The Virtual Learning Commons

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Videos:
VLC Objectives link - http://youtu.be/yO_iu4GzRZs
VLC Demo link - http://youtu.be/nXq60mj9uy4
Two workshops
- Content requirements
- System requirements

48 attendees

Results: need for community-generated content:
- Technical explanations of approaches and tools;
- Descriptions of how a specific technology is actually used – the work context and work flow in real settings from users’ perspective;
- Awareness of social and organizational context – both of those who create technical approaches and of LTER itself;
- Understanding of scientific data/methods being supported by IM.
Background

- **2008 Discussion with Kristin**
  - Disconnect between technologies being developed vs IM needs
  - How to understand and keep up
- ***ASM 2009**
  - Series of working meetings on learning in information management
- **Spring 2010 met with IM Exec (briefly)**
- **Finland Jan 2011**
  - Kristin, Deana, Karen Baker, Helena Karasti
  - Collaborative learning and learning systems
- **March 2011 NSF CI-Team proposal**
- **September 2011 award**
  - Built on prior research on human factors in technology learning and adoption; cross-disciplinary learning and diffusion of innovation
    - 2002-2007 SEEK
    - 2006-2008; 2008-2010 NSF CI-Team projects
Project Goals

Goal 1: Create a virtual learning environment focused on new and existing techniques for data and information acquisition, exchange, analysis, and integration of data;

Goal 2: Engage local, regional, national and international STEM research and education communities in both face-to-face and virtual settings; and

Goal 3: Continue to develop and extend our understanding, theories, concepts, and models of interdisciplinary collaboration and diffusion of technical innovations in STEM research settings. [This research builds on two prior CI-Team projects]
Proposed solution: The Virtual Learning Commons (VLC)

- Assist users in *finding* relevant existing content about a given technology (VLC Discover)
- Support users in self-directed *learning* about that technology (VLC Educate)
- Support users in *appropriating* that technology into their work (VLC Innovate)
- Enable collective *learning and discussion* around content (VLC Collaborate)
What is different about the VLC?

- Many online learning systems for classroom education
  - But they assume there is a teacher designing the learning experience and creating content

- Many online systems for sharing documents
  - But they assume that you own the content and you just need to share it
  - The resources you need to share and discuss may not belong to you

- VLC handles DISTRIBUTED collections
  - Content of interest exists out on the Web – and need to be organized by you into collections that make sense to you (Semantic Web solution)
  - You contribute discussion and auxiliary materials around that content (Social Web solutions)

- VLC is INNOVATION-CENTERED:
  - Targets learning across disciplines in research settings where materials are limited, for the purpose of appropriating new approaches into different settings

Discover
Educate
Collaborate
Innovate
LTER Controlled Vocabulary??  LTER Projects/People??
1. Tags embedded in projects’ registered website
2. Tags manually captured and managed in the VLC
Concept Map of VLC Ontology
Semantic-Based Mashups

1. Ontologies definition (fact)
2. Ontology approaches (concepts)
3. Pizza ontology (tutorial)
3. Wine ontology (example)
4. Climate ontology (example)
5. Biodiversity ontology (example)
6. Jane Doe discussion (synthesis)
6. John Smith discussion (synthesis)
7. Recommendations (people who conducted this search also searched…)

1. Wikipedia
2. W3C website
3. Protege website
3. Protege website
4. Cyber-ShARE educational portal
5. DataNet educational portal
6. Jane Doe practical application
6. John Smith practical application
7. System analysis

- General source
- Academic IT source
- Academic domain sources
- Networked learning sources
- Recommender source

11/5/2012
Social Web: STEM Communities

1. LTER Information Managers
2. UTEP STEM Educators
3. Geo-Epidemiology Research Network

VLC targets sharing within and across communities
Create collection

- My own (private)

Shared:
- Public (with everyone)
- Private (with specified group)
VLC Approach

Social Media

Views:
Who
What
Where
When

Collections - Semantic mashups

Distributed resources
Discover!

Collaboration Networks (Who)

What
Where
When

Person
Institution

P
1
P
2
P
3
P
4
P
5
I
1
I
2
I
3
I
4

Project A
Resource 1
Resource 2
Resource 3
More...

Project B
Website
YouTube Video
Tutorial
Conference abstract
Presentation
More...

Project C
Resource 1
Resource 2
Resource 3
More...

Project D
Resource 1
Resource 2
Resource 3
More...

LIST: Institutions
LIST: People
Feedback box

11/5/2012
Discover!

Who
List (What)
Where
When

Resource 1
Resource 2
Resource 3

NEWEST
More

Resource 1
Resource 2
Resource 3
Resource 4
Resource 5

More

TAG CLOUD
(Newest entries with these tags/terms)

TAG CLOUD
(Entire site with these tags/terms)

Feedback box

Collect

11/5/2012
Discover!

Who
Cluster (What)
Where
When
Discover!

Who
What
Where
When

1. Project A
   - Website
   - YouTube Video
   - Tutorial
   - Conference
   - Presentation
   More…

2. Project A
   - Resource 1
   - Resource 2
   - Resource 3
   More…

3. Project B
   - Resource 1
   - Resource 2
   - Resource 3
   More…

4. Project C
   - Resource 1
   - Resource 2
   - Resource 3
   More…
Discover!

Who
What
Where
When
Educate!
Create course
Create virtual conference
Innovate!

Search term(s)

Searches:
• Elevator speeches
• One page flyers
• Lightning talks
• Semantic Abstract workflows
• Tutorials
• Exercises
Design research

• *Semantic abstract workflows*
• *Data management planning*
What are the patterns that researchers use to discover and evaluate resources in virtual space?

How does networked learning impact those patterns?

What is the impact of networked learning on technology adoption?
LTER IM is KEY

1. I know the community and you know me!
2. The project has evolved from discussions with you
3. I *think* I understand your problems
4. VLC success depends on community contribution and sharing of content, knowledge, and expertise…I *think* your wealth of experience will make this a success
5. We have budgeted funds for small meetings of LTER IMs specifically to work on content (Kristen)
6. We have budgeted funds for an extra day at the annual IM meetings for training (Kristen).
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