Competency-based Education

New Challenges and New Opportunities

Michael Fosmire
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What is Competency Based Education?

- Form of education derives from analysis of prospective or actual role in modern society and attempts to certify student progress on the basis of demonstrated performance in some or all aspects of that role...demonstrations are independent of time spent in formal educational settings. – FIPSE (Fund for the Improvement of Post-Secondary Education)
Why CBE?

• Consistent Standards
• Efficiency
• Customization
• Increased Access
Why Now?

- Cost of Education
- Accountability Measures
- Information Technology
- Learning Technology
Courses vs. Competencies

**Courses**
- Completion-based
- Macro-level
- Fixed course progression

**Competencies**
- Performance-based
- Specific
- Individualized
- Self-paced
What Does this Mean for Libraries?

Traditional Approaches to Information Literacy

Standalone courses
• Lacks context

Embedded in courses
• Lacks weight/accountability

Competency-based Environment

• Takes best of both approaches
  – Tracks accountability
  – Embedded in context
May 15 – College of Technology renamed Purdue Polytechnic Institute

VALUES

- Learning by Doing
- Multidisciplinary/integrative
- Learner-Centered
- Experiential
- Competency-focused
Transdisciplinary Degree in Technology

- Ultimate embodiment of PPI
- Design Lab and Seminar only required courses (each sem.)
- Work with mentor to create individual program of study
- Non-course requirement is key where students demonstrate competencies
Trans-D Tech Competencies

• Use Design Thinking Principles
• Communicate Effectively
• Envision and Execute Independently
• Innovate and Create
• Apply Systems Thinking
• Work Productively in Teams
• Apply Disciplinary Knowledge
• Apply Ethical Reasoning

Three levels: Developing, Emerging, Proficient

Includes Information Literacy
Information Literacy Sub-competency

Developing Level

• Analyzes assignments to identify missing information and ambiguities
• Uses simple search strategies to locate information; not all information on open web
• Determines whether sources are scholarly or not
• Assembles information from multiple sources to draw appropriate conclusions
• Cites and references information appropriately
Implementing the IL competency

- Purdue’s OpenPassport badge system (www.openpassport.org)
- InfoSEAD model
- Modular approach to respect learner-centered focus
Initial Implementation

Outcomes
• Explore a Topic
• Develop and Refine Research Question
• Compare search engine results
• Refine Searches
• Evaluate Search Results

Deliverables
Mind Map, Environmental Scan, Refined Research Question, Reflective Search Log
Initial Implementation

Outcomes

• Evaluate quality of information source
• Evaluate relevance of information source

Deliverables

• Source Evaluation worksheet
Initial Implementation

Outcomes

• Use information ethically and appropriately to strengthen assertions/arguments

Deliverable

• Research paper, report, project
Outcomes

- Appropriately paraphrase, quote, and cite materials/ideas used
- Ethically access information
- Demonstrate basic understanding of intellectual property

Deliverables
Research paper, project, report
Results

• Piloted in 1\textsuperscript{st} year Seminar Class
• Librarian embedded as co-instructor
  – Several mini-lectures/activities
  – Graded Information Literacy activities
• High incompletion rate (30\% for Use and Documentation challenge)
• Multiple rounds of revision
• High quality bibliographies of those completed
• Challenges of time-management, self-direction, transfer
Conclusions

• Still trying to fine-tune amount of scaffolding needed for student-centered learning approach

• Competency-based program allows much deeper integration of libraries into all aspects of course development

• Confidence that students who ‘pass’ have demonstrated a proficiency in information literacy
  -van Epps, Johnson, Fosmire (2015) Badging your way to information literacy. ASEE Conference paper.

• CBE provides a high-impact, efficient method for engaging with technology faculty