NorthEast Regional Computing Program

March 26-28, 2018 | Providence, Rhode Island
THE EXPLODED SYLLABUS

Examining User Experience and Instructional Design in Learning Management Systems

Carol Damm & Lance Eaton
Brandeis University
Based on the model of User Centered Design practice from the International Standards Organization (ISO), 2010
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THE COGNITIVE LOAD

USER-CENTERED DESIGN
Visually quiet
- restrained color palette
- clear representation w/ icons
- evoke pleasure and calm

LEARNER-CENTERED DESIGN
Reduce cognitive overload
- overuse interferes w/learning
- heuristic understanding of interface
- learning space is non-threatening


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Figure 1.3. Layer Cake of eLearning Design (Peters, 2014)

- **System Design**: Architecture, interaction design, default interface elements and look & feel.
- **Interface Styling**: Look & feel, interface elements, customization, information design.
- **Multimedia Content**: Graphics, video, audio, animation objects; info & interaction design.
### LINGUISTICS

<table>
<thead>
<tr>
<th>Discrete Elements</th>
<th>Narrative (Interactions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>graphical elements</td>
<td>hyperlinks</td>
</tr>
<tr>
<td>color</td>
<td>video/audio</td>
</tr>
<tr>
<td>font: type, size, case</td>
<td>embedded documents</td>
</tr>
</tbody>
</table>

**Metacommunication** - Style Guide


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Every element relevant

  Minimalism isn’t bland
  Attractive visuals make an interface more usable
  Increased credibility

Cognitive expression

### Table 5.1

**VISUAL ELEMENTS**

(Peters, 2014)

<table>
<thead>
<tr>
<th><strong>UNCONSCIOUS ELEMENTS</strong></th>
<th><strong>Individual features we recognize unconsciously</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color, Movement, Position, Size, Edges, Depth</td>
</tr>
</tbody>
</table>

**Patterns (combinations of features) we recognize unconsciously**

<table>
<thead>
<tr>
<th>Shapes and closure</th>
<th>Closed shapes and enclosing boundaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grouping</td>
<td>Implied by proximity, similarity, symmetry, bounding, and connectedness</td>
</tr>
<tr>
<td>Contrast</td>
<td>Juxtaposed elements that differ in color, direction, position, size, and/or shape</td>
</tr>
<tr>
<td>Luminance</td>
<td>The level of perceived brightness (important for distinguishing detail)</td>
</tr>
<tr>
<td>Texture</td>
<td>Surface property made up of repeated elements of contrast and orientation</td>
</tr>
<tr>
<td>Scenes (gist)</td>
<td>Scenes identified in less than a second with peripheral vision</td>
</tr>
<tr>
<td>Faces</td>
<td>Rapid perception and focus on faces, especially eyes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>CONSCIOUS ELEMENTS</strong></th>
<th><strong>These direct our brains’ interpretations of what and how we see</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>Memory includes our schemas and previous experience. It can be guided with priming.</td>
</tr>
<tr>
<td>Expectations</td>
<td>We’re likely to see what we expect to see.</td>
</tr>
<tr>
<td>The task at hand</td>
<td>Our brains guide attention based on what’s needed for the task at hand and can be blind to much else (see “What Gorilla?” sidebar).</td>
</tr>
</tbody>
</table>
ELEMENTS TO CONSIDER

Motivation

Social Awareness

Participation

Member Types

OUR META-NARRATIVE: THE EXPLODED SYLLABUS

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Energy students, what issues, questions and topics do you want to learn about and discuss? Share with the class some of your questions/issues about energy and climate.

- Resources on Energy, climate, centers with Links
- Psychology of climate report
- Class survey, perspectives
- Echo slides and sound link

Here is the link for slides and audio of our energy class/speakers

- Energy exercise 1a. History Due Feb 3rd
  Choose ONE essay question on our readings in Titan or the Prize, due February 4th and answer REQUIRED Shell scenario question

- Energy exercise 1b. Your Energy scenarios
  Due Tuesday Feb 13/14, review Shell Scenarios and others

- Energy exercise 1c. Life histories
- John's life history, patterns

  Sample of my story, perspectives and approach to energy scenarios

- Our life stories and scenario drivers
- Energy exercise 2, climate change
- Energy exercise 3, Scenarios again, DUE April 11th, noon
- Complexity maps
- Scenario class brainstorming, 2014
History of Oil: Oligopoly pricing

Class 1, Introduction: Challenges and change
Energy Trends: demand, price, climate
Class 2, History, Politics, Oligopoly
Energy supply chain, P&L
Class 3, History, topics and scenarios
Coal background

Supply: Demand and Scenarios
EU Energy Polygon: chess and scenarios

April 2013 presentation in Germany: EU, Russia and Ukraine gas supply/demand and price. How the world changes in TWO years?!

Ukraine and Russia after Crimea

Internationalism or Nation States: energy security in our interconnected world

JWB Summary global politics and energy talk.

Climate change, Politics

Energy, climate and politics, JWB

Moomaw and Stanislaw introduction

IPCC 5th Summary policy makers
IPCC 5th Summary Impact Climate
Special Report on Renewables and Climate Change, IPCC
Psychology of climate change
IPCC 2013 policy summary
IPCC 2007 Summary policy makers
IPCC Impact 2 report
Climate simulations, stemman
Climate resources, links
More climate resources
bath tub, complacency about climate
Seas and change, Kolberl
Stanislaw, global power shifts
Stanislaw, Clean over Green
Moomaw climate slides
Moomaw, 2013 climate and carbon
Moomaw and Stanislaw videos
Moomaw 2016 Climate change trends
Moomaw 2015 Climate change, bathtub

Student topics discussions
India 2013
Geopolitics 2013
Nuclear 2011
Supply, Demand shocks 2011
Shale gas 2014
Southern Africa electricity and renewables 2014
Opec, breakeven fiscal budgets 2014
Energy Investments projects

- Algae 2011
- Smart grid in China
- Sustainable Island energy, 2012
- Desert Tech 2011
- Big belly solar, 2013
- Ocean waves, 2009
- Wind, MIT 2008
- Mineshafts and geothermal, 2012
- Ocean waves outline
- Wind in Vietnam, 2014
Investing in Energy

- JFK Innovation, technology support
- Framework for transforming energy investments
- Storage and batteries, Troop Wilder
- European Utilities, storage?
- German storage plans
- Moneys for clean energy
- Outlook energy prices, 2009
Topic 7

Topic 8
Classes 6 - 8 | 2/28 - 3/14

Climate | Scenarios

6 | February 28 - March 7
Download Class 6 Agenda
Read available climate articles. Submit your work below.
Complete and submit Exercise 1a: Life Stories, due by Monday before class.
Review Topic Presentations 1 available by Monday before Class 7.
Prepare questions for your classmates to be asked in class.

Links to Materials presented in Class 6:
Presentation: Scenarios and Brainstorming
Presentation: Iris radiant

Introducing William Moonan & Joseph Stanford

7 | March 7 - 14
Download Class 7 Agenda
Speakers: Climate
Read available climate articles. Include Scenario Articles in text to the right.
Summarize your Life Story by filling out the Life Story Summary Form below. Forms must be completed by tomorrow so that you can look at others'...
INTRINSIC MOTIVATION

Week 2 | January

Prepare for Class

- Working around the “Circle of Value”
  
  Theodore Johnson, J.D., MALD, Ph.D.,
  Associate Professor of the Practice

- Neighborhood Care Inc Simulation Pairings 3/18
- Read: Stone, Patton, Heen, Difficult Conversations; How to Discuss What Matters Most, Pages 3 - 57; The “What Happened?” Conversation
- Recommended Reading: Beer and Pankard, “Opening Stages,” pp. 31-36 and 39-54

Class Meeting - January 25

Themes:
- Recognizing and dealing with perceptions
- Structuring a mediation process
- Starting a mediation
- Managing and concluding a mediation

- Seven Elements of Negotiation
- Seven Elements of Rap Sheet
- Role Play Guidelines
- Begin Simulation: Neighborhood Care

After Class Assignments & Activities

- Write in your journal
SOCIAL AWARENESS

Fall 2017 | September 1 - December 8

Click on the buttons below to read and download the syllabus and other relevant documents.

Watch before Session 1: Introduction to the course (6:13)

Before session 1: Introduction Slides (from the video above)

Watch: Video explaining course navigation (6:18)

Communications Center
- Course Announcements
- Q&A Forum for Students

Sign up here to meet during Prof. Lempereur's office hours.
Zoom Meeting room: https://brandeis.zoom.us/my/lempereur
Project Success and Failure

We started the course talking about project success. This week’s reading from Wysocki and the Additional Material section we look at the flip side of success, i.e. failure.

What does project success and failure mean in your context? Armed with your knowledge of project management, what would you recommend to help projects succeed and prevent projects from failing in your organization.

Re: Project Success and Failure

In my organization, the difference between success and failure is communication. Those who do an excellent job communicating experience great success. Those who are

Re: Project Success and Failure

Hi [Name], Thanks for your post, I can relate to success being related to communication, particularly when working within a right timetable. I have personally been part of
MEMBER TYPES

Screen recording of course layout
Take accessibility into consideration
  Text, video, and audio
Online and print
Online activities
Online presentations of learning
HOW DO YOU CREATE NARRATIVE?

Cognitive Load

Intrinsic Motivation

Social Awareness

Participation

Member Types

The UX in LMS
https://tinyurl.com/nercomp-lms
THANK YOU!

To view this presentation online, go to: tinyurl.com/nercomp18-lxd

You will find the completed activity at this link: tinyurl.com/nercomp-lms

Link to the session evaluation: tinyurl.com/review-lxd-nercomp

If you would like to have a follow-up conversation, you can reach us at:
  Carol Damm: cdamm@brandeis.edu - @damm_c
  Lance Eaton: leaton01@brandeis.edu - @leaton01