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LTTS

A Course Management System for Online Inquiry Learning

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Presentation Plan

- The problem
- What is needed
- LTTS: an alternative model for DE
- LTTS Design principles
- Evaluation data
- Discussion



The problem...

- ❑ Flexibility in access is possible but traditional course structure reduces flexibility.
- ❑ Personalizing learning is envisioned as the great potential of DE, but group courses and fixed content contradicts a personalization goal.



What is needed...

- ❑ **Any pace instruction.** Self-pacing, individualized instruction is where the real freedom of the Internet rests.
- ❑ **Just-in-time support.** Self-pacing but not self study. Mentoring is essential to support understanding and the application of new concepts and strategies to the learners particular context.
- ❑ **Relevance of content.**
 - Course available when it is relevant to the student (when there is a need).
 - Course content relevant to the work context of the student (grade level and content of teaching).
- ❑ **Pedagogically sound.** Instructional design based on our knowledge of how people learn.

LTTS



<http://ltts.indiana.edu>

- ❑ A mature and successful inquiry based online learning course management system.
- ❑ Development driven by the instructional goals and resulting course design.
 - Replaces the “bucket” interface common in DE, with a guided problem-solving interface reflecting a pedagogy supported by research.



LTTS

- ❑ LTTS supports individualized instruction and mentoring and it is in this context that most of the course management work has been undertaken.
- ❑ The learning architecture grew out of our attempt to take seriously three instructional goals:
 - **Flexibility of access**
 - **Relevance of content**
 - **Pedagogical soundness of the instruction**

LTTS



An alternative model for DE

MY DESK

catalog tour glossary faq

TE401

Supporting Internet Exploration with WebQuests:

How do I design a WebQuest to meet my curriculum goals?
Author: [Carey Smith](#)

course home

resources process

solution

assessment

My Workbook

ACTIVITIES

You are here

- 1 [Explore WebQuests and establish goals for your WebQuest](#)
- 2 [Choose a topic and define a task for your WebQuest](#)
- 3 [Create the introduction for your WebQuest](#)
- 4 [Identify resources for your WebQuest](#)
- 5 [Develop the task and process sections for your WebQuest](#)
- 6 [Design the evaluation and conclusion sections for your WebQuest](#)
- 7 [Consider additional issues critical to implementation of your WebQuest](#)

Activity 1: Explore WebQuests and establish goals for your WebQuest

In this activity you will familiarize yourself with the concept and structure of WebQuests in order to specify goals for the students participating in your WebQuest. This will provide a foundation for development of your own WebQuest.

Task and Guidance

Exploring WebQuests

"A WebQuest is an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet, optionally supplemented with videoconferencing (Dodge, 1997). Prior to designing your own WebQuest you need to find out what WebQuests are and what they are good for. The following resources will provide you with an overview:

[The Student WebQuest](http://www.chicopee.mec.edu/webquest.htm)
<http://www.chicopee.mec.edu/webquest.htm>
An online article with an overview of WebQuests and their critical features.

[Some Thoughts About WebQuests](http://edweb.sdsu.edu/courses/edtec596/about_webquests.html)
http://edweb.sdsu.edu/courses/edtec596/about_webquests.html



LTTTS: Design Principles

- **Relevant to the learner**: supporting the learners (teachers) in applying the concepts to their particular situation (classroom).

- **Principle 1. Situate learning in teaching problems or curriculum issues** “bringing the problem home”



- **Principle 2. Provide choices.** One size does not fit all. Catalogue of 60+ courses





LTTS: Design Principles

Pedagogically sound: Online adaptation of PBL → Inquiry environments with guided (scaffolded) problem solving.

- **Principle 5. Problem centered learning.** Curriculum problems drive learning
- **Principle 6. Scaffolded work environment.** Set of tasks, guidance, tips, templates, facilitation.
- **Principle 7. Link conceptual understanding and practical application.** Learners provide rationale and self-assessment for work
- **Principle 8. Rich in resources.** A work environment with resources to use in solving the problem, not a set of required readings





LTTS: Design Principles

- **Ease of Access:** More than interface and technical requirements... For busy learners schedule and time requirements are critical.
 - **Principle 9. Short, focused courses.** Middle ground between full semester courses and online resource environments. 30 hour/ 1 credit
 - **Principle 10. Self-paced instruction.** “Anytime” is only real if courses are self paced: up to 12 weeks to complete the course.
 - **Principle 11. Just-in-time access.** No fixed dates to start a course (24/7). Available when the learner wants, needs or can engage in learning of the particular concepts and practices

Evaluation data:



Self-paced or Collaborative?

- Percent of students who agree or strongly agree (post course evaluation; N=90)

The ability to move at my own pace was important to me	94%
I would prefer going through this course with other students as a class	38%

Evaluation data:



Course components

- Percent of students who agree or strongly agree (post course evaluation; N=90)

The resources available in this course were valuable.	90%
I wish their were fewer but larger tasks (assignments) in the course.	21%
Overall I would rate the quality of this course as outstanding	84%

Evaluation data:



Learning & Transfer

- Percent of students who agree or strongly agree (post course evaluation; N=90)

I expect to use or have already used this project in my classroom or in someone else's classroom	90%
I learned a lot in this course	88%



The future of LTTS...

- ❑ Developed originally for teacher PD, but appropriate for any PD environment
- ❑ Appropriate for any problem centered learning environment (e.g. we may be using it to teach HS kids about Congress)
- ❑ We focus on individualized learning, but LTTS can and has been used with groups, and includes the necessary collaborative tools.
- ❑ Conversational animated agent used to supplement the mentor's efforts is in initial testing.
 - Agent is triggered by student behavior (click stream data)
 - Agent can offer encouragement, provide direct instruction, provide process guidance.



Thanks!

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