The use of wikis as Learning Content Management Systems (LCMS)

Paul Laughton
Department of Information and Knowledge Management
paull@uj.ac.za
1 Introduction

- Recent developments in Internet applications have seen the birth of a new kind of user generated content on the Internet and World Wide Web (WWW).
- The incorporation of Web 2.0 into e-learning has led to new possibilities.
- Learning no longer is viewed as an internal or individualistic process, but rather it has emerged as a social process (Lave & Wenger, 1991; Levine & Moreland, 1991).
- This minimal invasive education (MIE) concept can now more effectively be incorporated into the e-learning environment, with the goal of improving the learning experience.
1 Introduction

• The rationale of the study was to gauge the effectiveness of using the Infoman2b wiki as an e-learning tool and to assess the contribution that the Infoman2b wiki made to the understanding of the course material in comparison to Blackboard (WebCT).

• The survey undertaken allowed for the identification of the strengths and weaknesses of using a wiki for e-learning.
2 E-learning

- Online learning was widely talked about in the late 1990's and consisted of using network technology to design, deliver, select, administer and extend learning (Cross, 2004:104).
- For the focus of this research e-learning is used to describe a hybrid system as mention by Akeroyd (2005), e-learning was used in conjunction with theory and practical lectures for the course offered relating to the research.
- This approach maintains a human element which can help encouraging learners to be more open, and increase the level of trust amongst those responsible for teaching and learning.
- O'Hear (2006) mentions that an e-learning approach is often driven by the needs of an organisation and not the needs of the individual learner, reducing their effectiveness.
3 Learning Content Management Systems (LCMS)

- LCMS, offering a technological platform for e-learning. Mason (1998) highlights three different approaches to LCMS design:
  - **Content and support**: traditional model, static content is used alongside conventional offline teaching.
  - **Wrap around**: uses higher levels of interaction, content itself becomes more dynamic and the e-learning process becomes more involving.
  - **Integrated**: this is a community of learning approach where content is dynamic, collaboration and mutual support are key to this process. This is a desired state in terms of MIE and is growing in popularity.

- LCMS can be defined as two concepts, virtual learning environments (VLEs) and learning management systems (LMS).
3 Learning Content Management Systems (LCMS)

VLEs are software packages that work together with hardware, designed to support education and are characterised by a combination of features (Bostock, 2000):

- Computer mediated communication: email and bulletin boards, real-time messages (chat).
- Publishing: lecture slides, module outlines, case studies and assessment materials.
- Computer assisted assessment.
- Course management facilities.

A LMS is a Web application where a learner can log on and access the course and contains features which include (Watson & Ahmed, 2004:5):

- Delivery of course content.
- An administrative tool that allows for tracking of learners performance.
- Management of online learning (course and learner administration).
- Provision of tools for student collaboration.
The word ‘wiki’ originates from a Hawaiian term meaning quick.
The founder and inventor of the wiki was Ward Cunningham, who in 1995 set out creating the simplest database that would work.
Desilets et al. (2005) defines wikis as simple to use asynchronous, web based collaborative hypertext authoring systems.
Wikis are web pages that people can directly edit, update, modify or delete (Vossen & Hagemann, 2007:49).
4.1 Wikis in education

- Wikis allow us to create collaborative knowledge spaces that harbour learning practices that extend beyond the boundaries of traditional formal education (Guth, 2007).
- Allows learners an opportunity to collaborate with their peers, teaching valuable skills of constructive criticism.
- Create a sense of responsibility amongst participants as they are incorporated into this learning community.
- Minimal hardware and software requirements makes it ideal for education: computer, Internet connection and an Internet browser.
- Ease of use depends on the wiki software one employs, not all “What You See Is What You Get” (WYSIWYG).
- There is a wide range of different wiki software.
4.1 Wikis in education

- Infoman2b wiki was created for this research using Wetpaint
  http://infoman2b.wetpaint.com

- Wetpaint was founded in 2005.
- Wetpaint allows user to create a Web site (wiki) using a mix of the best features from wikis, blogs, forums and social networks.
- Today Wetpaint is responsible for over a million wikis and partners include: Fox Entertainment, HBO, T-Mobile, HTC, Oracle Corporation and Hewlett-Packard.
Welcome! This is a website that everyone can build together. It’s easy!

### Classroom

**Hello and Welcome to the Information Management 2B Wiki**

This wiki will be used for the purpose of student collaboration. Please use this facility to read the views of other students as well as express your views through the threads on the discussion topics. This is a first for me so please let's use this tool to the best of its ability. I look forward to observing the potential power of Wikis in education. I hope this is a rewarding experience for all.

Good luck and please read the instructions in WebCT. I have also made them available on the Wiki under Wiki instructions, so there are no excuses.
5 Methodology

- Sample: Information Management 2B undergraduate students (+/- 250 students).

- Two tools were used as the e-learning component of this course: Blackboard Vista Enterprise Licence and Wetpaint Infoman2b wiki.

- To administer the wiki participation, the class was broken into three different groups according to their surnames (A-L, M-N, O-Z).

- Each group was asked to comment on a topic on a fortnight basis.

- The same resources (study guides, class notes) were replicated on the wiki and the Blackboard environment.

- A total of 212 students completed the survey.
6 Findings

Age of Respondents

- 17-19
- 20-22
- 23-25
- 26 and older

Gender of Respondents

- Female
- Male
6 Findings

Accessibility

- 2 or more times a day
- Once a day
- 3 times a week
- Once a week
- Seldom or hardly ever

Comparison between WebCT and Infoman2b wiki.
6 Findings

Ease of navigation

1 is least effective and 5 is optimal
6 Findings

- **Downloading of study guides, instructions and other manuals**
  - Infoman2b wiki
  - WebCT

- **Looked at or received announcements**
  - Infoman2b wiki
  - WebCT
6 Findings

![Bar chart showing time spent in a single session for Infoman2b wiki and WebCT. The chart indicates that most sessions are less than 5 minutes, with fewer sessions lasting up to 30 minutes.](chart.png)
6 Findings

Incorporation of other tools and applications

<table>
<thead>
<tr>
<th>Tool</th>
<th>Infoman2b</th>
<th>WebCT</th>
</tr>
</thead>
<tbody>
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<td>Other</td>
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<td>35</td>
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<td>YouTube</td>
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<td>Delicious</td>
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<td>Blogs</td>
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<td>79</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>104</td>
</tr>
</tbody>
</table>

Contribution to discussions, messages and posts

<table>
<thead>
<tr>
<th>Tool</th>
<th>Infoman2b</th>
<th>WebCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infoman2b wiki</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>WebCT</td>
<td>72%</td>
<td>72%</td>
</tr>
</tbody>
</table>
Findings

Contribution of WebCT to understanding of course

Contribution of Infoman2b wiki to understanding of course

1 is least useful and 5 is most useful

Contribution to understanding of course

0% 5% 10% 15% 20% 25% 30% 35% 40%

1 2 3 4 5
6 Findings

Communication between respondents

- Use of Infoman2b to communicate with other students: 39 responses
- Use of WebCT to communicate to other students: 118 responses
- Use of Infoman2b wiki for non academic purposes: 15 responses
- Use of WebCT for non academic purposes: 24 responses
8 Limitations of research

- The format of the questionnaire made a direct comparison between the Infoman2b wiki and Blackboard.
- This comparison is not entirely fair as not all applications and tools were duplicated.
- This comparative approach does not reveal all the strengths and weaknesses of using wikis in education.
- Students exposure to the wiki was relatively short in comparison to Blackboard.
Recommended reads:

- www.ikiw.org
Q & A