Developing Online Experiential Learning through Educational Design Research

Indiana University – November 2, 2015

The University of Georgia

TABLE MOUNTAIN, CAPE TOWN, SOUTH AFRICA.

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Educational design research has enormous potential to increase the impact of our scholarship.

The only defensible rationale for Educational Research is

IMPACT

on real world problems!

"The status of research deemed educational would have to be judged, first in terms of its disciplined quality and secondly in terms of its impact. Poor discipline is no discipline. **And excellent research without impact is not educational.**"

Charles Desforges (2000)

We need a socially responsible research agenda focused on problems that matter.

UN Millennium
Development Goals

keep the promise
Millennium Development Goals 2015

Goal 1: Eradicate extreme poverty and hunger

Goal 2: Achieve universal primary education

Goal 3: Promote gender equality & empower women

Goal 4: Reduce child mortality

Goal 5: Improve maternal health

Goal 6: Combat HIV/AIDS, malaria and other diseases

Goal 7: Ensure environmental sustainability

Goal 8: Develop a Global Partnership for Development

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Cold Chain for Vaccines

"Pharmaceutical Cold Chain Management on Wheels"

https://vimeo.com/51505482

Model of Instruction:
Experiential and social learning theories

Concrete experience

Active experimentation

Reflective observation

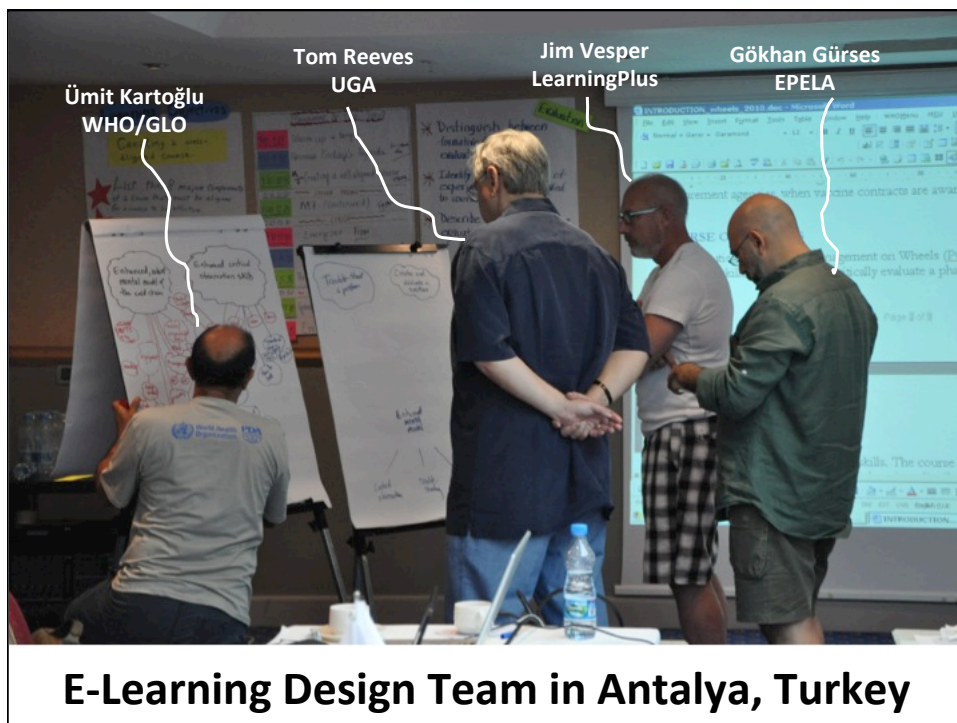**Abstract conceptualization**

From Kolb, D. A. (1984). *Experiential Learning*. Englewood Cliffs, NJ: Prentice Hall.

CHALLENGE:
Converting an
Experiential
Learning
Course
into an
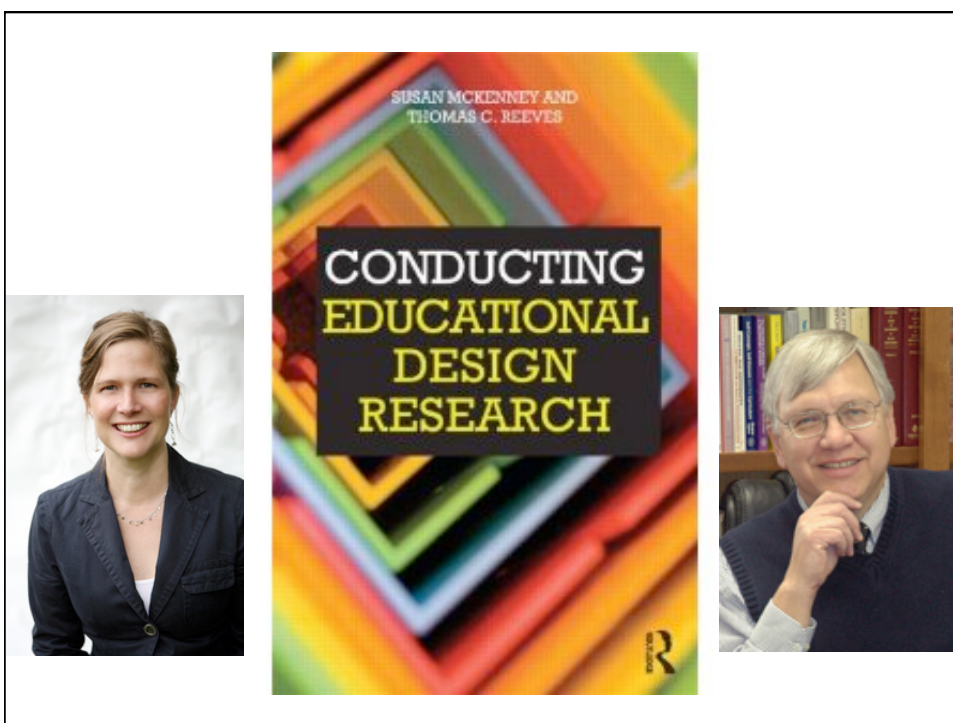e-Learning
Environment

Authentic learning design principles

- Provide **authentic contexts** that reflect the way the knowledge will be used in real life
- Provide **authentic tasks**
- Provide access to **expert performances** and the modeling of processes
- Provide **multiple roles and perspectives**
- Support **collaborative construction of knowledge**
- Promote **reflection** to enable abstractions to be formed
- Promote **articulation** to enable tacit knowledge to be made explicit
- Provide **coaching and scaffolding** by the mentor at critical times
- Provide for **authentic assessment** of learning seamlessly integrated within the tasks.

E-Learning Design Team in Antalya, Turkey

Educational Design Research

Jim Vesper, Jan Herrington, Tom Reeves

Generic Model for Conducting Educational Design Research

Implementation and spread

| Analysis | Design | Evaluation | Maturing intervention |
| Exploration | Construction | Reflection | Theoretical understanding |

(McKenney & Reeves, 2012)

Educational Design Research

- Working closely with practitioners, identify a serious problem and then define a pedagogical outcome that will address the problem.
- Develop a prototype learning environment informed by theory and guided by creativity and effort.
- Emphasize content and pedagogy rather than technology alone.
- Give special attention to supporting human interactions.
- Test, refine, and retest learning environment until outcome is reached.
- Refine theory simultaneously.

Extensio et Progressio

e-Pharmaceutical Cold Chain Management Course
http://www.epela.net/epela_web/index.php

Dr. Ümit Kartoglu
World Health Organization

GO AUTHENTIC!

e-Learning environment alignment

Low order, discrete	**learning objectives**	High order, robust
One right answer	**content**	Multiple perspectives
Direct Instruction	**instructional design**	Experiential Learning
Academic	**learner tasks**	Authentic
Lecturer	**facilitator roles**	Mentor
Pre-packaged tutorials	**technology roles**	Communications & Collaboration
Discrete knowledge	**assessment**	Mental models

Low order, discrete ← **learning objectives** → **High order, robust**

Objectives

Knowledge dimensions	Cognitive process dimensions					
	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
Factual knowledge				1	2	2
Conceptual knowledge	1	1			2	2
Procedural knowledge			1	1	3	2
Metacognitive knowledge				1	2	3

One right answer ← **nature of content** → **Multiple perspectives**

model of instruction

learner tasks

Specific skills   **Mental models**

focus of assessment

Real World Assessment

For a given a client, conduct a critical analysis of the cold chain management system and make recommendations to improve the performance of the system in line with good distribution practices (GDP) and good storage practices (GSP).

Learning environment alignment

Low order, discrete	**learning objectives**	High order, robust
One right answer	**content**	Multiple perspectives
Instructional	**instructional design**	Experiential
Abstract	**learner tasks**	Authentic
Trainer	**facilitator roles**	Mentor/facilitator
Pre-packaged tutorials	**technology roles**	Authentic simulations
Discrete knowledge	**assessment**	Mental models

Design Principle 2: The collaboration that is essential to instantiating authentic tasks-based learning strategies online is a new experience for most learners and must be carefully nurtured.
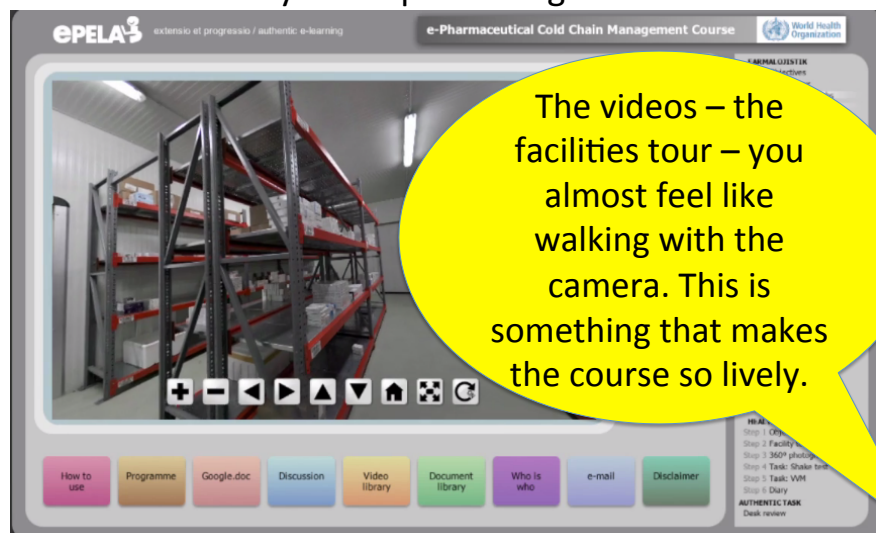

Design Principle 3: The fidelity of the simulated experiential learning environment does not have to be high as long as it enables learners to suspend disbelief and feel that what they are experiencing is real.

Don't waste
Your life.
Do Educational
Design Research!

Thank You!

Tom Reeves, The University of Georgia

treeves@uga.edu, www.evaluateitnow.com