A Learning Framework for Information Literacy and Library Instruction programs at Rutgers University Libraries

Recommendations of the Learning Framework Study Group

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Introduction

The Learning Frameworks Study Group was charged to "identify and study *Learning Frameworks* and recommend an appropriate learning framework for Information Literacy Instruction" at the Rutgers University Libraries. In addition, it was asked to determine if this framework might be used as a foundation for the development of an online information literacy tutorial for the Rutgers University Libraries. Further, and more specifically, the group was charged to analyze the Texas Information Literacy Tutorial (TILT) to determine whether it is an appropriate online information literacy tutorial for the university.

"Theoretical frameworks provide a powerful lens through which to make sense of everyday experiences and observations. They provide a way to organize and explain that which might otherwise appear mystifying or without reason. By providing this framework for understanding, such theories also then provide a framework for developing and implementing strategies to direct and manage our experiences" (Woodard and Hinchliffe 2002).

Definition of a Learning Framework for Information Literacy Instruction

The field of education boasts many different models, frameworks, and theories, but for the most part lacks consensus about the meaning of a "learning framework." The group therefore suggests the following definition for a learning framework:

> A learning framework provides the overall parameters, conditions and support for various learning and teaching styles, information-seeking behaviors and multiple intelligence approaches to learning in any type of classroom or online learning environment.

The Learning Framework Study Group considered two learning frameworks for Rutgers University Libraries: *How People Learn* and *A framework for E-Learning.*

How People Learn

How People Learn (HPL) developed by the National Research Council states that the following four principles should be included in the design of learning environments:

- Learner Centered: takes into account the learning styles, attitudes and unique characteristics of users; recognizes the prior knowledge and skills that users bring to the learning environment.

- Knowledge Centered: provides opportunity for hands-on, learner-driven, interactive learning that leads to students learning with understanding, rather than acquiring disconnected sets of facts and skills. The goal is a mastery of concepts and "transfer of learning" that can then be applied elsewhere.

- Assessment Centered: finds ways to monitor progress; not just a test at the end; allows for feedback along the way.

- Community Centered: considers the context in which learning takes place; promotes a sense of community through shared goals and values.

Since HPL is founded on a review of recent research in cognitive science, it is no surprise that HPL supports the cognitive psychology notions of sense-making, development, insight, and metacognition. The rather static view of learning styles is not emphasized, but Howard Gardner's concept of multiple intelligences is considered in How People Learn (Bransford et al. 2000, 101-102). The behaviorist idea of the child's mind as a tabula rasa is openly refuted (Bransford et al. 2000, 79-80). HPL embraces active learning, an outgrowth of behaviorism (Grassian and Kaplowitz 2001, 36), but active learning in the service of metacognition rather than just the mastery of immediate skills (Bransford et al. 2000, 12-13). Any assessment or learning measurement has to be in some sense behavioral as well, since the instructor must explore the student's state of mind through the student's behavior (writing, speaking, or performance of a task). The ideas of self-directed learning, learning communities, and culturally appropriate instruction might be interpreted as a nod to humanistic psychology and social learning, paying

attention to the affective and social as well as the cognitive aspects of learning (Grassian and Kaplowitz 2001, 50-55; Merriam and Caffarella 1999, 256-261).

The HPL framework is biased toward science education, with very little space devoted to basic reading and writing instruction and none to the teaching of the humanities or the social sciences on the college level. This is a logical outgrowth of the funding agency and the individuals who examined educational issues for this publication. However, the principles explored in this book seem basic to any learning or teaching. Although nothing in the framework seems inherently unusable in a humanities or social sciences context, professors in those areas might disagree.

There is no contradiction between use of the HPL framework and the ACRL competency standards for information literacy. HPL is concerned with "how"; ACRL is focused on "what". The ACRL standards provide a basis for assessing the attitudes and behaviors of information literate students, but do not specify how students are to achieve information literacy skills. The HPL framework's emphasis on metacognition, learning with understanding, and transfer of learning dovetails with the ACRL standards' goal of producing independent, life-long learners (ACRL 2000, Information 3).

A Framework for E-Learning

The second framework considered by the group was, *"A Framework for E-Learning"* created by Badrul Khan, of The George Washington University. Khan begins by asking what it would take to provide the best and most meaningful flexible learning environments for learners worldwide. He goes beyond pedagogical considerations to provide a technical, administrative and resource support structure for online learning, which would provide a firm basis for the HPL learning framework.

Khan recommends a framework with eight dimensions: institutional (administrative matters of education), pedagogical (teaching and learning needs for e-learning), technological (technology infrastructure, hardware, and software), interface design (overall look and feel of e-learning programs), evaluation (assessment of learners, instruction and programs), management (maintenance of learning environment, distribution of information), resource support (online and technical support) and ethical considerations (such as social and cultural diversity, copyright and so on) for building e-learning environments (Khan 2001).

The HPL learning framework is concerned only with pedagogy; Khan's added dimensions inform and support the building of a learning environment for information literacy within an organization.

Recommendations for a learning framework for information literacy instruction

The Learning Frameworks Study Group recommends an integrated approach for the foundation of information literacy instruction at Rutgers University Libraries. Combining the four principles of HPL with the technological, resource and maintenance support, institutional, management and administrative dimensions suggested by Khan would provide a comprehensive, productive and stable learning environment for the Rutgers University Libraries.

Specifically, the learning framework for information literacy instruction at Rutgers University Libraries should strive to include the following components:

Educational aspects

A learning environment should include a learner centered, knowledge centered, assessment centered (for both learning and teaching) and community centered approach to teaching and learning.

Institutional involvement

The cooperation and collaboration of faculty, instructors and other entities, programs or departments on campus should be included while reaching out and providing services to students.

Creation, Presentation and Assessment [of teaching materials]

Technological issues (such as hardware, software, technical infrastructure, standards for learning objects and metadata), interface design (online tutorials design, web page design, content design, navigation, usability) and other requirements for creating effective teaching materials should be taken into consideration.

Resource and Maintenance Support

Budget and resources support for maintenance and updating of teaching materials and ethical, instructional or guidance support for both online and offline tutorials needs to be provided.

Management and Administration

Issues of distribution and assessment of information literacy instruction program in terms of financial and infrastructure feasibility, approval and implementation of innovative instruction projects, skills development opportunities for instructors, budgeting, partnerships with other institutions, class-size, workload and compensation, and so on, need financial and moral support from library management.

Analysis of the Texas Information Literacy Tutorial

The Texas Information Literacy Tutorial (TILT) was examined. In addition, the group reviewed the information literacy section of the ACRL/IS Emerging Technologies in Instruction Committee's Internet Education Project Database, a database of exemplary online instruction materials. In particular, *SearchPath*, the adaptation of TILT by Western Michigan University, stood out as an excellent example of application of TILT.

The group evaluated TILT based on the assumption that the "problem based learning" (active learning) instructional design is also suitable for an online information literacy tutorial for Rutgers University.

HPL and TILT

The Texas Information Literacy Tutorial (TILT) is consistent with many of the HPL principles.

- The tutorial is learner-centered. Offering the student a choice of subject matter increases the individual's readiness to participate in the program. Students can also choose which module to complete according to their skill level and information needs. Attractive visual design increases the appeal to an undergraduate audience.

- The tutorial is knowledge-centered. It uses hands-on, interactive, learner driven methods. The split-screen technique of teaching catalogs and databases provides help and context for a student approaching these for the first time. This assists the student toward an understanding of the material.

- Built-in assessments show both the learner and the instructor how the learner is doing.

- Having a large portion of the undergraduate student body complete TILT helps to build a community of shared knowledge and values among students, professors and librarians. This sense of community does not come from completing a tutorial alone, but from the efforts of the librarians who wrote it to spread the word through meetings and workshops at their university (Fowler 2003, Integration).

HPL and *Searchpath* (an adaptation of TILT)

Further, the group particularly felt that the adaptation of TILT by Western Michigan University called *Searchpath* was a good example to see the possibilities for the Rutgers environment. *Searchpath* consists of six modules including: choosing a topic, finding articles, using their catalog, using the web, and citing sources. Subject specific modules are also possible.

One of the important considerations about TILT is that it (or its adaptation such as *Searchpath*) is distributed with an Open Publication License (OPL) and can be freely manipulated to create customized modules as long as proper attribution is made to the original work and the customized version also placed under OPL. Individual modules might conceivably be integrated into appropriate "point of need" sections of the libraries' website, as well as existing as a packaged tutorial. TILT can be used as a stand-alone tutorial, independent of classroom instruction, however it is also useful as a reinforcement tool, both before and after formal library classes. TILT effectively changes the one-shot library classes into a set of tools for librarians and teaching faculty to use for information literacy efforts. The Learning Frameworks Study Group recommends that Rutgers University Libraries adopt and customize a version of TILT similar to the one created by Western Michigan University.

Further Thoughts on an Online Information Literacy Tutorial at Rutgers

If Rutgers University Libraries decides to adopt such a TILT-like, online information literacy tutorial, initiatives should be made to include faculty from the university very early in the decision-making process, especially writing program faculty or individuals interested in writing across the curriculum. Including faculty early on will help to create the community-centered environment discussed in the HPL learning framework.

An online tutorial will not replace a personal, varied, robust, integrated information literacy instruction program for the Rutgers University Libraries (Fowler 2003, Impact). However, it will enhance the other offerings.

Any online tutorial will need to be assessed and updated at frequent intervals, especially during the first year of operation. TILT is assessed continuously and continues to grow and change (Fowler 2003, Impact).

A second, text-only version of the tutorial will have to be maintained indefinitely for visually impaired students and those with slow dial-up connections at home.

The adoption of an online information literacy tutorial means a large commitment to hardware and software maintenance for the foreseeable future.

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