Applying Wikis To Project-based Modules With Large Classes

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Outlines

- Motivations and previous research
- Experiment settings
- Experiment, method and data collection
- Results and Conclusions
Motivations

- Challenge: effectively manage project-based module with large class size
  - Large class size project-based module
    - More than 100 students, 20-30 project groups.
    - The module project should be finished in 7 weeks.
  - Monitor the student progress and provide timely feedback.
    - Identity slow students and groups.
    - Make sure groups are on the right track.
- Engage students.
- We need an online discussion space with access right function. → Wiki space → Wiki@nus
Previous research

- Web 2.0 tools were helpful in learning and teaching. (Abdulla & Muhammad, 2009)
- Wiki was used as a tool for educational applications focusing on collaborative and constructive paradigms. (Parker & Chao, 2007)
- Applying Wikis to facilitate student group work has been investigated for language courses. (Ramanau & Geng, 2009)
- The feasibility of applying Wiki to engage students has been put in doubt. (Cole, 2008)
Experiment settings

• Set up pages on Wiki@nus
  • Space accessible only by group members
  • Common space for all students
  • Depository for related materials

• Module project
  • Project design
  • Project implement
Experiment

- Run this experiment twice.
  - About one-third of students are involved in this experiment in each run.
  - We deliberately decrease the amount of interaction between the students and lecturer in the second round.

- Promote the Wiki space among students.
  - Students need to login in before system recognize him/her.
  - Discuss the problems posted on the Wiki spaces during the lecture/project sessions.
  - Put compulsory participation requirements.
Experiment

- Engage students online and with meetings.
  - Join students’ discussion to encourage learning.
  - Guide students to avoid the traps in their projects.
  - Arrange face-to-face meetings when necessary.

- Trace students’ progress.
  - Pay attention to those “quiet” students and groups.
  - Arrange face-to-face meetings with these students and groups.
Method and data collection

• Student grades
  • Student performance data

• Student survey
  • Wiki is helpful or not for students?
  • How helpful Wiki is for student collaboration?
  • How helpful Wiki is for students and lecturer interaction?
  • Problems on working with Wiki.
Results and conclusions
<table>
<thead>
<tr>
<th></th>
<th>Sem 1</th>
<th>Sem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>Percentage in the class</td>
<td>38.38%</td>
<td>36.94%</td>
</tr>
<tr>
<td>Percentage of A- and above</td>
<td>43.33%</td>
<td>36.84%</td>
</tr>
<tr>
<td>Percentage of B- and above</td>
<td>41.11%</td>
<td>39.29%</td>
</tr>
</tbody>
</table>

\[
\text{Percentage of A- and above} = \frac{\text{number of engaged students with grade A- and above}}{\text{number of students with grade A- and above in the class}}
\]

\[
\text{Percentage of B- and above} = \frac{\text{number of engaged students with grade B- and above}}{\text{number of students with grade B- and above in the class}}
\]
• How this Wiki application affect their interests on the topic?
Inspire my interest in the project a lot.

Inspire my thinking about the project somehow.

It is hard for me to understand what was discussed.

Don't know.
What is the main advantage for the usage of the Wiki for this module?
My group can discuss online without having to find common slots for discussions.

Students can interact with lecturers without taking time to make appointments.

Various materials, such as videos and texts, can be integrated together and easy to access.
Do you think you benefit from the peer discussions on the project Wiki space for your project design and implementation?
• What is the main obstacle for students to use the project Wiki space?
Typing interrupts my thinking.
Not familiar with the interface or don’t know how to use it.
I do not want to put my ideas on internet.
Others.
Conclusions

- This project shows Wiki is a possible way to manage project-based module in engineering.

- Students use Wiki as a tool to interact with lecturers. It is also a way for lecturers to engage students.

- Students’ performance is improved by this application.

- The collaboration function of Wiki is not well perceived by students in this experiment.
Thank you!