ENHANCING MEDICAL CURRICULA VIA ONLINE PROBLEM BASED LEARNING – EXPERIENCE USING WEB 2.0 TECHNOLOGIES

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Setting the scene

- current enormous expansion in knowledge
- challenge to the educational mission
- two main issues arise in medical education:
  1. the necessity for overspecialized learning material and educators
  2. the need to shift emphasis from a disease-based approach, to the more intuitive patient centered view
Approach

- We shift the emphasis of the use of wikis and blogs towards active support for problem based learning in medicine
- Based on a blended learning scheme
- Moodle open source learning environment
Work is illustrated along three main objective lines:

1. deployment of problem-based sessions in virtual teams, where both students and instructors may be located in remote institutions
2. provision of tools for student inquiry and collaboration
3. provision of mechanisms for continuous monitoring/assessment and evaluation, thereby, addressing direct knowledge, as well as, any tacit competencies targeted via PBL
A schematic representation of web2.0 as a virtual place for bi-directional collaboration, new knowledge and new educational experience creation by both students and instructors.
PBL session

- Instruction is performed by an interdisciplinary team of experts from remote institutions.
- The group of learners can be students from the same or different institutions within the consortium.
- Instructors collaboratively develop a problem in a wiki.
Discussion is initiated via a dedicated discussion forum (or a problem specific blog)

Students and instructors collaborate to

- analyse the problem
- identify conquered knowledge
- plan actions for problem solving

Once the PBL session kicked off and the above instruments were set

- students had to search for relevant information (be it via the web or not)
- collaborate in order to start solving the case/problem via the wiki
All student activities, progress and more importantly collected experience and acquired competences were recorded, shared and commended on via their personal blogs.

The whole learning procedure and all its steps (with the final problem/answer deployment) are recorded, commended on and monitored via the wiki (final and intermediate versions) and the participants’ blogs.
PBL idea and the overall process

step-wise setting of the problem in the form of numbered questions

associated finalised answers/resolutions
dedicated PBL discussion forum

personal blogs used by each student for drafting their own approaches/answers to each problem/case question
A summary of the step-wise Web 2.0 PBL approach and its features

1. Instructors
2. Problem setting
3. Student preparation
4. PBL step 1
5. Resolution of PBL step 1
6. Proceed to next steps…
7. Record process progress
8. Assessment
9. Evaluation
Students’ evaluation

- was obtained via an anonymous questionnaire emphasising on the use of Web 2.0 tools.
- The Moodle system lead the logged-in students to an external web site powered by another open source survey tool, namely, “PhP Surveyor”
Evaluation of the user friendliness of each Web 2.0 instrument used

Web 2.0 tools - Ease of use

Percentage

Yes | Probably Yes | Unsure | Probably No | No
---|---|---|---|---
Blog | Forum | Wiki

0.00 | 10.00 | 20.00 | 30.00 | 40.00 | 50.00 | 60.00
Students indicated a positive attitude towards future experimentations with such approaches.
Most students admitted that they often consulted their fellow students’ blogs before starting their own entries.
Evaluation indicates that the overall educational process was enhanced by the approach followed.
Acknowledgements

IntraMEDnet:
http://www2.cs.ucy.ac.cy/intramednet/index.html

WideMEDnet:
http://www2.cs.ucy.ac.cy/widemednet/index.html