Supporting Reflection in Informal Learning

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EC-TEL Doctoral Consortium 2008
People need to communicate their knowledge and competences ... 

... but they have to be aware of them, too!

http://www.flickr.com/photos/jbot6000/1153835575/
How to make learning conscious in unstructured and emerging environments?
Make people aware about their learning even if they don’t intend to learn?
Learner Support in Unstructured Environments

Model Tasks
Analyse Actions
Educational Templates
Recommend Content or Activities
Relate to Ontologies
Assessment and Testing
The Approach

Highlight and unveil effort, interest, and competences by providing and adapting different indicators on the learning process to the learner.
Indicators are *landmarks* that help learners to navigate through the learning process in different contexts.
What has happened so far?

- Learners are treated as equal (aka cohorts)
- Learner support directly related to learning goals and/or learning objectives
- Indicators are considered to have equal effects on all learners
- The context of learning is hardly taken into account
A Model for Supporting Self-regulation and Self-organisation

(Butler & Winne, 1995)

(Dey, 2000)
Peripheral information

... any information which is not directly dependent on the objectives
- on the content
- on the didactics of a learning processes

... allows learners
- to relate
- to maintain
- to assess

Peripheral information helps learners to create relations of their activities in a given context.
Framework for Adaptive (Smart) Indicators

**Interface**
- Selection Sensor (click-through detection)
- Tagging Sensor (del.icio.us JSON Interface)
- Contribution Sensor (RSS/ATOM Feed Reader)

**Monitoring**
- Sensor Layer

**Assessment**
- Semantic Layer
  - Activity Aggregator
  - Interest Aggregator

**Respond**
- Control Layer
- Indicator Layer

**Interface**
- Interface Widget
- Interface Widget

Data Flow and Control

Style Sheets
Process Log
Smart Adaptation

Sensor Reference

Aggregator Reference

Context Boundary

Indicator Reference

Adaptation Strategy
Problems

• Defining contextual boundaries
  – not empirically grounded
• Choosing appropriate indicators
  – contextual effects were not analyzed
• Defining effective adaptation strategies
  – not empirically grounded

• Are there contextual differences in the perception of activity visualisation?
Team.sPace

http://lnx-otecexp-005v.ou.nl
ReScope

I use del.icio.us for bookmarking. Below you find the tags I use.

The tag cloud shows the relevance and the recency of these topics that I find interesting. The font-size of each tag indicates its relevance, while the color tells you my current interest for the tag.

http://lo-f.at/glahn/
First Experiment

- engages non-contributors
- mostly ignored by contributors

- distracts non-contributors
- engages and motivates contributors
Second Experiment

- Social navigation can be detected also among small user groups
- Implicit interests of contributing users are more focused than those of non-contributing users
- Implicit interests in tags do not replicate explicit interests
- More active users tend to replicate their tagging behaviour in their implicit interest in tags
Third Experiment

1. Relating browsing and tagging to external tasks
2. Controlling and directing towards interests or tasks
3. Linking topics and tags on a conceptual level

http://lnx-otecexp-005v.ou.nl/rescope/
Key Findings

• Explicit knowledge about concepts, quality, tasks, and processes is not always needed to support reflection.

• There are contextual factors that influence the perception of information.

• If the responded information is actually beneficial to learning depends on the context.
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