, small group work and whole class activities based on both content and collaboration.
QR Code Based E-Content

MCS-011: PROBLEM SOLVING AND PROGRAMMING

Requirements:
Smartphone (Android or iPhone) or Tab or iPad with any QR Scanner app.
QR Code Generators

Create your QR Code for free

Website (URL)

Static  Dynamic  What does dynamic mean?

Create QR code

1. Kaywa
2. GOQR.me
3. Free QR Code Generator by Shopify
4. Visualhead
5. The-qrcode-generator.com
6. QR Stuff
7. qr-code-generator.com
8. QR Code Monkey
9. Create QR Code by Google App Engine
Concluding Remarks

• We need to think critically about future roles of Teachers in e-learning context.
• The Teacher’s role will increasingly shift from the “sage on the stage” to the “guide on the side.”
• It is important for the Teacher to begin preparing for the changing education paradigms of tomorrow.
• Teachers need to exploit the power and potential of new educational technologies and tools to engage learners and enhance learning.