Adapting Research Methods
To Construct a Learning Design Research Agenda

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Who we are

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Learning Goals

1. Consider simple ways research can be leveraged to improve and validate your learning design.

2. Explore tools and methods for conducting learner-centered design validation testing.

3. Evaluate learning science validation themes that can be used to design engaging learning experiences.

4. Brainstorm bootstrap methods for popping up your research-based design proof of concept pup tent.
Quick Review: Learning Design

**Design**
Purpose, planning, or intention that exists behind an object.

**UX Design**
The process of enhancing user satisfaction by improving the usability, accessibility, and pleasure provided in the interaction between the user and the product.

**Learning Design**
The application of research from the learning sciences to UX design to inform and drive outcomes.
Design Affects Learning

Usability factors are significantly associated with students’ real and perceived learning performance.

Evaluation of Distance Learning Environments: Impact of Usability on Student Performance International Journal of Educational Telecommunications
Three Phases of Design Research

1. Foundational
   - Learner Personas
   - Learner Outcomes
   - Context / Pedagogy
   - Learning Principles

2. Formative
   - Generative
   - Iterative Usability
   - Neuroscientific Engagement
   - Accessibility

3. Semi-Summative
   - A/B Studies
   - Analytics Evaluation
   - Case Studies
   - Third Party Reviews

Learning Design Research
Foundational Learning Design Research

Learner Personas

The Pedagogical Implementation Model

- **Implementation Components**
  - Delivery Methods: Reasoning behind product delivery method
  - Instructor-Learner Communication: How product enhances communication
  - Assessment Strategy: List of assessment tools feedback strategy
  - Area of Focus: Identification of product/title area(s) of focus (i.e., critical thinking, writing skills)

Context / Implementation

Digital design to reduce extraneous cognitive load

- **Learning Impacts**
  - *Achievement*
  - Self-regulation

- **Related:**
  - Digital design to manage intraneous cognitive load
  - Video in instruction and assessment

Sample Design Implementations

Learning Capabilities

- **Robust Tech:** Software simulation
- **Augmented:** Enhanced instructional multimedia
- **Content Support:** Instructional practice of designing multimedia

- **Assessment:** Software simulation
- **Instruction:** Player + item
- **Instruction:** Multimedia active reading

Learner Outcomes

Learning Design Principles
The **Learning Design Principles** are research-based syntheses of targeted topics within the learning sciences that provide design points of view around what will likely impact learning.

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Formative

MyProgrammingLab Mindset Messaging Design Concept
from a Learning Design Perspective

Lead Contributors:
David Porter, PhD, Director of Learning Capabilities Design

Executive Summary
This report documents the results of the Pearson Higher Education Portal Homepage usability study. Recommendations, detailed findings, and methodological notes are included. See the following link to view a video of key insights:
https://sites.google.com/view/ProgramCourse-Learning/UX/20160814.png

Overall, participants did fairly well on the study tasks. The primary findings of the study are:
- Participants had difficulty finding and understanding the create group functionality. Most or all of participants failed to complete the create group task. Even after initially finding and creating a group, they struggled to create subgroups.
- Despite this, participants reported they would prefer to have a group feature over a search feature.
- Participants wanted to sort courses first, then create groups. Five (5) participants suggested a sort by time or data feature would be very helpful.
- Two (2) participants accidentally deleted a group while trying to open or close it. This represents an infrequent but critical error.
- The top usability recommendations are:
  - Make the grouping feature visible to the user with an affordance or allow it at the top.
  - While participants struggled to create a group, they valued groups over search. Support grouping if at all possible.
  - Allow users to sort courses before grouping them. Consider allowing users to quickly sort by searching.
  - Move the delete button away from the open/close feature to prevent users from accidentally clicking it.

For further information about this research, please contact:
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Engagement & Accessibility Research

Iterative Usability Studies

Generative & CoDesign Research

Learning Design Research
Case Study: Developing Skilled Writers

SAY

DO

MAKE
Validated Learning Themes 2015

- Motivation
- SRL / Learning Strategies
- Deliberate Practice
- Feedback
Semi-Summative

Google Analytics

CourseConnect Case Study

Third Party Reviews
What are your essential design elements?

1. Invisible Interface
2. JIT Embedded Help
3. Deep Personalization
4. Omnichannel
5. Accessible
6. Objective-based
7. Social & Interactive
8. Supports Motivation & Self Regulation
9. Context Sensitive
10. Consistent
Designing Your Own Program...

Start Small & Scale

- RESOURCES
- GETTING STARTED
  - GOALS
  - LEARNERS
  - DESIGN CONCEPTS
  - STUDY PROTOCOLS
  - TOOLBOX
  - REPORTS
Please reach out to us!

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ALWAYS LEARNING