



## Scaffolding interaction in asynchronous online discussion through peer facilitation

**Connie Siew Ling Ng**  
Educational Technology Division  
Ministry of Education, Singapore

**Wing Sum Cheung**  
National Institute of Education  
Nanyang Technology University

**Khe Foon Hew**  
National Institute of Education  
Nanyang Technology University

This study aims to identify the peer facilitation techniques that could scaffold interaction in asynchronous online discussion forums. The findings of this study suggest that scaffolding interaction in asynchronous online discussion through peer facilitation could be achieved through the use of the following five peer facilitation techniques: “showing appreciation”, “considering others’ viewpoints”, “general invitation to contribute”, “questioning” and “challenging others’ points”.

Keywords: Peer facilitation, asynchronous online discussions, scaffolding

### Introduction

Past studies which investigated interaction in asynchronous online discussion found that limited student interaction is a persistent and wide-spread problem (Cheung & Hew, 2004; Hewitt, 2005; Wozniak & Silveira, 2004). Facilitation is one way to improve interaction in asynchronous online discussion forums (Anderson, Rourke, Garrison, & Archer, 2001; Seo, 2007; Wozniak & Silveira, 2004).

Advocates of peer facilitation pointed out that peer facilitation leads to more student-student discussion and interaction as compared to instructor facilitation (Light, Nesbitt, Light, & White, 2000). In addition, peer facilitation allows the more able learner to scaffold or help his peers learn and in the process, advance his own understanding (Gilbert & Dabbagh, 2005; Topping, 1996).

Although peer facilitation of asynchronous online discussion has great potential to improve learner-to-learner interaction, most studies done on peer facilitation did not delineate the actual types of peer facilitation techniques used in the online discussion. This study aims to address this gap, i.e. to determine the types of peer facilitation techniques that could scaffold interaction in asynchronous online discussion.

## Method

### Participants

The participants in two case studies were two classes of graduate students taking courses at Master's level in a university in the Asian Pacific region. The 26 students, aged between 29 to 50 years old, were working adults taking the courses on a part-time basis. For both case studies, students were taught principles and concepts related to the course and given time to work on a proposal for their final project for this course. The instructors of the course created one discussion forum for each student to upload their project proposal. The discussion forums were fully student-facilitated. The facilitators were given a list of examples of facilitation techniques that they could use to scaffold other students' interaction.

For both case studies, students had the freedom to choose to contribute to whichever asynchronous online discussion forums they wished. It was up to the peer facilitators to use various facilitation techniques to encourage and scaffold participants' interaction in the discussion forums. The students were given 20% of the total marks for their interaction in the four-week long asynchronous online discussion. The online discussion tool used in both case studies was the threaded discussion feature in Blackboard, a learning management system. All the students were familiar with the use of this online discussion tool.

### Data sources and analysis

This study adopts a cross-case comparison approach to identify peer facilitation techniques which could scaffold interaction in asynchronous online discussion. Data were collected from online discussion transcripts and semi-structured interviews. Permission was sought from the students to use their online discussion transcripts as data sources for this study. The purpose of the research and the methodology of the study were told to the students. The online discussion transcripts were downloaded and printed in hardcopy for content analysis to determine the interaction and peer facilitation techniques that encouraged interaction in the online discussion forums. A list of literature based peer facilitation techniques was used to guide the coding of the online discussion transcripts for peer facilitation. Thematic unit was the unit of analysis used in the content analysis.

As for the semi-structured interviews, they helped to confirm that the peer facilitation techniques observed to be used more frequently in the forums with more interaction did indeed scaffold learners' interaction in the online discussions. All the students accepted the invitation for the 20-minute interviews which were conducted two weeks after the courses ended. Permission was sought to audio-tape the interviews and notes of the sessions were also taken. An example of a question asked during the interview was "Were there any facilitating techniques that the facilitators used in the asynchronous online discussion forums that influenced your decision to participate in the discussion?"

## Findings

Content analysis of the online discussion transcripts and interviews with students, and cross case comparison shows that following five peer facilitation techniques encouraged interaction in the asynchronous online discussion forums: "showing appreciation", "considering others' viewpoints", "general invitation to contribute", "questioning" and "challenging others' points".

## Discussion

The findings of this study suggest that scaffolding interaction in asynchronous online discussion through peer facilitation could be achieved if the peer facilitators were able to create a conducive environment for discussion, encourage participants to contribute ideas, and trigger participants to reflect on the discussion points through the use of the five peer facilitation techniques.

Peer facilitators could create a conducive environment for discussion by using peer facilitation techniques – "showing consideration" and "considering others' viewpoints". "Showing appreciation" indicated to the

participants that suggestions were valuable and this motivated the participants to contribute more postings. Use of “considering others’ viewpoints” was construed by participants to indicate that the peer facilitators valued and respected their ideas and were opened to opposing ideas. To encourage the participants to contribute their suggestions or opinions, the peer facilitators could use peer facilitation techniques “general invitation to contribute” and “questioning”. The former was viewed by the participants as appeals for help which they tried to respond to while the later, especially open-ended questioning, prompted them to think from various perspectives and helped them to contribute in the online discussion forums. The participants felt that when peer facilitators used the peer facilitation technique “challenging others points”, it triggered them to reflect on the discussion points and come up with alternative views.

## Conclusion

This study delineated five peer facilitation techniques which seem to scaffold participation in asynchronous online discussion forums. Due to the nature of case studies, the findings from this study may not be generalizable to all peer-facilitated asynchronous online discussion forums. However, the findings of this study will still be useful in providing the reader with insights on how peer facilitators could be trained to scaffold interaction in asynchronous online discussion.

## References

- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2), 1-17.
- 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), 195-225.
- 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.
- Hewitt, J. (2005). Toward an understanding of how threads die in asynchronous computer conferences. *The journal of the learning sciences*, 14(4), 567-589.
- Light, P., Nesbitt, E., Light, V., & White, S. (2000). Variety is the spice of life: Student use of CMC in the context of campus-based study. *Computers and Education*, 34, 257-267.
- Seo, K. K. (2007). Utilizing peer moderating in online discussions: Addressing the controversy between teacher moderation and nonmoderation. *The American Journal of Distance Education*., 2(1), 21-36.
- Topping, K. J. (1996). The effectiveness of peer tutoring in further and higher education: A typology and review of the literature. *Higher Education*, 32(3), 321-345. <https://doi.org/10.1007/BF00138870>
- Wozniak, H., & Silveira, S. (2004). *Online discussions: Promoting effective student to student interaction*.

### Author contact details:

Corresponding author:  
Connie Siew Ling Ng  
Educational Technology Division  
Ministry of Education, Singapore  
[ng.sl.connie@gmail.com](mailto:ng.sl.connie@gmail.com)

Wing Sum Cheung  
National Institute of Education  
Nanyang Technology University  
[wingsum.cheung@nie.edu.sg](mailto:wingsum.cheung@nie.edu.sg)

Khe Foon Hew  
National Institute of Education  
Nanyang Technology University  
[khefoon.hew@nie.edu.sg](mailto:khefoon.hew@nie.edu.sg)

**Please cite as:** Ng, C. S. L., Cheung, W. S., & Hew, K. F. (2010). Scaffolding interaction in asynchronous online discussion through peer facilitation. In C.H. Steel, M.J. Keppell, P. Gerbic & S. Housego (Eds.), *Curriculum, technology & transformation for an unknown future. Proceedings ascilite Sydney 2010* (pp.690-693). <https://doi.org/10.14742/apubs.2010.2128>

Copyright © 2010 Connie Siew Ling Ng, Wing Sum Cheung & Khe Foon Hew.

The author(s) assign to ascilite and educational non-profit institutions, a non-exclusive licence to use this document for personal use and in courses of instruction, provided that the article is used in full and this copyright statement is reproduced. The author(s) also grant a non-exclusive licence to ascilite to publish this document on the ascilite Web site and in other formats for the *Proceedings ascilite Sydney 2010*. Any other use is prohibited without the express permission of the author(s).