

The problems of online collaboration for junior high school students: Can the Learning Activity Management System (LAMS) benefit students to learn via online learning?

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This paper identifies the problems incurred in online collaboration with high school students. The major problem is that the mentality of high school students using online collaboration is similar to casual chatting on 'MSN', which is used more for socializing than learning. This problem is particularly significant in junior high school students. The findings from the two focus group discussions (with two groups of junior high school students) show that there are many problems using online collaboration when students performed a learning activity. This paper attempts to point out that a live monitoring facility in the Learning Activity Management System (LAMS) may provide the solution to help students to learn via online learning.

Keywords: Online collaboration, LAMS, themes, learning activities

Introduction

Dillenbourg (1999) and Station et al. (2001) both indicate that social interaction among peers and learners is the basic element to achieving learning. Wagner (1994) also defines that "Interaction is an interplay and exchange in which individuals and groups influence each other" (p. 20). Stahl et al. (2006) identify collaborative learning as a synchronous activity in which participants remain interactively engaged with a shared task in group processes. Boettcher and Conrad (1999) point out that online learning provides learners with the freedom of no physical and time constraints. Online collaborative learning creates the convenience for small group learners because they can meet and interact online irrespective of their distance and location. Learners can choose their own timeframe, using their own computer for their online collaboration.

While there are many benefits of online collaborative learning, one drawback is that the mentality of high school students using online collaboration is similar to that of chatting on 'MSN', which is more in line with socializing instead of learning. This paper selected part of the research data for the online collaboration from a research project entitled "Designing for mobile learning in a Technology Museum". This research project requires students to perform an exhibition design as part of their learning activity. Online collaboration is used for part of their learning process in sharing ideas among their peers. This paper focuses on one of the learning supports (i.e. online collaboration) provided for students in sharing ideas by using the online collaboration tool. Further investigation on the behaviour of two groups of junior high school students (all from Year 8) in performing their online collaborative sessions has been carried out.

The Learning Activity Management System (LAMS) is a revolutionary tool for designing, managing and developing online collaborative learning activities (LAMS1, 2008). It provides a structured way to describe teaching and learning processes (Dalziel, 2003). The LAMS provides a live monitoring facility that can help the instructor to monitor the progress of the learners, particularly in relation to their online learning activities (LAMS2, 2008). As described above, the problems of online collaboration for junior high school students may hinder the effectiveness of online collaborative learning. This paper will focus on the discussion of the live monitoring facility provided by the LAMS, and attempt to list out its functions that may help students to achieve more learning through online collaboration.

Participants

All students participating in this research project are entirely voluntary. In this project, there are three participating groups, but only two groups have online collaborative sessions. Therefore, in this paper, the focus of analysis will concentrate on these two groups of students: Group M and Group O. Each group has six to seven students (all in Year 8) coming from different types of schools including private, local and selective government schools, with a mix of boys and girls.

Methods

The purpose for students in having the online collaborative session is to give the opportunity for them to share ideas about their exhibition design activities. There are five online sessions using LearnLab (an online collaboration tool developed by CoCo research centre, refer to Figure 1). This is our online collaboration tool for sharing students' ideas. An expert from the Powerhouse Museum was invited to join in one of the online sessions with students.

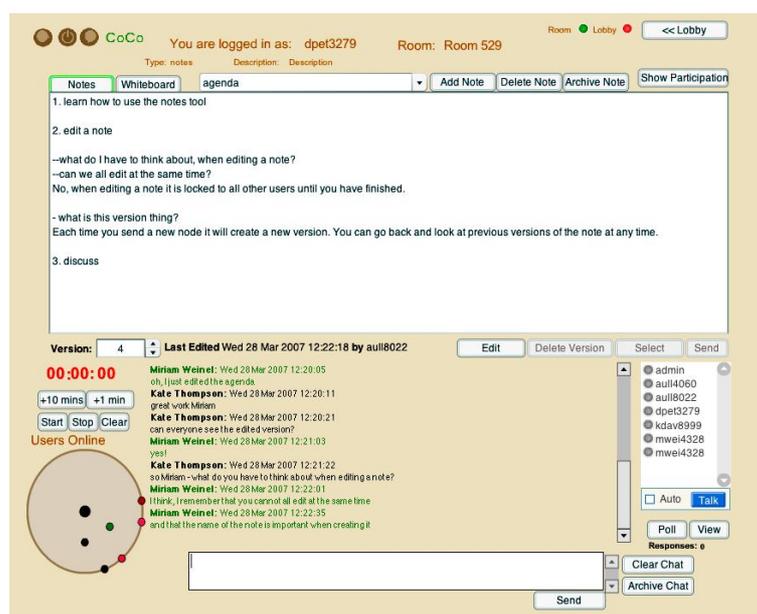


Figure 1 Online Collaboration Tool – LearnLab

Focus group discussions on students' opinions in using different learning supports are conducted at the end of the research project. In this paper, the discussion of the analysis will only be focused on one of the learning supports (i.e. online collaboration). Arvaja (2007) proposes three dimensions in analysing online collaboration: thematic content, communicative functions and the resources used in the collaboration. In this research project, thematic analysis, as described by Ryan and Bernard (2000), is used for this study. Based on all focus group discussions, numerous themes are established with respect to different learning supports. However, as mentioned before, in this paper the focus will only be on the learning support of online collaboration. All focus group discussions were audio-recorded, and the transcription data were thematically coded. Some of the coded themes are listed below.

Results and Findings

There are some interesting findings regarding the learning support of online collaboration in two groups of students: Group M and Group O. For Group M, there are a total of fifty-eight students' references in relation to the learning support mechanism of online collaboration. Basically, all references occur in negative comments except for one student making reference to the theme of *'Help to Learn'*. However, his comment is not entirely a positive one, for he mentions that he has only learnt one thing in the entire online session. All other students' references in the entire online collaboration sessions mainly consist of negative themes: one

for 'Boring', nine for 'Not useful', twenty-two for 'Not sharing ideas', and twenty-five for 'Problem & Frustration'. For Group O, the feedback is slightly better, with one for 'Help to Learn' and one for 'Knowledge gain'. All other coded themes are in negative feedback: eleven for 'Not sharing ideas' and six for 'Problem & Frustration'.

Some examples for these themes on Group M and Group O:

Not Useful:

¹Student MB2: "You find them chatting, half of the people weren't replying, or they are doing something else although I had something to tell them."

Student MG1: "Yeah, well you just can't expect to speak with a bunch of teenager in an online session which is a bit like MSN and then tell us to concentrate because we're not going to."

Student MG1: "I don't think online is one of the best ways, if you want to share ideas and you can't seek teenagers with each other, you should do it online 'cause it won't really like."

Not sharing ideas:

Student MG1: "Everybody's already said it, it lags, people don't talk, the right stuff, nobody really shares, people keep logging out to change their colours ..." Explanation – See Footnote 3

Student MG2: "I don't mind, but like you don't know what to share with them 'cause just like the parts of your exhibit, it's just like which part you want to tell and then they don't know what part they want to have either, so it's just a bit hard to share."

Student MG1: "Well it's hard to explain."

Student MG1: "Nobody really sees any point in sharing ideas."

Student OG1: "You have to remember everything You have to remember everything that you've done and then tell everyone."

²Student OB2: "If I was said how to have a keyboard design, everyone's going to turn around and laugh at me."

Problem & Frustration:

Student MB2: "It's yeah, and you remember the things lagging with who can be the best ... best person to get to the middle." Explanation – See Footnote 4

Student MB2: "Trying to beat each other and then you can just see it goes high and then it gets lower and lower and lower."

Student MB2: "They want to do their own stuff."

Student OG2: "Everyone talks at once. It's hard to get your questions answered."

Student OG2: "So the questions being like someone answers something and then another question's being asked and someone replies to the other question and then he talks for like two minutes... And then like two minutes later you come back and you say 'nothing there.'"

Student OB2: "You lost the respect."

Discussion

Based on the findings, students report that online collaboration is not useful, and that it cannot help them to share ideas when they performed the learning activity of their exhibition designs. The coded themes indicated that the learning support of online collaboration provided for students has a majority of negative feedback. Take, for instance, Student MG1, who expressed this by saying that "you just can't expect to speak with a bunch of teenagers in an online session which is a bit like MSN and then tell us to concentrate, because we're not going to".

¹Student MB2 = A male student in Group M, Student MG2 = A female student in Group M,

²Student OB2 = A male student in Group O, Student OG2 = A female student in Group O

In Group M, one of the students mentioned that nobody was really sharing ideas in the online session and that *“they keep logging out and logging in to change the colours of their names”*³. Another student points out that ‘the system is lagging and students want to beat others in order to get to the middle of the participation chart’⁴.

Students, instead of using the online collaboration tool in an appropriate manner, seem to be misusing the tool in a destructive way. Junior high school students have the mentality of using online collaboration in a similar way to chatting on ‘MSN’, which is used more for socializing rather than for learning. Therefore, if the environment for junior high school students is too loose, or too flexible, without an appropriate monitoring system, this may encourage them to misuse the online collaboration tool in the way that learning cannot take place. Consequently, the purpose of online learning, which aims at providing a good effect on students, may end up with an unsatisfactory outcome.

This paper is not intended to generalise the usefulness of online collaboration for high school students, but would like to point out the effectiveness of online collaboration of this particular case (i.e. the learning activity of sharing students’ ideas about their exhibition designs applied to these two groups of junior high school students). The interesting findings indicate that the junior high school students may have the mentality of treating online collaboration as causal social chats rather than as a way of learning. This factor may be important for all educators to be aware of when designing their learning activities for high school students. It appears that monitoring facilities may be useful in providing effective guidance for learners when they perform a learning activity.

As mentioned before, the LAMS is a revolutionary tool for designing online collaborative learning activities, and it provides a structured way to describe teaching and learning processes (Dalziel, 2003). Unlike the LAMS, LearnLab do not have a close monitoring facility to mentor the students. The LAMS, on the other hand, provides a live monitoring facility that allows effective guidance or mentoring of students as they grapple with the learning tasks (LAMS1, 2008).

Figure 2 shows the live monitoring facility of the LAMS, and is illustrated as below (LAMS2, 2008):

- The integrated monitoring panel allows the instructor to check the progress of the students
- A sequence-oriented view in the form of a ‘road map’ showing the overall progress of the students can be monitored within each activity
- As learners complete the learning activities, their position will automatically be updated, allowing the instructor to see the progress of the students
- The instructor can closely monitor the students’ progress without letting students fall behind or lose control
- The instructor can monitor each individual student in the integrated monitoring panel

Figure 2 describes the LAMS ‘Monitor’ environment that learners progress through the sequence within. It lists out the progress of each individual student with the activities being colour coded in the same way as the learner progress bar is. Take, for instance, the blue

³ Figure 1 shows the online collaboration tool (LearnLab); the chat area is in the middle lower section. When students login to the LearnLab, they have a preset colour signifying their names. If they logout and log back in, the colour of their names will be changed. Therefore, students intend to keep logging out and then logging in to change their colours.

⁴ Figure 1 shows the Collaboration Lounge of the LearnLab; in the lower left hand corner, there is a participation chart showing who the most active participant is. The more active the participant, the closer to the centre of the circular chart their position is. Therefore, students attempt to play around and continuously press the enter key so that they can be closer to the middle. But unfortunately, the whole system lags behind due to the students’ misbehaviour.

spot, that indicates the task is finished; the pink spot that displays the task is currently running, and the green spot, that shows that this task has not yet started.

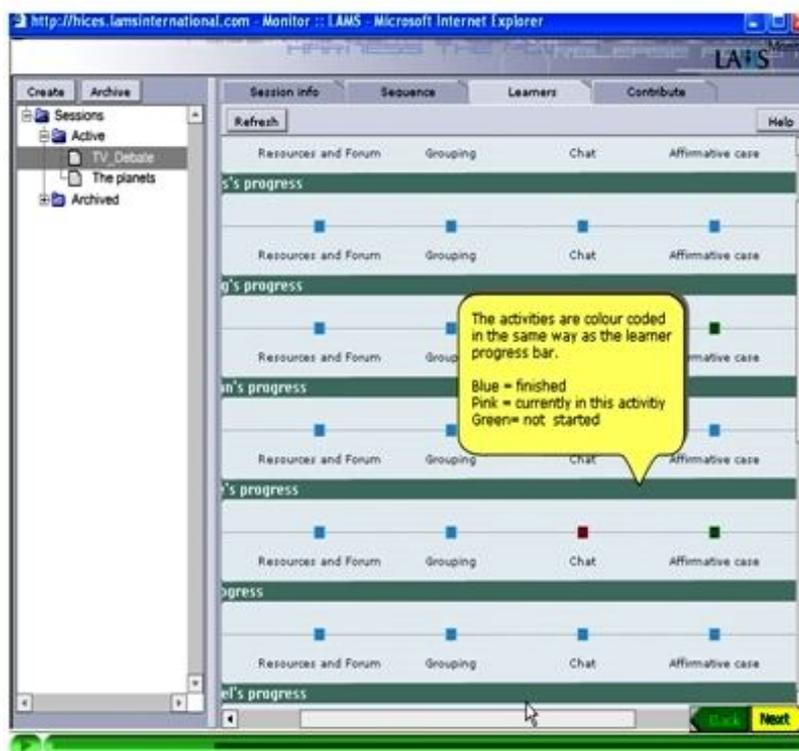


Figure 2:LAMS 'Monitor' environment – Progress of each individual learner
[Source: LAMS Interactive Tutorial – Monitoring (LAMS3)]

The LAMS 'Monitor' environment provides a live monitoring facility for the instructor to monitor the progress of each individual student, so that inappropriate behaviour of misusing the collaboration tool in a destructive way can be minimised.

Conclusion

While online collaborative learning can effectively help students in their learning activities, without an appropriate monitoring facility, students may end up abusing the collaborative tools, using them in a destructive way. Using the live monitoring facility provided by the LAMS may help the instructor to effectively mentor and guide students with their learning tasks. This is particularly important for junior high school students, who require substantial guidance and assistance due to their immaturity.

References

- Arvaja, M. (2007). Contextual perspective in analysing collaborative knowledge construction of two small group in web-based discussion. *International Journal of Computer-Supported Collaborative Learning*, 2(2-3), 133-158.
- Boettcher, J. V., & Conrad, R. M. (1999). Faculty guide for moving teaching and learning to the Web. Laguna Hills, CA: League for Innovation in the Community College.
- Dalziel, J. (2003). *Implementing learning design: The learning activity management system (LAMS)*. Paper presented at the Proceedings of the ASCILITE 2003 conference Adelaide.
- Dalziel, J. (2008). Walk through of LAMS: LAMS - Learning Activity Management System. Retrieved 22 September, 2008, from http://www.melcoe.mq.edu.au/documents/LAMS_Walkthrough.ppt

- Dillenbourg, P. (1999). *Collaborative learning: Cognitive and computational approaches*. Oxford, England: Pergamon, Elsevier Science Ltd.
- LAMS1. (2008). The Learning Activity Management System. Retrieved 2 Sept, 2008, from <http://www.lamsinternational.com/documents/LAMSBrochure.pdf>
- LAMS2. (2008). LAMS Resources: Demonstration of LAMS in action. Retrieved 10 September, 2008, from <http://www.lamsinternational.com/resource/>
- LAMS3. (2008). LAMS Interactive Tutorial – Monitoring. Retrieved 27 October, 2008, from http://lamsinternational.com/documents/1.0/winks/monitoring/monitoring_a_class.html
- Ryan, G. W., & Bernard, H. R. (2000). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 769-802). Thousand Oaks, CA: Sage Publications.
- Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning. In R. K. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences* (pp. 409-425). Cambridge: Cambridge University Press.
- Staton, D., Bayon, V., Neale, H., Ghali, A., Benford, S., & Cobb, S. (2001). *Classroom collaboration in the design of tangible interfaces for storytelling*. Paper presented at the Proceedings of the SIGCHI 2001 Conference on human factors in computing systems.
- Wagner, E. D. (1994). In support of a functional definition of interaction. *The American Journal of Distance Education*, 8(2), 6-26.

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Biographical notes

Susanna has over 15 years of work experience in the field of EE, IT (networking), education, and educational technology with different large corporations both overseas and in Australia. She has substantial experience using mobile devices with learners and school students in and outside the classroom. Susanna has been teaching ICT and also has experience in developing and teaching innovative learning programs. She has completed a project design and implementation of an 'ICT Online Learning Community'.

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