Chapter 5
Case Studies on Peer Facilitation: What Motivates Participants to Contribute?

In this chapter, we describe four studies that examined the possible factors which could motivate participants to contribute in peer facilitated online discussions. The first study examined peer facilitators' habits of mind, while the other three studies examined factors other than habits of mind that could motivate participants to contribute in online discussions. We first summarize the key elements of the studies before presenting the findings. Although we acknowledge that our studies cannot guarantee sampling representativeness, the findings from the four studies presented here nonetheless provide important information that can be applied in similar contexts and situations. We believe that these findings would be useful to other educators and researchers who are interested in using peer facilitation in their asynchronous online discussion environments. Figure 5.1 summarizes the findings.

5.1 Examining Habits of Mind

Study 1

Study 1 was conducted to address the question—What specific habits of mind exhibited by peer facilitators may influence the quantity of online messages posted by participants (Hew and Cheung 2009)? The following four habits of mind were studied: awareness of own thinking, open-mindedness, taking a position, and sensitivity to others.

Definition

Habits of mind may be viewed as the affective aspects of thinking (Neo and Cheung 2007), that is the natural disposition to employ one's skills or knowledge in deciding what to do in any circumstance. Although different authors have suggested different lists of these habits, and alternatively labeling them habits of mind (Costa and Kallick 2000; Marzano et al. 1993), habits of thought (Dewey 1933), or thinking dispositions (Ennis 1987; Facione et al. 1995), the various lists
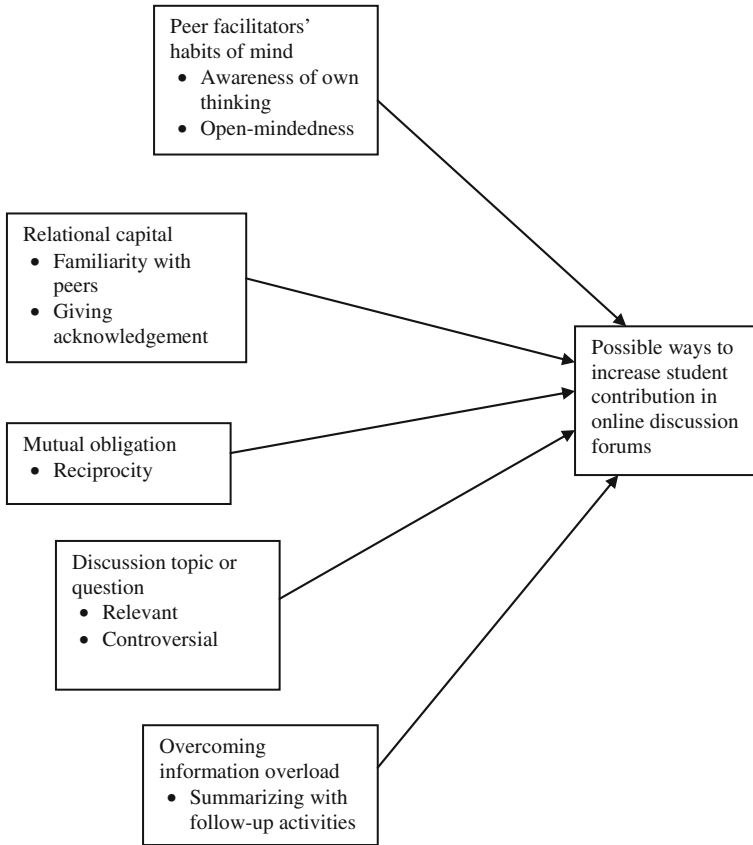
Fig. 5.1 Major findings

are quite similar in spirit (Tishman 2000). In this study, we examined four habits of mind.

Awareness of own thinking refers to the ability to know what one knows and what one does not know (Costa 2000). It is similar to metacognition. Students who display this habit of mind typically describe their thoughts when handling a task or question (Marzano et al. 1993). *Open-mindedness* refers to the habit of seeking out, as well as considering different viewpoints (Marzano et al. 1993). Students who have developed a sense of open-mindedness typically use words or phrases such as "I look forward to hearing from you…", "Let me know what you think…" *Taking a position* refers to the habit of taking a stand pertinent to an issue being discussed (Marzano et al. 1993), as well as providing justification for it. This justification may be grounded on literature-based evidence, or personal experiences. *Sensitivity to others* refers to the ability to empathize with another person's

Table 5.1 Rubric to examine habits of mind (adapted from Marzano et al. 1993)

Habits of Mind	Indicators
Is aware of own thinking	Describes the thoughts he or she uses when faced with a task, problem, or question.
	Describes how an awareness of own thinking helps me to improve the task
Is open-minded	Considers alternative views
	Seeks out different viewpoints.
Takes a position	Takes a position that is related to the circumstances
	Provides justification for the position
Is sensitive to others	Shows concern about others' feelings.
	Shows concern about others' level of knowledge
	Encourages respect for individual differences

feelings, show concerns about others' level of knowledge, or encourage respect for individual differences (Marzano et al. 1993).

Method

This study involved 20 discussion forums selected from two graduate courses: Course I with 13 forums, and Course II with 7 forums. There were a total of 27 students. Although the 20 forums came from two courses, they shared the following characteristics. First, both courses discussed the use of technology in education, involving a blended approach of face-to-face tutorials and asynchronous online discussion activities. Second, each forum was entirely peer facilitated. Third, all 20 forums used the same threaded asynchronous discussion tool. Fourth, students were free to contribute in whichever discussion forum they wished with no number of posting quota imposed. Fifth, all forums had the same discussion activity, which was to design instructional materials for use in schools or training organizations. Students used the discussion forums to identify design problems of their peers' design projects, give viewpoints or suggestions for improvements, and respond to the comments raised.

Since the mean number of all participant postings was 19.55 for all 20 forums, forums with 20 or more posting were deemed as the frequent forums. Seven such forums were found. Seven least frequent forums in terms of participant posting were then chosen from the remaining forums and referred to as the infrequent forums.

Data were collected through online observations of the discussion forums and a series of interviews. The online posts by peer facilitators were observed in order to examine the types of habits of mind displayed using the rubric shown in Table 5.1. Overall, inter-rater agreement of the coding was 90 %. Ten individuals volunteered to be interviewed which lasted 30 min each to gain insight into why students contributed in the online discussions.

Main Findings of Study 1

5.1.1 Peer Facilitators Should Display the Following Two Habits of Mind More Frequently: Awareness of Own Thinking and Open-Mindedness

Results from Study 1 showed that the more and less frequent forums differed significantly in terms of the frequency of the following habits of mind displayed by the peer facilitators: (a) awareness of own thinking and (b) open-mindedness. In other words, this finding suggests that participants tend to post significantly more postings in forums that are facilitated by peers who are aware of their own thinking, and who are open-minded. Why is this so?

The interview data revealed that peer facilitators who are aware of their own thinking tend to describe clearly the thoughts they use when faced with a task, problem, or question. This allows other participants to have a better understanding of what the discussion is about and hence enables them to respond to the topic being discussed. For example, Daniel (pseudonym), a participant, remarked:

> A facilitator who is aware of his own thinking tends to be clear in his postings (e.g., asking questions). This helps the other participants to understand clearly the issue being discussed. Consequently, I know what suggestions or feedback to give. If he is not clear about what he is asking or commenting, I am not sure how to respond to his message, or how to help him. As a result, I would participate less.

Discussions that are facilitated by peer facilitators who are open-minded are seen as a safe environment where participants feel they can freely post their comments without running the risk of being harshly judged or criticized. As Georgia, a participant, stated:

> Open-mindedness will definitely have an impact on my degree of contribution in a discussion. An open-minded facilitator shows that he or she is willing to consider other people's viewpoints and ideas, and welcomes suggestions and comments. This makes me more likely to contribute my opinions in the discussions.

Researchers posit that habits of mind can be cultivated through the specially crafted learning experiences that encourage and reinforce their use (Tishman et al. 1995). We propose two suggestions here. First, instructors should *model* the required habits of mind (Tishman et al. 1995). For example, to develop the habit of open-mindedness, Costa and Kallick (2000) suggested that instructors give students problems or issues that require a change of perspective to find a solution, model the habit of open-mindedness, thereafter ask students to describe how they could look at the issue differently, and what other possibilities would arise from a change in viewpoint. Instructors may also observe students' interactions, and label the habit of open-mindedness when it they occurs. For example, when a student considers her peer's suggestions, the instructor may highlight it, and compliment the student for showing the habit of open-mindedness (Neo and Cheung 2007).

Second, besides modeling, instructors should *explain* what habits of mind are, how they benefit students, and when they come into play (Tishman et al. 1995). Instructors, for example, could explain that articulating about their thinking or

reasoning process (i.e., awareness of own thinking) is of great value not only in the classroom but in the world as well. Individuals who are aware of their own thinking are more able to critically analyze their own postings because they are cognizant of their own understandings and misconceptions. This facilitates the negotiation of ideas, as individuals can identify the inconsistencies and weaknesses in their own viewpoints more readily, as compared to their peers who are less cognizant of their own thinking (Hew and Cheung 2011b). Individuals who are less aware of their own reasoning processes tend to be more defensive when others point out the flaws in their viewpoints, and this renders the task of negotiating and coming to a consensus even more difficult (Hew and Cheung 2011b).

5.2 Examining Other Possible Reasons Why Students Contribute in Online Discussions

In this section, we describe three studies (Study 2, 3, and 4) that examined possible factors other than peer facilitators' habits of mind that could motivate participants to contribute in online discussions. Table 5.2 provides a summary of these three studies. Each of the three studies will be described first, followed by a cross-case discussion of the main findings.

Study 2: Full-Time Diploma in Education Students

Study 2 was carried out to investigate possible reasons that motivate full-time diploma students to contribute in online discussions (Cheung et al. 2008). The following research question was examined: Given the same nature of the discussion tasks, and that the students are given a freedom of choice to choose, why do they choose to contribute in some forums but not in others?

Method

Sixteen students, who were enrolled in a diploma in education program, participated in the study. The program was a blended course that involved both face-to-face and asynchronous online discussion sections. The online discussion activity, course expectations, time requirements, and deliverables, were similar for all students. Each student designed a Web-based learning resource and then uploaded their design onto their own discussion forum. The students facilitated their own discussion forums to discuss ideas in order to improve their Web-based materials. Students, in essence, were involved in solving a design task, considered one of the most complex and ill-structured types of problems (Jonassen 1997; Kitchener 1983).

The online discussion ran for 2 weeks, after which the individual student wrote a reflection which included: (a) general comments on the use of asynchronous online discussion; (b) their learning points from facilitation of their own forum; (c) their learning points from observations on how other students facilitated their forums; and (d) their rationale for accepting or rejecting the suggestions or

Table 5.2 Characteristics of Studies 2, 3, and 4

Characteristic	Study 2 (n = 16)	Case 2 (n = 56)	Case 3 (n = 10)
Mode of learning	Blended with face-to-face and online components	Blended with face-to-face and online components	Blended with face-to-face and online components
Discipline of study	Education	Education	Non-education
Type of online component	Peer-facilitated asynchronous online discussion	Peer-facilitated asynchronous online discussion	Peer-facilitated asynchronous online discussion
Online task	Design tasks	Design tasks, dilemma discussion	Design tasks
Duration of online discussion	2 weeks long	4 weeks long	13 weeks long
Discussion requirement	Course credits given for contribution in the discussion; however, no number of posting quota or deadline imposed. Students were free to post in whichever forums they wished.	Course credits given for contribution in the discussion; however, no number of posting quota or deadline imposed. Students were free to post in whichever forums they wished.	Course credits given for contribution in the discussion; however, no number of posting quota or deadline imposed. Students were free to post in whichever forums they wished.
Profile of students	Full-time diploma students (no bachelor degrees yet)	Full-time graduate students	Full-time undergraduate students
Data sources	Student questionnaire, interviews	Student questionnaire, reflections, interviews	Student reflections

comments made by other students on their own design projects. Although course credits were given for contribution in the discussion, students had the freedom to choose to contribute in whichever thread or respond to whom they wished. There was no quota imposed on the number of posts made (e.g. students have to post at least two messages), and no discussion deadline was imposed.

Following the completion of the reflection, a questionnaire survey was conducted. The questionnaire allowed the students to indicate more than one reason as to why they chose to contribute or not contribute to the discussions. Fifteen students completed the questionnaire. Six students were also randomly selected to be interviewed individually to gain more insight into why students chose to contribute in certain discussions but not other forums. Member checking was conducted after the interviews for validity check.

Study 3: Full-Time Diploma in Education Students

Study 3 was carried out in a similar fashion after Study 2. The main difference between Studies 2 and 3 was that the former was a diploma level course while the

latter was a graduate level program. The students in Study 3 already had their undergraduate degrees and were pursuing a graduate course in education. The primary research question that was addressed in Study 3 was: What are the motivators and barriers of student online contribution?

Method

A total of 56 students participated in this study. The discussion tasks in Study 3 involved the following: design task and dilemma discussion. With regard to design task, students worked in pairs or in groups of 3–4 to design a multimedia instructional package. After the students had designed the lesson, they uploaded them onto the discussion forums in BlackBoard for peer discussions.

Dilemmas are also ill-structured problems. In dilemmas, there is often no solution that satisfies all people, and there are compromises implicit in every solution (Jonassen 1997). In this study, an ethical dilemma was used. Students were asked to comment on the following topic: "Do you think it is okay for people to buy or sell organs? Justify your opinions." The online discussions were completely facilitated by the students, without involvement from the instructor. Although course credits were also given for contribution in the discussion, students had the freedom to choose to contribute in whichever thread or respond to whom they wished. In addition, no number of posting quota and discussion deadline were imposed.

Data were gathered from the following sources: (a) an end-of-course questionnaire survey, (b) student reflections, and (c) student interviews. The questionnaire measured what students perceived as factors, including facilitation strategies that motivated them to contribute in peer-facilitated discussions. Fifteen students completed the questionnaire. Fourteen students volunteered to be interviewed face-to-face individually for about 30 min each to provide more detailed explanations about some of the motivating factors. Following the interviews, member checking was carried out for validity check. Finally, 41 students completed a student reflection on the following questions: (a) what factors made you contribute in the discussion? (b) what factors discourage you from contributing in the discussion?

Study 4: Full-Time Non Education Undergraduate Students

In the previous Studies 1–3, all the participants involved in the discussions were education major students. We were interested in replicating the previous studies using a different sample of participants. So in Study 4, we had non-education undergraduate students as participants. The same instructor, who oversaw Studies 1–3, was responsible for study 4 to minimize the risk of confounding variable due to possibility of different instructors setting different online activities.

Method

Ten students who majored in disciplines such as business, science, and engineering participated in the study. Study 4 was a blended course that involved both face-to-face lessons and online activity. During the face-to-face lessons, the instructor presented new content materials, and asked students questions to help

them recall prior related learning, as well as to assess students' understandings of the current topic. The nature of the online activity was similar to Studies 1–3, that is to design Web-based instructional packages. Each of the 10 students was given an individual discussion forum to upload their design drafts. The students facilitated their own discussion forums to discuss ideas in order to improve their Web-based materials. At the end of the course, students were asked to write a reflection guided by the following questions: "What factors encourage you to participate in other people's forums?", and "What factors discourage you from participating in other students' forums?" Students' reflection data were analyzed using Lincoln and Guba's (1985) constant-comparative method to derive categories relevant to the research objective.

Main Findings of Studies 2, 3, And 4

In this section, we highlight the following four major findings gathered from the aforementioned three studies with regard to other possible ways of increasing student contribution in peer-facilitated online discussions.

5.2.1 Emphasize Efforts to Nurture Relational Capital Among Students

Efforts to establish relational capital is essential. Relational capital refers to personal relationships (e.g., friendships) that people have with each other (Granovetter 1992). Relational capital helps build shared understandings and community feelings, both of which can increase the likelihood of student contribution in online discussions (Hewitt 2005).

As many as 93 % of students in Study 2 reported that they chose to contribute in forums facilitated by peers whom they were familiar with. Similarly, familiarity with peer facilitator was identified as one of the top five reasons why students in Study 3 chose to contribute. As remarked by Kenny, a participant, "I participate if the discussions are facilitated by my friends." This was echoed by Lee, another participant, who stated, "If I knew the facilitator personally, I would be more inclined to participate in that forum. I would be more willing to give my honest opinion as I know that my friend would be able to take my comments and criticisms."

Students tend to avoid interacting with someone whom they are unfamiliar with for fear of offending him or her, particularly if they perceive that the person is not receptive to negative comments. For example, Seng, a participant, stated, "I hesitate to contribute if I don't know the person well because I don't know how he or she might react to my comments."

Since establishing relational capital is important, instructors should focus their attention on helping students to know one another prior to the actual online discussion activity, instead of asking students to do the actual discussion

immediately, especially if the students are new to one another. Agre (1998) suggests that individuals need to meet in person, and eat and drink as a group in order to develop shared understandings and community feelings. Instructors should, perhaps, even encourage some off-task talk among participants. Off-task talk plays an important socialization role in online discussions because it can create a sense of shared meaning (Hara 2009), and a sense of familiarity.

Students' familiarity with one another could also positively influence the social presence in an asynchronous online discussion environment (Cheung et al. 2008). Essentially, social presence refers to the perception that there is another real person (instead of merely a name) taking part in the discussion (Short et al. 1976; Tu and McIsaac 2003; Wise et al. 2004). Research has suggested that participants with high social presence tend to post messages that are twice as long as those with low social presence (Wise et al. 2004).

In addition, interview data from Studies 2 and 3 suggested that another possible way to help foster relational capital would be to acknowledge or appreciate the contribution made by people. For example, Koh, a participant, commented, "It[acknowledgement] positively reinforces me to contribute because it affirms that my opinions are worthwhile. I think people generally like to be acknowledged for their contributions." However, such acknowledgement has to be sincere because it may fail to motivate individuals to contribute if the acknowledgement appeared insincere. As Dave, a participant, explained:

> Some peer facilitators merely said 'thank you' or 'thank you for your postings' to every participant who contributed. They did not further elaborate how and why the contributions were useful to them. Such forms of acknowledgement appeared to be a mere formality or lip service to me rather than a sincere gesture.

5.2.2 Remind Students to "Help Other People First"

Individuals usually feel that it is only fair to help others such as contributing ideas and suggestions when they have received help from others in the past (Wasko and Faraj 2000). Such mutual obligation may be referred to as reciprocity, which is the "act of giving benefits to another in return for benefits received" (Molm et al. 2007, p. 200). Becker (1956, p. 1) referred the human species as "homo reciprocus", Gouldner (1960) noted that a norm of reciprocity helps ensure that people help others who have helped them before, while Nowak and Sigmund (2000, p. 819) described reciprocity as shrewd investments where "we give to receive".

Reciprocity may be either direct or indirect (Nowak and Sigmund 2000). In direct reciprocity, the recipient of a benefit or help returns a benefit directly to the giver, while in indirect reciprocity, the recipient does not return a benefit directly to the giver but to other people in the social circle (Molm et al. 2007). Specifically, the analysis of the interview data from Studies 2 and 3 suggested that students in our studies received help from the same individual they helped before, that is

direct reciprocity. For example, Kenny, a participant, explained, "When I noticed that Dave responded frequently to my postings as well as other people's postings in my discussion forum, I felt that it was only morally right that I went and do the same in his discussions too." This was echoed by Krista, a participant in Study 4, who wrote:

> In addition, I tend to participate more in forums of specific individuals who also contributed to my forum. I like the sort of dependency between me and the other party in situations like this. The reciprocal relationship between me and the other party assured me that my thoughts are valued, and that the other person was willing to share his/her views too. As a result, a form of trust was built. This significantly boosted my confidence to voice out my thoughts comfortably and kept me going back to the forums.

Our finding thus suggested that students should first help others (e.g., contribute ideas). When they do so, it is likely that this will motivate other students to reciprocate by contributing in return. Although this may merely be a transactional exchange at the beginning, the results of reciprocity tend to forge relationships that will grow in trust and increase the relational capital among individuals over time (Uzzi 1996).

It is important to note that at the initial stage, individuals usually exchange help based on the instrumental or utilitarian value of the initial help provided (Molm et al. 2007). In other words, if the initial help rendered is of superficial value (e.g., one-liner postings with no elaboration), there is a high chance the recipient would be put off from contributing in return (Hew et al. 2010a, b). For example, Goh, a participant, explained:

> When I realize that people in the forum are talking crap or making arguments merely for the sake of making them, I stop contributing. I think it's a complete waste of time when people do not think through their points and post their comments for the sake of having something in the forum. It irks me!

As the examples above illustrate, reciprocity is contingent on evidence of trustworthiness such as the soundness of ideas, at least at its initial stages. As such, instructors should remind students to contribute information that is valid and reliable to the best of their ability. This will then increase the chances of the recipients reciprocating the favor.

5.2.3 Choose Interesting Discussion Topics or Questions, Especially Those That are Relevant and Controversial

It is widely acknowledged that the choice of the discussion topic or question plays a vital role in determining the success of an online discussion. However, what exactly entails an appropriate topic or question may not be entirely clear. Our findings from Studies 2, 3, and 4 suggested two major dimensions that make a topic or question interesting to motivate students to contribute in a peer-facilitated discussion environment.

First, topics that are interesting to students are topics that directly concern or relate to the students' own subject matter or personal experience. For example, Chew, a participant, explained:

> I was enticed to forums which had interesting topics which I could relate to. One example was the discussion on the use of Facebook. I had always used Facebook as a social medium to connect with my friends. Thus the topic of Facebook got me all excited because it was directly related to my personal experiences. I find the topic easy to talk about, and I could generate more ideas.

Another participant, Andy, remarked, "The topics that interest me are topics that are relevant to me. By relevant, I mean that these are topics that I could apply to my own project." When asked to explain why the relevance of a discussion topic is important, students explain that they had the knowledge to share in such topics as compared to irrelevant topics. For example, Sandy, a participant, stated, "I did not contribute in some of the discussions because I don't know the content or subject being discussed well."

Second, topics or questions that are interesting to students are those that are controversial in nature. Controversial topics are open-ended, with many possible answers depending on the assumptions that a student makes. Such topics or questions lend themselves very well to conflict of ideas which could spur people to respond. For example, Chee, a participant, remarked, "Conflict of ideas provides room for discussion and debate, especially when the data proves counter to what many people think."

5.2.4 Peer Facilitators Should Periodically Summarize the Main Points of a Discussion and Follow Up with Relevant Questions After the Summary

Finally, peer facilitators should summarize the main points of a discussion thread when the thread contains many postings. Results of our studies suggested that summarizing the major ideas serves two major purposes.

First, it prevents information overload on the part of the readers because students can quickly get a gist of what the postings are about by simply reading the summary instead of having to plow through every single contribution made. Students tend to stop contributing in a discussion if it contains many messages. For example, Loh, a participant, explained, "It was very mentally exhausting to go through each message in a forum and post a comment. Eventually, I ended up with only commenting to a few messages due to an exhaustion of the mind."

Second, it helps students to keep track of the discussion in order to respond appropriately, in order to avoid further repetitions of the same issues. For example, Liz, a participant, stated, "Reading a summary helps me to easily identify what others have said so far in the discussion so that I know exactly what else I can contribute."

So far, we have addressed the need for summarizing. It is also important to address the issue of what to do *after* summarizing the main points of a discussion. Our studies found that not all students agreed that having a summary of the main points of a discussion thread motivated them to contribution to the discussion. Providing a summary may unwittingly end a discussion. The students explained that the posting of a summary suggested that the peer facilitator had made a decision on whose and which views to take up. Hence, other participants stopped contributing because they felt as if the discussion had been concluded. As Mark, a participant, explained, "Giving a summary or closure suggests to me that no further discussion is needed. It tells me that I don't need to contribute anymore even if I have something to say." To encounter this problem, some participants recommended that peer facilitators follow up with questions (e.g., questions that ask people for further comments if they have any), or suggest new directions for discussion after the summary.

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