

Examining facilitators' habits of mind and learners' participation

Wing Sum Cheung

Learning Sciences & Technologies

National Institute of Education, Nanyang Technological University, Singapore

Khe Foon Hew

Instructional Science Academic Group

National Institute of Education, Nanyang Technological University, Singapore

The use of online- and blended-learning is growing very fast in universities. Given this interest in online-/blended-learning, understanding how to promote participation among learners in asynchronous online discussions, which is considered an integral part of online-/blended-learning has become increasingly crucial. Previous research has examined how factors, such as course design, and the amount of facilitator involvement can affect learner participation. However, none of the previous studies hitherto has examined facilitators' thinking dispositions or habits of mind. Habits of mind may be defined as the characteristics of what intelligent people do and think when they face an issue or a problem, and thus may play an important role in influencing the degree of learner participation. This proposed study aims to advance the line of research that examines facilitators' influence in promoting learners' participation by analysing their habits of mind. The following habits of mind of the facilitators will be examined: (a) awareness of own thinking, (b) accurate and seeks accuracy, (c) open-minded, (d) taking a position when the situation warrants it, and (e) sensitive to others. We refer the degree of learners' participation as the quantity of message posted by the learners. A case study methodology approach will be used in this study. The primary sources of data will be the online message postings of both the facilitators.

Keywords: problem solving, asynchronous online discussion, facilitator, habits of mind, and learners' participation.

Introduction

Online-/blended-learning has become more popular in schools. Some courses are offered completely online, while some courses are offered in the blended mode (consisting of a mixture of face-to-face and online elements). In online-/blended-learning, communication among learners may occur via an asynchronous online discussion environment (Harmon & Jones, 2000; Fung, Fu & Cheung, 2005). In Singapore, schools can continue to provide education to students via an asynchronous online discussion environment if Singapore is in crisis situations such as SARS.

However, to ensure that teachers use asynchronous online discussion well either in online learning mode or blended mode, they should know about the major factors that influence learner participation. According to Vonderwell and Zachariah (2005, p.214), "Learner participation is an essential element for active and engaged learning". Although student participation is not a direct measure of learning, it is necessary in order for a discussion to occur in the first place; and through the discussion, it is more likely that learning takes place (Dennen, 2005).

Little is known about how facilitators' thinking dispositions or habits of mind (Costa & Kallick, 2000; Marzano, Pickering and McTighe, 1993) may affect learners' participation in an asynchronous online discussion environment. According to Marzano, Pickering and McTighe (1993, p.23), "Researchers in the field of cognitive psychology have found that human beings, unlike any other animal, have the ability to control their own behaviour, even their own thought processes, by using effective habits of mind". Habits of mind may be defined as the characteristics of what intelligent people do and think when they face an issue or a problem (Costa & Kallick, 2000; Marzano et al., 1993). We believe the facilitators' habits of mind may play an important role in influencing the degree of learners' participation. Facilitators' habits of mind should be differentiated from their facilitation roles or functions. Facilitation roles or functions

are typically skills-or knowledge-based. Habits of mind, on the other hand, may be viewed as the affective aspects of thinking (Neo & Cheung, 2005); the natural disposition or tendency to employ one's skills or knowledge in deciding what to do in any circumstance. Although an individual may have the necessary skills or knowledge to act, he or she may not be disposed to do so (Facione, Facione, & Giancarlo, 1997). It could then be assumed that without the habits of mind, people may even not use their skills or abilities. Facilitators' habits of mind represent a research area that has hitherto received little attention as compared to facilitation roles.

Research questions

In this study, we analyse the following habits of mind of the facilitators: awareness of own thinking, accurate and seeks accuracy, open-minded, taking a position when the situation warrants it, and sensitive to others. Based on these habits of mind, the following research questions will be addressed:

1. To what degree is each of the aforementioned habits of mind exhibited by the facilitators during the online discussion?
2. What types of habits of mind are prominent in groups that have high degree of participation in the discussion?

Literature review

An asynchronous online discussion environment may be defined as "a text-based human-to-human communication via computer networks that provides a platform for the participants to interact with one another to exchange ideas, insights and personal experiences" (Hew & Cheung, 2003, p. 249). One of the main defining characteristic of an asynchronous online discussion is that the discourse that takes place within it is not real time. Typically, in an asynchronous online discussion, the participants type in their messages and send them to a central database. Thus, there is no loss of data as the discussion forum allows records of a participant's written messages to be kept in the virtual space. Participants can thus respond to the messages posted at any time they prefer and view the messages many times and long after the messages have been posted. In this way, asynchronous online discussion can resemble written communication (Ganeva, 1999). Most of the current asynchronous online discussion forums automatically sequences and arranges the messages into various discussion threads sorted according to the time of contribution, the author, or clustered according to topical links (Ganeva, 1999). According to Hewitt (2005), a discussion thread is a hierarchically organised collection of messages in which all messages but the one that started the discussion are written as replies to earlier messages. Follow-up messages to the initial message are typically indented under the original message. A single simple discussion thread may remain a straight line or turn into a tree as participants post follow-up messages to replies. Threads are well-defined and easily identified artefacts; they make it easier for people to trace the evolution of a discourse (Hewitt, 2005). There are now many software packages that offer platforms for threaded asynchronous online discussions such as BlackBoard, Knowledge Community, Knowledge Forum, and Knowledge Constructor.

A review of the literature shows several reasons for the popularity of using asynchronous online discussions in online-/blended-learning. For example, asynchronous online discussion forums are generally available 24 hours a day and seven days a week. This is especially useful, as they allow participant-to-participant communications to occur at any time and at any distance. In addition, since many of the current asynchronous online discussion forums are solely text-based, participants have to explicitly express their thoughts in writing. The very process of writing in itself encourages reflection which helps promote higher level learning such as analysis, synthesis, evaluation as well as clear and precise thinking (Cheung & Hew, 2004; Newman, Webb, & Cochran, 1997).

Although asynchronous online discussions can afford certain benefits, such benefits can only be reaped if participants are willing to participate in the discussions in the first place. Earlier studies conducted by Cheung and Hew (2004), for example, found that some participants never participated in the discussion, while some procrastinated in responding to other people's messages. Other studies showed that the extent of discussion among participants was low. For example, in one study that required participants to identify design problems of their course mates' hypermedia materials and give comments or suggestions to their course mates, Cheung and Hew (2005) found that the majority of the participants' extent of discussion tended to be low; i.e., the extent of discussion was one (when person A posts a question and person B gives a reply). The extent of discussion appeared to resemble a mere question and answer session where participants simply answered their course mates' online queries, rather than exchanging opinions about the issues on hand. Similarly, Guzdia (1997) found that the average discussion thread contained

essentially a single message and a response to that message. This was also corroborated by Hewitt and Teplovs (1999) in their study of seven graduate classes at the University of Toronto. Prior research thus suggests that limited learners' participation appears to be a persistent and widespread problem.

Given that learners' participation in an asynchronous online discussion environment is not something that can happen automatically, researchers have in the past examined possible factors that can influence learner participation. Factors that can influence learner participation may fall into one of three different categories: (a) attributes of the asynchronous online discussion (Bullen, 1998; Cheung & Hew 2004), (b) role of the facilitator (Choitz & Lee, 2006; Palloff & Pratt, 1999; Tagg & Dickinson, 1995), and (c) design of discussion activities (Cifuentes et al., 1997; Dennen, 2005; Gilbert & Dabbagh, 2005).

Thanks to the aforementioned factors, instructors and researchers now have a better sense of how to foster a higher degree of learner participation in asynchronous online discussions. Yet, some fundamental questions remain unanswered. How do facilitators' habits of mind influence the degree of learners' participation? What types of habits of mind do facilitators exhibit? This study begins an investigation of these questions, which hitherto have not been investigated.

Methodology

We will use a case study design approach (Yin, 2003) in this study in which the unit of analysis is a single discussion group. This approach is suitable given that the key purpose of this study is to help us gain an in-depth understanding of a situation (Merriam, 2001) – facilitators' habits of mind in an asynchronous online discussion environment, rather than to generate grand predictions or prove or disprove underlying hypotheses.

This study was conducted in National Institute of Education, Nanyang Technological University, Singapore. Thirteen graduate students (3 females and 10 males) who were in a "Design of Asynchronous Online Discussion" course participated in this study. It was a blended course involving both face-to-face and asynchronous online discussion section. The discussions will be done using BlackBoard, a Web-based course management software used by NIE. Each asynchronous online discussion will typically consist of 13 students. Each student served as a facilitator of his or her own discussion forum, with the other 12 students as participants in the group. There were, therefore, be 13 discussion forums. Each discussion forum ran for 2 weeks. However, they were allowed to participate in the forums after the 2 weeks. The main purpose of the online discussions is to allow the participants to identify problems of their classmates' projects, make suggestions, and comment on others' suggestions in order to improve the quality of the projects. All the students will be rewarded 15 points for their participation in others' forums and 15 points for their facilitation of their own forum. Transcripts from the 13 forums were collected.

Data analysis

To address the first research question, "To what degree is each of the aforementioned habits of mind exhibited by the facilitators during the online discussion?", we used the content analysis method on all the 13 discussion group facilitators' transcripts. We examined if any of the following habits of mind (awareness of own thinking, accurate and seeks accuracy, open-minded, taking a position when the situation warrants it, and sensitive to others) are exhibited by the facilitators.

To address the second research question, "What are the prominent habits of mind displayed by facilitators in groups that have high degree of participation in the discussion?", we evaluated the transcripts (excluding the facilitators') in terms of the quantity of messages posted by the learners in each forum. We ranked the participants' postings (excluding facilitators' postings) and chose the top 30% of the forums which had the higher number of participants' postings.

Although Marzano et al. (1993) suggested some possible rubrics to evaluate the habits of mind, we believe that there are problems in using them wholesale to examine the postings in the asynchronous online discussion environment. We use the following example to illustrate the problems. For example, Marzano et al. (1993, p. 100) suggested the following rubrics for "Is aware of own thinking" habit.

Points	Description
4	Consistently and accurately explains in detail the sequence of thoughts he or she uses when faced with a task or problem, and provides analyses of how an awareness of own thinking has enhanced his or her performance.

3	Consistently and accurately describes how he or she thinks through tasks or problems and how an awareness of own thinking enhances his or her performance.
2	Sporadically but accurately describes how he or she thinks through tasks or problems and how an awareness of own thinking enhances his or her performance.
1	Rarely, if ever, accurately describes how he or she thinks through tasks or problems or how an awareness of his or her thinking enhances performance.

What exactly does “consistently”, “sporadically”, or “rarely” mean? No operational definition for such terms is provided by Marzano et al. (1993). So even if an individual explains in details the sequence of thoughts he or she uses when faced with a task or problem, it is difficult to say whether he or she is consistent or not. As a result, we decide to modify the rubrics in the following way. When an individual’s postings have one of the following indicators, he or she will have one point. Hence, we adapted and modified the rubrics of the habits of mind (Marzano et al., 1993) into indicators for the following five habits of mind.

Habits of mind	Indicators
Is aware of own thinking	- Describes the thoughts he or she uses when faced with a task, problem, or question. - Describe how an awareness of own thinking helps me to improve the task
Is accurate and seeks accuracy	- Pays attention to detail when appropriate. - Checks against relevant sources. - Recognise inaccuracies quickly - Corrects inaccuracies that not only clear up the identified errors, but add greater clarity to the whole.
Is open-minded	- Considers alternative views - Seeks out different viewpoints.
Takes a position when the situation warrants it.	- Takes a position that is related to the circumstances - Provide justification for the position
Is sensitive to others	- Show concerns about others’ feelings. - Show concerns about others’ level of knowledge - Encourages respect for individual differences

Results

1. To what degree is each of the aforementioned habits of mind exhibited by the facilitators during the online discussion?

The top two exhibited habits of mind are “Aware of thinking” and “Open-minded” for all the forums as well as for the top 30% forums in terms of participation. The details of all the five habits of mind are in Table 1.

Table 1: Habits of mind exhibited by all facilitators during the online discussion

Displayed habits of mind	Frequency	Percentage
Is aware of own thinking	73	52%
Is accurate and seeks accuracy	12	8%
Is open-minded	48	34%
Takes a position when the situation warrants it.	7	5%
Is sensitive to others	2	1%

2. What types of habits of mind are prominent in groups that have high degree of participation in the discussion?

After ranking the participants’ postings (excluding facilitators’ postings), we chose the top 30% of the forums which had the higher number of participants’ postings. We examined the facilitators’ habits of mind in those discussion forums. It also happens to be “Aware of thinking” and “Open-minded” as the first and the second habits of mind exhibited by the facilitators’ in the online forums. The details of the findings are summarised in Table 2.

Table 2: Habits of mind exhibited by the facilitators who had the higher participants' posting (i.e. top 30%)

Displayed habits of mind	Frequency	Percentage
Is aware of own thinking	33	64%
Is accurate and seeks accuracy	3	6%
Is open-minded	12	24%
Takes a position when the situation warrants it.	3	6%
Is sensitive to others	0	0%

Discussion

According to our finding, facilitators tended to exhibit the “Aware of thinking” habits more than other habits. When we zoom in the top 30% of the forums in terms of participation, those facilitators also tended to exhibit “Aware of thinking” habit as the most exhibited habits.

It seems to us that “Aware of thinking” is an important thinking habit for the facilitators to facilitate in an asynchronous online discussion environment. Some facilitators exhibited their thoughts in the postings to respond to other’s comments about their design. Here are some examples.

Student A: The question is “Why use online discussion when students can share ideas immediately with one another face-to-face during the conduct of the experiment?” Here, I am assuming that the online discussion is actually for them to write down and record their thoughts. They may not be doing the experiments together. They will do it during their free time after school. The classmates are new to each other and not all of them are communicating with each other yet. So hopefully through the online discussion, they can learn from each other better.

Student B: I will use my literature bridging lesson as an example. The kids knew what advertisements were about etc. But I used their knowledge of advertisements to show them exactly how certain elements of the advertisements they liked were achieved, e.g., camera angles or voice-overs. By focussing on these techniques, I attempted to incite their meta-cognition, something that Siti brought up in her post on this topic. This allowed me to draw links between creating an advertisement and writing a novel, where certain points of view (camera angles) and the way the story was told (narrator/ voice-over) affected the end product in the way the creator (director or author) wanted them to. Hence, through my media resource, I helped the children draw links from what they already knew to what I wanted them to know.

Some facilitators shared their thoughts about how to handle their cases. Here are the examples.

Student A: In my case there would not be any reward. The cadets are supposed to be able to learn through this discussion and reflect on how they can use it when dealing with their junior as these are sec 3 cadets who are going to take over the unit.

Student J: For the proposed project, I am more interested to look at how AOD could facilitate pupils in constructing knowledge. Hence I’ll be evaluating the social construction of knowledge in AOD and I would be adopting the model by Gunawardena, Lowe & Anderson (1997).

Student K: I personally think that this is a good idea as a warm up to show how discussion could be conduct. This is especially so for primary school students who have difficulty understanding, the idea of discussion.

Student Y: The online discussion will be infused into the Philosophy curriculum, and they will be assessed by “Class Participation”, just like their face-to-face discussions. Of course, I will need to inform them about this during the introductory session. We already have the rubrics for “Class Participation”, and this assessment will be translated into qualitative comments (active participation, respect and openness, and quality of thinking) in their Academic Process Report.

We believe the facilitators exhibited the “Aware of thinking” habit because when the facilitators showed the habit it would be easier for others to get involved in the online discussion. In this study, the facilitators are the owner of the projects to be discussed. It is quite normal for them to share their thoughts

about their projects as well as response to other's comments about their projects. One may argue that the facilitators showed such a habit is because the discussion is directly related to their projects.

The second exhibited habit was "Open-minded" of the facilitators in all the forums and also for those facilitators in the top 30% of the forums in terms of participation. It seems to us that when facilitators exhibited "Open-minded" habit, they could engage others to participate in the online discussion. Here are some examples.

Student A: Then it could be a good idea to maybe participate a second level facilitator.
Would it create more confusion if there are 2 levels of facilitators? Any comments?

Student A: Just wonder whether path (3) will create too much confusion. Any comments?

Student D: Just my two cents worth. How about the others? What do you guys think?

Student Y: I look forward to more feedback from all of you. Please feel to critique from all perspectives. I really need your help to fine-tune my plan. Thanks.

In this study, students were expected to participate in the online discussion forums because it is one of the required assignments that they had to do. As a result, this may serve a "force" to push students to be involved in the online discussion. This may explain why even some facilitators did not show that they are "open-minded" their classmates participated in their online discussion forums.

Limitations and future research

In this study, we try to examine the habits of mind of the facilitators when they conduct online discussion. We note that there are several limitations to this study. Firstly, in the current study, the facilitators are the owners of the design of their projects. This may influence their exhibited habits of mind. Future study might consider to examine how facilitators' habits of mind when they facilitate the online discussion about others' projects.

Secondly, all the participants' participation in the online discussion was graded. Students received incentives in the form of course points for their participation. Future research should examine cases that no incentives are given to the participants.

Thirdly, in the current study, all the facilitators were actually graduate students. They are not experienced university educators. Future research might replicate the case study by asking experience university educators as the facilitators in the study.

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References

- Bullen, M. (1998). Participation and critical thinking in online university distance education. *Journal of Distance Education*, 13(2). <http://www.jofde.ca/index.php/jde/article/view/140/394>
- Chickering, A., & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, 39, 3-7.
- Cheung, W. S., & Hew, K. F. (2005). How can we facilitate students' in-depth thinking and interaction in an asynchronous online discussion environment? A case study. *Proceedings of the Association for Educational Communications and Technology*, USA, 28, 114-121.
- Cheung, W.S. & Hew K. F. (2004). Evaluating the extent of ill-structured problem solving process among pre-service teachers in an asynchronous online discussion and reflection log learning environment. *Journal of Educational Computing Research*. 30(3). 197-227.
- Choitz, P., & Lee, D. (2006). Designing asynchronous, text-based computer conferences. *Performance Improvement Quarterly*, 19(3), 55-71. <https://doi.org/10.1111/j.1937-8327.2006.tb00377.x>
- Cifuentes, L., Murphy, K. L., Segur, R., & Kodali, S. (1997). Design considerations for computer conferences. *Journal of Research on Computing in Education*, 30(2), 177-201.
- Costa, A.L. & Kallick, B. (2000). Assessing the habits of mind. In A.L. Costa & B. Kallick (Eds.), *Assessing and reporting on habits of mind*, pp. 29-53. Alexandria, VA: Association for Supervision and Curriculum Development.

- Dennen, V. P. (2005). From message posting to learning dialogues: Factors affecting learner participation in asynchronous discussion. *Distance Education*, 26(1), 127-148.
- Facione, P. A., Facione, N. C., & Giancarlo, C. F. (1997). The motivation to think in working and learning. In E. Jones (Ed.), *Preparing competent college graduates: Setting new and higher expectations for student learning* (pp. 67-79). San Francisco, CA: Jossey-Bass.
- Fung, A.C.W., Fu, F.H.K. & Cheung, W.S. (2005). The application of web-based teaching and learning in tertiary institution – A case study in Hong Kong, *Journal of Education*, 51, 68-80.
- Ganeva, I. (1999). *Native and non-native speakers' participation in educational asynchronous computer conferencing: a case study*. Unpublished Masters thesis. Ontario Institute for Studies in Education, University of Toronto.
- Gilbert, P. K., & Dabbagh, N. (2005). How to structure online discussions for meaningful discourse: A case study. *British Journal of Educational Technology*, 36(1), 5-18.
- Gunawardena, C.N., Lowe, C.A., & Anderson, T. (1997). Analysis of a global online debate and the development of an interaction analysis model for examining social construction of knowledge in computer conferencing. *Journal of Educational Computing Research*, Vol. 17(4) 397-431.
- Guzdial, M. (1997). Information ecology of collaborations in educational settings: Influence of tool. In R. Hall, N. Miyake, & N. Enyedy (Eds.), *Proceedings of Computer-Supported Collaborative Learning* (pp. 83-90). Toronto, Canada: Lawrence Erlbaum Associates.
- Harmon, S. W. and Jones, M. (2000). The five levels of web use in education: Factors to consider in planning online courses. *Educational Technology*, 39(6), 28-32.
- Hew, K. F., & Cheung, W. S. (2003). Evaluating the participation and quality of thinking of pre-service teachers in an asynchronous online discussion environment: Part 1. *International Journal of Instructional Media*, 30(3), 247-262. <https://doi.org/10.2190/9JTN-10T3-WTXH-P6HN>
- Hewitt, J. (2005). Toward an understanding of how threads die in asynchronous computer conferences. *Journal of the Learning Sciences*, 14(4), 567-589. https://doi.org/10.1207/s15327809jls1404_4
- Hewitt, J., & Teplov, C. (1999). An analysis of growth patterns in computer conferencing threads. In C. Hoadley & J. Roschelle (Eds.), *Proceedings of the Computer Support for Collaborative Learning* (pp. 232-241). Palo Alto, CA: Stanford University Press. <https://doi.org/10.3115/1150240.1150269>
- Marzano, R. J., Pickering, D. J., & McTighe, J. (1993). *Assessing student outcomes: Performance assessment using the dimensions of learning model*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Merriam, S. B. (2001). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Neo, C. E., & Cheung, W. S. (2005). The impact of directed viewing-thinking activity on students' critical thinking: Part II. *New Horizons in Education*, 52, 80-90.
- Newman, D.R., Johnson, C., Webb, B., & Cochrane, C. (1997). Evaluating the quality of learning in computer supported cooperative learning. *Journal of the American Society of Information Science*, 48, 484-495. [https://doi.org/10.1002/\(SICI\)1097-4571\(199706\)48:6%3C484::AID-ASI2%3E3.3.CO;2-Z](https://doi.org/10.1002/(SICI)1097-4571(199706)48:6%3C484::AID-ASI2%3E3.3.CO;2-Z)
- Palloff, R., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass.
- Tagg, A. C., & Dickinson, J. A. (1995). Tutor messaging and its effectiveness in encouraging student participation on computer conferences. *Journal of Distance Education*, 10(2). Retrieved on November 29, 2006 from <http://cade.athabasca.ca/vol10.2/taggdickinson.html>
- Vonderwell, S. & Zachariah, S. (2005). Factors that influence participation in online learning. *Journal of Research on Technology in Education*, 38(2), 213-230. <https://doi.org/10.1080/15391523.2005.10782457>
- Yin, R. K. (2003). *Case study research: Design and methods* (Third ed.). California: Sage Publications.

Author: Wing Sum Cheung, Learning Sciences & Technologies, National Institute of Education, Nanyang Technological University, Singapore. Email: wingsum.cheung@nie.edu.sg
Khe Foon Hew, Instructional Science Academic Group, National Institute of Education, Nanyang Technological University, Singapore. Email: khefoon.hew@nie.edu.sg

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