
Introduction to Evaluating, Selecting and Using Digital Learning Materials

Brandon Muramatsu

NEEDS and SMETE/University of California, Berkeley

Joseph Tront

Virginia Tech
SUCCEED and NEEDS

Flora McMartin

MERLOT/ California State University Office of the Chancellor

Jean-Pierre Bayard

California State University at Sacramento



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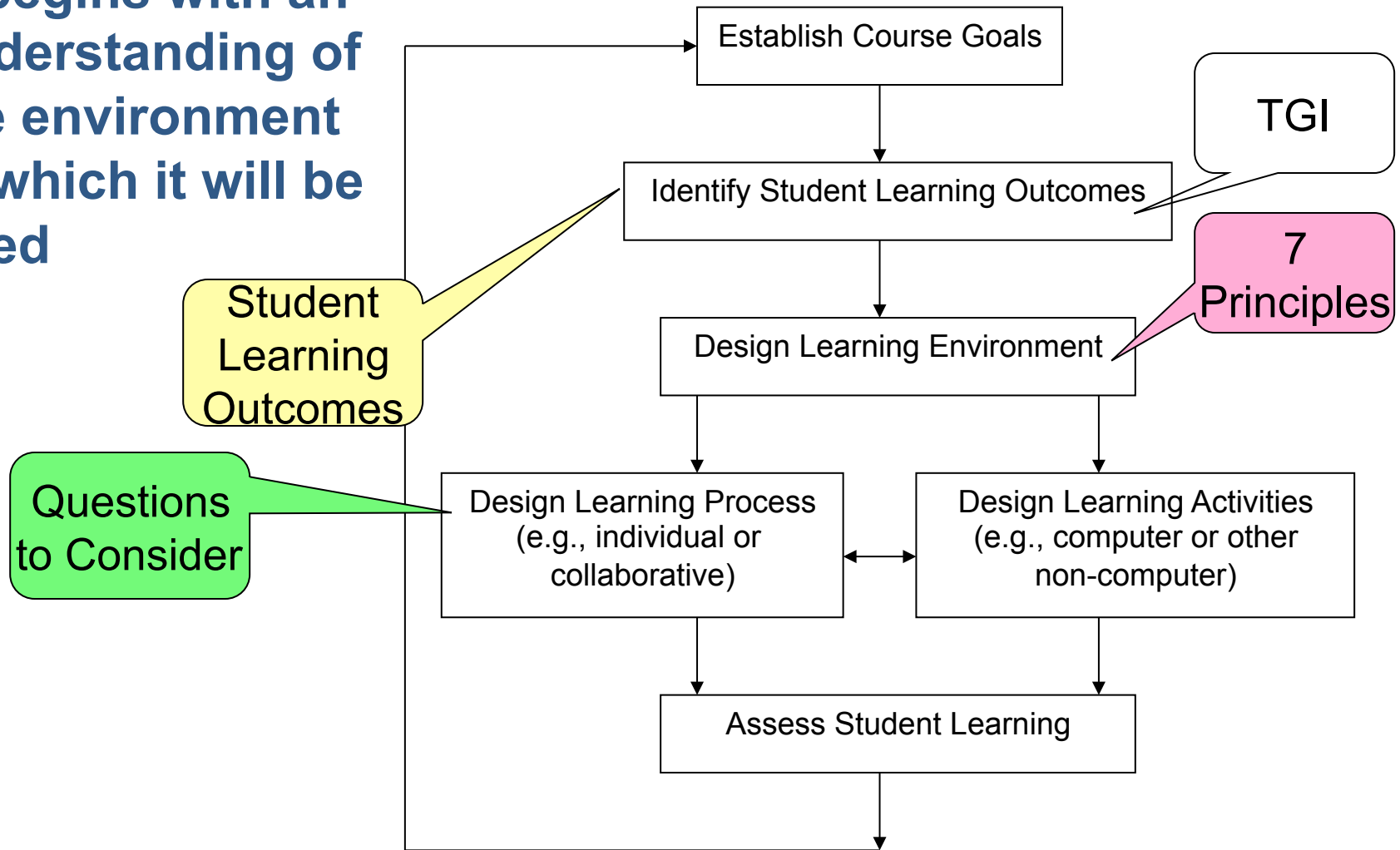
Outline

- **Greetings and Overview**
- **General Framework for Selecting and Evaluating Digital Learning Materials**
- **Educational Digital Libraries**
- **Evaluation Criteria**
- **Interactive Discussion: Comparing Digital Learning Materials to the Criteria**

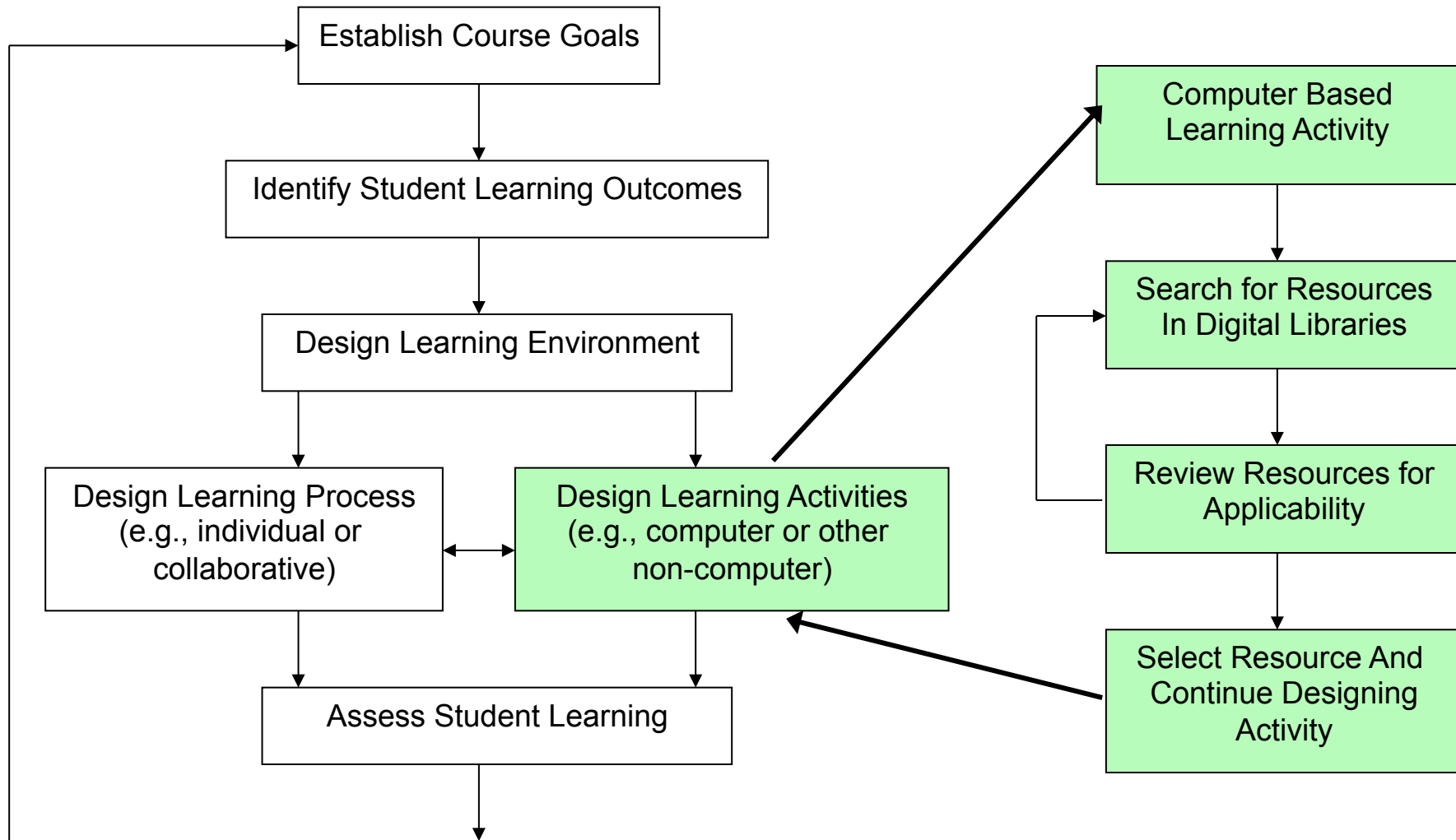
Selecting Learning Materials...



...begins with an understanding of the environment in which it will be used



Designing Computer-Based Learning Activities



“Working” Description of Educational Digital Libraries



...or...how they go beyond traditional brick and mortar library on your campus or research digital libraries...

- Directly supports teaching and learning activities**
- Provides support (through comments of use, lesson plans, etc.) for adapting or adopting resources developed by others**
- Uses technology to support collaboration, personalization, recommendation of resources**
- Covers a wide range of disciplines and allows for connections between disciplines**
- Supports communities of users**

- **The difference is *learning*, not just bibliographic information retrieval**
 - Teaching and learning require something more
- **Guided by *user needs* and philosophy of education that is constructivist**
- **Link content to community and services**
- **Build integrative tools and incorporate “best of breed” tools from partners**

www.merlot.org

- **Collaborative to improve access to quantity and quality of teaching and learning resources and to help faculty identify and use those materials**
- **Institutional partnerships with 20+ systems of higher education in the U.S. and Canada**
 - Reaching 8 Million students
 - 350,000 faculty
- **Broad collection extending beyond STEM**
 - Search, browse, catalog, comments, assignments
 - Including: History, Music, World Lang., etc.
- **14 Disciplines doing peer review**
 - Including engineering in collaboration with NEEDS

NEEDS—A Digital Library for Engineering Education



www.needs.org

- **Established circa 1992**
 - from NSF Synthesis Coalition (engineering education reform)
- **Collection of digital learning resources for engineering education (search, browse, catalog)**
- **Hosts *Premier Award for Excellence in Engineering Education Courseware***

Workshop Links

- **Access to materials and web sites used throughout the workshop:**

www.ee.vt.edu/~jgtront/workshop

- ***Premier Award Criteria***
 - Developed in 1995-1997, refined in 1998
 - Used for six years in the *Premier Award* competition
 - Designed and used to find the “best of the best”
- **MERLOT Evaluation Standards**
 - Developed in 1999
 - Applied in MERLOT’s peer review process

The Premier Award for Excellence in Engineering Education Courseware



- **A national competition to identify and reward the authors of high-quality, non-commercial courseware designed to enhance engineering education**
 - The *Premier Award* is about the entire experience of using the courseware by learners, not just the courseware itself
- **A dissemination system to distribute the Premier Courseware (via CD' s, ASEE Prism ads, presentations at FIE and ASEE)**



- **Convene Judging Panel**
 - Professors and content experts, students, instructional designers, publishers
- **Review supporting material in the submission packet**
 - Author supplied responses to criteria
 - Evidence of student learning and evaluation
 - Testimonials
- **Review and test the courseware**

Premier Award Criteria: **Instructional Design**



Does the courseware enhance learning?

- **Learning Objectives**
 - Learning objectives are clearly stated and supported by the software.
- **Interactivity**
 - The learner is actively involved in the learning process—the interaction enhances learning.
- **Cognition/Conceptual change**
 - Learning appears to be significant and long lasting, and strong and useful cognitive models can be built.
- **Content**
 - The content is well chosen and structured.
- **Multimedia use**
 - Multimedia is used effectively and promotes the learning objectives and goals.
- **Instructional use/Adaptability**
 - The software can be used in a variety of settings.

Premier Award Criteria: **Software Design**



Is the courseware well designed and usable?

- **Engagement**
 - The software holds the interest of a diversity of learners.
- **Learner Interface and Navigation**
 - The software is easy to use.
- **Technical Reliability**
 - The software is free from technical problems.

Premier Award Criteria: **Content**



Is the content appropriate and well presented in the courseware?

- **Accuracy of Content**
 - The content is accurate and error free.
- **Appropriateness**
 - The content is appropriate for the scope of the *Premier Award*.

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Action Plan

Relate the workshop to your everyday activities

- **Teachers**
- **Developers**
- **Administrators**

Workshop Evaluation

Let us know what you think of the workshop

- **Click on the Workshop Evaluation link and give us your candid opinions**

www.ee.vt.edu/~jgtront/workshop

Further Contact

Joseph G. Tront
359 Durham Hall
Virginia Tech
Blacksburg, VA 24061

jgtront@vt.edu

Brandon Muramatsu
3115 Etcheverry Hall
University of California
Berkeley, CA 94720

mura@needs.org