User-Activity Logging for Work-Integrated Learning

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Knowledge Context, www.know-center.at/knowledge-context
Knowledge Context @ Know-Center

- Know-Center: Knowledge Management and Technologies
  - R&D in cooperation with companies
  - Knowledge Context, Discovery, Visualisation and Evolution

- Mobile Work & Knowledge Context
Work-Integrated Learning

Real Time
Real Content
Real Environment

Contrasts with formal training

- No separate times for working and learning
- No separate times for working and teaching/documenting
User Activity Logging

**Gather data** about users and their activities (where, when, activity, with who, what resources…)

Draw clever inferences – **about the current situation, work and behaviour patterns or about user characteristics**

Use data as basis for reflective learning

Use inferences to adapt

- To the current situation (**context-aware systems**)
- To the user (**user-adaptive systems**)
Task- and User Adaptive System
www.aposdle.org

Panorama-Außenspiegel Standard
Maße: 130 mm x 65 mm
Marken: Citroën, Ford, VW für Baujahr 1998 – 2004

Task Detection

Die Aufgabe Innovationsstrategie entwickeln wurde erkannt.
Task- and User Adaptive System
www.aposdle.org

Resource Recommendation
Task- and User Adaptive System
www.aposdle.org

User Activity Logging

Resource Recommendation:

- Based on current task and user’s competencies
- Resources are snippets (parts of documents, videos, etc.) and people

Learning Guidance: Structured conversations, learning hints, learning paths

Task- and User Adaptive System
www.aposdle.org

Evaluated at EADS, isn, IHK

- Makes knowledge workers aware of resources within their company
- Effective: Relies on existing material
- Crucial to have good modelling tools, experienced modellers and high quality annotations
Reflective Learning Apps
www.mirror-project.eu

Learning from Resources → Learning from Experience

User Activity Logging Data as Basis for Reflection

1. Return to Experience(s)
   „objective“ perspective on experience

2. Critically Re-Evaluate
   data analysis supports interpretation/re-evaluation,

3. Learn from Experience
Reflective Learning Apps – Time Management

www.mirror-project.eu

Usage Scenario

- Work on PC, notebook, phone, mobile devices
- Automatically track time – AS IS
- Compare with plan – SHOULD BE (calendar, project plan)
Reflective Learning Apps – Time Management
www.mirror-project.eu

Currently being evaluated (1 in the field study finished, 1 upcoming, 1 experimental study upcoming)

Indications that state-of-the-art supports returning to experience well, but re-evaluation and learning not so well

→ Watch out for future results!
User-Activity Logging for Work-Integrated Learning

User Activity Logging can serve to make (learning) systems adaptive

User Activity Logging can provide the basis for reflective learning

Both are relevant for work-integrated learning – informal learning that is an integral aspect of knowledge work.
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