

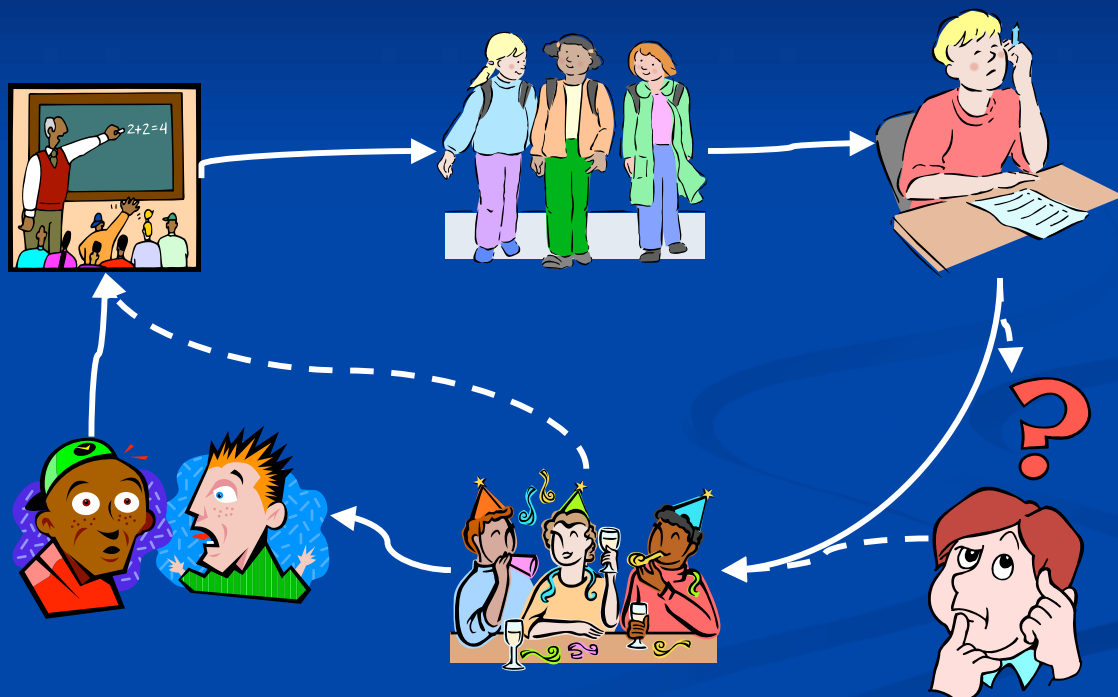
Using Blogs for Learning Logs

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Typical Situation



Identify/Close Learning Gaps

- ... by learning logs (studies provide evidence)
- ... naïve learning logs are sub optimal wrt. (meta-) cognitive learning (Nückles et al., 2004)
- ... Prompting: answering questions
 - ... can increase learning as they help to activate background knowledge (Pressley et al., 1992)
 - ... *the whole of a person's knowledge, including explicit and tacit knowledge, metacognitive and conceptual knowledge (Dochy & Alexander, 1995).*
 - ... (Meta-) Cognitive prompts (Berthold et al., 2006)

Electronic Learning Logs

- Electronic diaries exist for a long time
- Blogs became a popular platform
 - Use blogs for writing learning logs (with Elgg)
- Knowledge Bloggers report about:
 - Current work
 - Research ideas
 - Learning progress
- Exploratory study: using blogs for learning logs
 - Investigate usage and acceptance of blogs ...
 - ... Effects on retention and comprehension
 - ... Compare naïve learning logs with prompted learning logs

Experiment Setting

- 10 computer science students; 7 tutors
- Three-session seminar:
 - Read and present publications
 - 30 minutes talk + 10 minutes discussion
- Two groups (instructed by e-mail):
 - 📖 Instructed informally; write 300 words for each talk; summary plus thoughts, ideas, assessment
 - 📖 Instructed to answer (meta-) cognitive prompts
- Post-test. Second/Third session. Recall key ideas of two selected talks. 15 minutes time.

Cognitive Prompts


- **Organisation.** What is the story line of the talk? Describe the motivation, the goals, and the path to the goals.
- **Elaboration.** Make up own examples, counter examples or illustrations. Did you come across the presented techniques in a different context? If yes, where?
- **Critical Reflection.** What did you find interesting, useful, convincing, inspiring? Is there anything you criticise?

Metacognitive Prompts

- **Monitoring.** What did you not understand about the talk?
- **Self-diagnosis.** What is the likely reason?
- **Self-regulation.** How would you overcome your deficiency?

Example

August 13, 2006



ITS 2006 Seminar

My Summary: Decision Theoretic Tutors

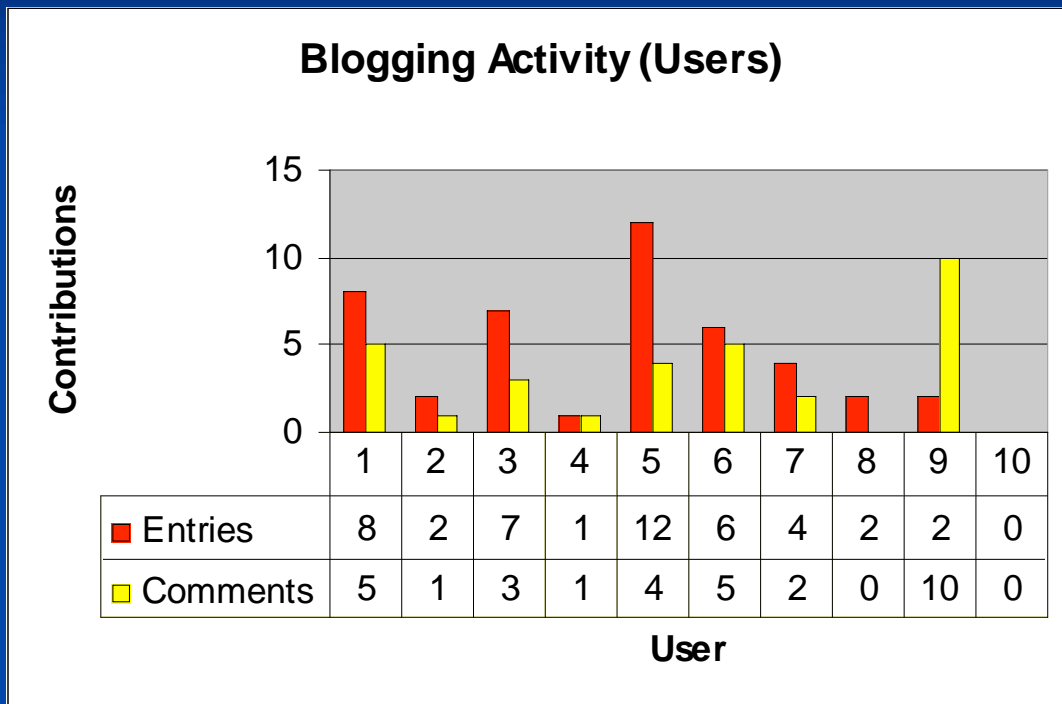
This is my summary of Stephen's Talk on Decision Theoretic Tutors.

I thought that the concepts presented here were very interesting because they're quite different to other approaches. The tutors I know of rely on good exercise construction and error or help messages to keep a user working. That is, a human exercise author is responsible for keeping the user happy and motivated. If a user is getting unhappy, because he can't do an exercise as well as he likes, then there is usually no way to react to this within the exercise. And the user will probably stop working on the exercise or with the tutor itself.

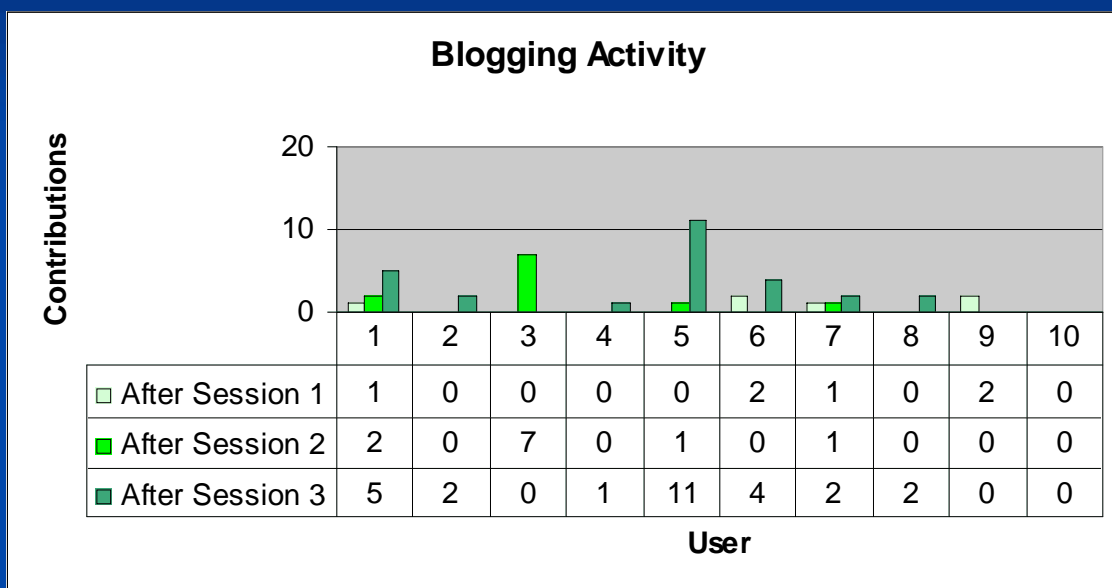
To counter this, DT-Tutors have a **student Model** that does not only contain knowledge and relevance networks, but also some information about the student's 'feelings'. This includes the students feeling of independence (from system help) and morale.

Now, the **knowledge network** is rather standard stuff, i.e. all the parts of the problem solution graph the student already knows.

Blogging Activity



Blogging Activity



Research Question 1

Are blogs accepted as reflective tools in short-term learning? How useful are blogs in a seminar?

- Recall and memorise learned material
- Structure and organise own thoughts
- Read about their fellow students' views
- Discuss raised open questions and opinions
 - ... in comments

Research Question 1

Are blogs accepted as reflective tools in short-term learning? How useful are blogs in a seminar?

- Careful reviews
 - Bad talks were related to possibly bad publications
- Students created own communities
 - Tutor was not aware
 - Too few (active) members to organise communities
- Work upload into e-portfolio file folder
 - Tutor was not aware

Research Question 1

Are blogs accepted as reflective tools in short-term learning? How useful are blogs in a seminar?

- Time-consuming
- They wrote because they were supposed to
- After the seminar nobody continued to blog
- Usability (no notification, no hierarchical views)
- Our own students in the research group did not blog

Research Question 2

Do students believe that their performance increased by using learning logs?

- Yes ...
 - In general, active bloggers dealt in depth with
 - ... and gained a broad overview (documented by blogs)
- But ...
 - Success cannot be fully confirmed by post-test
 - One student was very active but a poor post-test

Research Question 3

How do students reflect in naïve learning logs?

- Insufficient and diverse data, hence no tendency
- 📄 Only summaries; one brief, reflective paragraph on his own talk
- 📄 One general remark; one summary; some points raised in the discussion; no reflection
- 📄 Assessed the presentation (comprehensive, easy to follow, logically structured, well thought, convincing); related to other experience; recommended further reading

Hypothesis 1

We expect an increased motivation to blog if students know that their blogging activity is graded.

- Blogging was minor part of the grade
 - Cost-benefit ratio was too high
 - Blogging activity was hindered by usability:
 - No notification
 - No hierarchical views
- ➔ **Reject hypothesis.**

Hypothesis 2

We expect a better performance in the post-tests for students who were instructed to use prompts.

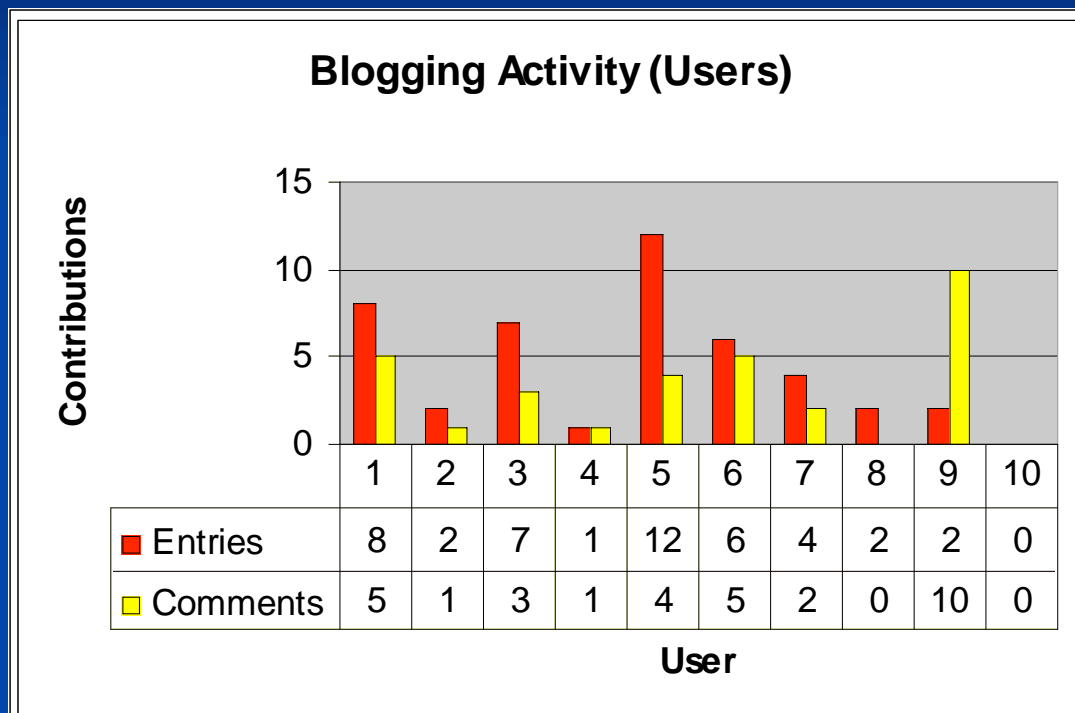
- ❁ Insufficient data
 - ❁ Students did not follow the prompt schema
 - ❁ Students skipped sessions
- ❁ Good students who blogged actively
 - ❁ Performed well in post-tests
- ❁ Cannot generalise to all active students

Hypothesis 3

We expect that students who write naive learning logs switch to the prompt schema after the second session.

- ❁ Only one candidate.
 - ❁ Did not know anything about the other group.
 - ❁ Combined summaries and reflections according to his own preferences.
- ❁ Not many examples for adaptation as the students with prompts did not follow them.

Blogging Activity



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Tutors refuse this medium

- ❖ Lack of time!!!
- ❖ Too much effort to follow activities
- ❖ One tutor followed but was not tempted to contribute
- ❖ Lack of notification
 - ❖ In contrast, e-mail communication works
- ❖ It took the tutor an amount of time for writing (think, question, write)
- ❖ Tutor stopped blogging after third session (time)

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Discussion

- Decrease cost-benefit ratio (time, effort)
 - Thread hierarchies, notification
 - ... why not use forums (phpBB)?
 - ... integrate into LMS, e.g. OSP and Sakai ...
- Learning logs for each subject?
- Tutors have time constraints:
 - Stop using
 - Restrict posts to a few post types (e.g., open questions)
 - Leave community to itself

Discussion

- Sustainable and vivid community:
 - Comprises volunteers with common interests
 - Essential for forming a *learning landscape*
- Prompt templates for blogs:
 - Though prompted, students did not structure their entries
- Experiment setting:
 - Don't let all students write.

Conclusion

- Exploratory study on using learning logs with a blog-based e-portfolio system.
 - Initial experience / few data
- Idea is well accepted.
- Cost-benefit ratio too high
 - ... decreases motivation
 - Sophisticated workflow mechanism are needed
 - Maximum usability
- To stimulate (meta-) cognitive processing
 - Prompts in form of template blog entries

Questions?