

# STUDENTS' PERCEPTIONS OF KNOWLEDGE SHARING THROUGH CLASS PARTICIPATION

Shaheen Majid, Aye Aye Mon, Chan Myae Soe and Soe Min Htut  
*Wee Kim Wee School of Communication & Information, Nanyang Technological University  
Singapore, Republic of Singapore*

**Keywords:** Students, Knowledge sharing, Class participation, Benefits, Barriers.

**Abstract:** Knowledge sharing is a key to effective learning. Students with positive attitude towards knowledge sharing are likely to take this behaviour to their workplace which could help achieve organizational knowledge management goals. The main objective of this study was to explore students' perceptions of class participation and its benefits, barriers to their participation, and the motivational factors that may improve their knowledge sharing. A pre-tested questionnaire was used for data collection, and 188 post-graduate students from Nanyang Technological University, Singapore participated in it. A majority of the students were aware of the benefits of knowledge sharing in their learning process as it provides an opportunity to listen to and appreciate diverse viewpoints, develop social and communication skills, and learn how to organize and present their ideas. The major barriers to class participation were: low English language proficiency, cultural barriers, shyness, and lack of confidence. This paper also provides some suggestions for improving effectiveness of class participation, particularly in the Asian context. It also highlights the role of instructors in helping and motivating students to overcome their fear of public speaking as well as to use this avenue for refining their communication skills.

## 1 INTRODUCTION

Many institutions of higher education use innovative pedagogical approaches for imparting knowledge to their students. Collaborative learning, also called peer learning, is one of the popular techniques, and active knowledge sharing is considered an essential element of this technique. As compared to other approaches, collaborative learning creates a more conducive learning environment which makes learning more interactive, interesting and engaging. Many class participation and knowledge sharing activities, such as expressing personal opinion on the topic under discussion, answering instructor's questions, sharing work-related or personal experiences, participation in small group discussions, and student presentations, contribute to their learning process. Active class participation also helps students develop certain useful skills such as better communication skills, social skills, presentation skills, and thinking and reasoning skills (Gilliam, 2002). Some other benefits of peers learning include higher student motivation and

achievements, greater comprehension and retention of knowledge, critical and innovative thinking, and encouragement for knowledge sharing (Boud, Cohen and Sampson, 2001).

Knowledge sharing and collective learning also enhance confidence and motivation level of students as they realize that they can contribute to the learning of others, and they also feel a sense of responsibility, pride and accomplishment. It also helps them to learn how to present their ideas logically, effectively, and in a convincing manner (Majid and Tina, 2009).

Through in-class knowledge sharing, students can be stimulated to learn from each other's real life experiences, instead of just memorizing certain facts and recalling them during examinations (Wilson, Pollock and Hamann, 2007). Students can present their thoughts and viewpoints, and in return, receive feedback from the instructor as well as classmates to assess the usefulness of their ideas (Jones, 2008). Weaver and Qi (2005) found that those students who actively participate in class discussions are likely to learn more than those who do not.

It is understandable that the full benefits of peer and interactive learning can only be achieved if students fully understand and appreciate the role and value of knowledge sharing through class participation. Some studies suggest that Asian students participate in class discussions less actively, particularly if the medium of instruction is other than their mother tongue. Chu and Kim (1999) claimed that culture plays an important role in determining the way students perceive class participation. Some reasons given for limited class participation by Japanese and Chinese students were respect for hierarchy and authority, perception of humility and conformance as virtues, and "face protection". Tani (2008) felt this attitude among Asian students was due to strict student-teacher behavioral norms, where students were not expected to ask questions or present a different viewpoint. Majid, et al (2010) reported that the knowledge sharing barriers faced by local and overseas students in Singapore were: low English language proficiency, cultural barriers, shyness, and lack of confidence.

Some studies have also investigated the impact of certain factors on knowledge and information sharing by students. Megan (2001) noted that male students put forward their opinions and ideas more frequently than females. However, Fritschner (2000) reported that female students are more likely to participate in senior classes. Similarly, older and more mature students usually participate more actively in class than younger students (Howard and Baird, 2000). Two other factors that can possibly influence the level of class participation are student's personality and level of confidence. Students with limited confidence usually feel intimidated when they are asked to participate in class discussion. Speaking up in class is often a frightening experience for introvert and shy students as they do not like to be at the centre of attention. They may also feel that their understanding and knowledge of the topic is insufficient, and class participation may expose them to criticism (Sixsmith, Dyson and Nataatmadja, 2006). Majid, et al (2010) reported that students are more likely to participate in challenging and interesting topics for which either there are no fixed answers or no prior preparation is required. Certain other factors that may influence class participation are language competence (Man-Fat, 2005), class size (Finn, Pannozzo and Achilles, 2003), and instructor's gender, style and personality (Crombie et al., 2003).

## 1.1 Knowledge Sharing by Students

Most of the previous studies on information and knowledge sharing had focused mainly on cooperate and public organizations. Only recently some studies on knowledge and information sharing behavior of students have started appearing. Yuen and Majid (2007) found that although students exhibited a positive attitude towards information and knowledge sharing, it was restricted to certain individuals and situations only. They noted that students avoided sharing knowledge with their peers if the individual or group projects were to be graded. In another study on the knowledge sharing behavior of graduate students, Majid and Mong Wey (2009) found that the main motivating factor for knowledge sharing by students was to build relationships with their peers. However, competition among students to outperform their classmates and lack of in-depth relationship were the two most important factors hindering the knowledge sharing activity. The authors suggested that academic institutions should review their instruction approaches to make the learning process less competitive, which would help improve knowledge sharing among students.

Chiu, et al (2010) reported that students may not be willing to share their knowledge as it is critical to their academic performance. Wolfe and Loraas (2008) studied knowledge sharing by MBA students and concluded that proprietary knowledge sharing occur when students' competitiveness is team-oriented. A cross-culture study of American and Chinese undergraduate students revealed that students were more willing to share their personal knowledge with in-group members than out-group members (Zhang et al., 2006). He (2010) identified factors influencing knowledge sharing among Health Services Administration students and found that mutual influence and team cohesion were two major factors directly influencing knowledge sharing within virtual teams.

Despite numerous benefits of knowledge sharing among students, many previous studies suggested that Asian students felt less motivated to participate in class discussions. Wee Kim Wee School of Communication and Information, Nanyang Technological University, Singapore, has put a lot of emphasis on developing soft skills among its students, and class participation is considered as a useful platform for developing such skills. Based on the nature of the course, different class activities are planned to encourage peer

learning through knowledge sharing. The main objective of this study was to investigate students' perception of knowledge sharing and its benefits, the impact of language competency on class contribution, and factors likely to create barriers or motivate students to share their knowledge.

## 2 METHOD

Students from four Master's programs of Nanyang Technological University, Singapore participated in this study. The four programs were MSc in Information Studies, Knowledge Management, Information Systems, and Communication Studies. A combination of quantitative and qualitative approaches was used for data collection. For the quantitative approach, a pre-tested questionnaire was used. The first section of the questionnaire collected demographic information about the participants such as their age, gender, nationality, and English language competency. The second section, containing multiple statements, investigated the impact of various factors on knowledge sharing such as nature of courses, students' language proficiency, cultural concerns, confidence level, gender of the instructor, and the learning environment. The areas covered in the third section of the questionnaire included the perceived benefits and barriers to class participation. In total, 320 copies of questionnaire were distributed with 188 filled-in questionnaires received, yielding a response rate of 58.8%. The data collection work was completed in April 2010. In the second phase of the study, interviews were conducted with 7 post-graduate students to understand some of the trends emerging from the quantitative data analysis.

## 3 FINDINGS

The following sections present the key findings of this study. For the sake of simplicity and avoiding repetition, responses for some statements as 'agree' and 'strongly agree' will be presented collectively as 'agreed'.

### 3.1 Profile of the Respondents

A total of 188 post-graduate students participated in this study, and nearly 58% of the participants were either overseas students or expatriates working in

Singapore. A majority of the overseas students were from China, India, Malaysia and Myanmar. A majority (60%) of the respondents were female. Nearly one quarter of the students were less than 26 years old, 45% between 26-30 years and another one quarter in the age group of 31 to 36 years.

### 3.2 Perception of In-class Knowledge Sharing

An overwhelming majority (95.4%) of the students agreed that class participation was helpful in their overall learning as it provided them an opportunity to listen to and appreciate diverse viewpoints, develop soft skills, learn how to organize and present their ideas, and get immediate feedback from classmates on their ideas. However, a mixed response was received for the question regarding whether marks should be awarded for class participation. Only 53.7% of the students agreed to this suggestion. A majority of the students opposing this idea were from overseas with fair or low English language proficiency, and had only occasionally participated in class discussions. Over one-half of those students supporting marks allocation for class participation said that between 20-40% marks would motivate them to actively take part in knowledge sharing.

The students were asked whether they felt comfortable sharing their knowledge and ideas with their classmates. Nearly 43.4% of the students said that they faced some difficulties in doing so. Comparatively more female students were uncomfortable in expressing their opinion during class discussions. In a follow-up question, nearly 78.2% of the respondents agreed that they felt relatively more comfortable in taking part in small group discussions.

A set of 7 statements was also given to the students to capture their perceptions towards the importance of knowledge sharing in their learning process. It was regrettable that a considerable percentage of the students stayed 'neutral' and did not express any opinion on many issues. Some 39.3% of the students either 'agreed' or 'strongly agreed' that they usually got better grades for those courses in which they actively participated in (Table 1). However, 64.9% of the students felt that they could pass the examinations without taking part in class discussions. Similarly, 45.7% of the students believed they could achieve their educational goals without taking part in class deliberations.

Table 1: Students' Perception of Class Participation (N=188).

Statement		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I usually achieve good grade for those courses in which I actively take part in classroom discussion.	6.9%	32.4%	51.1%	9.0%	0.6%
2.	I can pass the exam without participating in classroom discussion.	11.7%	53.2%	25.5%	8.0%	1.6%
3.	I can accomplish my educational goals even without taking part in classroom discussion.	5.3%	40.4%	34.6%	16.5%	3.2%
4.	Some students only participate for getting marks.	15.4%	43.1%	27.7%	12.7%	1.1%
5.	Class time is wasted by students on asking unnecessary questions/ expressing opinions.	12.2%	27.7%	28.2%	27.6%	4.3%
6.	Only interesting topics encourage me to participate in class discussion	13.8%	58.5%	18.67	9.0%	-
7.	I prefer instructor-centric learning where instructor does most of the talking with minimum student input.	4.3%	30.9%	26.1%	29.7%	9.0%

On the negative side of knowledge sharing, 58.8% of the students felt that some students only participate to get marks and, as a result, they end up wasting class time by asking unnecessary questions or expressing superficial opinions (39.9% students). It was worth noting that 72.3% of the students said that interesting topics would motivate them to share their opinions and knowledge with other students. However, comparatively a small percentage (35.2%) of the students agreed that they preferred an instructor-centric learning approach where most of the talking was done by the lecturer. On the whole, it appeared that although the students were convinced of the value of knowledge sharing in their learning process, they felt they could still achieve their educational goals without active class participation.

### 3.3 Perceived Benefits of Class Participation

The students were asked about the potential benefits of knowledge sharing through class participation. A 7-point scale was used to capture their responses where 1 was 'least beneficial' and 7 'extremely beneficial' (Table 2). The top benefit of knowledge sharing, as perceived by the students, was learning about diverse viewpoints and their relative merits (mean score 6.35). They also thought that face-to-face communication could help students get immediate feedback on their opinions and ideas (mean score 6.21). They were also convinced that class participation provided an opportunity for them to learn the skill of presenting ideas effectively.

However, they did not think that class participation alone could help make new friends.

### 3.4 Impact of Language Competency of Knowledge Sharing

A big majority of the students agreed with the statements related to the impact of language proficiency on knowledge sharing (Table 3). However, they also agreed that class participation provides an opportunity to students with limited language competency to improve their language skills.

### 3.5 Culture and Knowledge Sharing

Many previous studies suggest a strong relationship between culture and knowledge sharing. It was interesting to note that although a bulk of the respondents were from various countries, with their own distinct cultures, a majority of them either 'disagreed' or 'strongly disagreed' that in their culture expressing a different viewpoint was considered disrespect to the instructor, or a student expressing his/her opinion or experiences was considered a show-off person (Table 4). However, they agreed that students from the same country or culture usually preferred joining the same discussion group. It is probably because most of them have the same level of language competency, share the same cultural background and anecdotes, and even can use their native language to express difficult concepts.

Table 2: Perceived Benefits of Class Participation and Knowledge Sharing.

	Statement	N	Mean Score (1-7)	Std. Dev.
1	Students can learn about diverse viewpoints and arguments.	188	6.35	1.64
2	Face-to-face discussion assists me to obtain immediate feedback from instructors or students.	184	6.21	0.72
3	Classroom participation provides me an opportunity to learn how to present opinion and ideas.	186	5.87	0.68
4	Students can understand the lesson as well as other related concepts more thoroughly	186	5.21	1.23
5	Class participation help improve communication skills	185	5.07	0.77
6	Class participation help make new friends	180	4.34	1.68

Table 3: Impact of Language Competency on Knowledge Sharing (N=188).

Statement		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Limited language competency is a barrier to class participation.	22.9%	55.3%	13.3%	8.5%	-
2.	Students with limited language competency need more time to think and express their opinions.	20.2%	59.0%	14.9%	5.9%	-
3.	Those students who do not fully understand lectures are unable to participate in classroom discussion	20.2%	59.0%	14.9%	5.9%	-
4.	Class participation can help improve English language skills.	21.8%	56.4%	17.6%	3.7%	0.5%

Table 4: Impact of Culture on Knowledge Sharing (N=188).

Statement		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	In my culture, voicing views in class is considered as disrespect to the instructor.	3.2%	12.2%	32.4%	37.8%	14.4%
2.	In my culture, speaking up in class is regarded as showing off knowledge unnecessarily.	1.1%	11.7%	37.8%	39.9%	9.6%
3.	In my culture, it is impolite to present opposing views outwardly.	1.1%	22.6%	21.5%	45.2%	9.7%
4.	Students prefer discussing in a group with students from their own culture or nationality.	9.7%	39.2%	30.1%	15.1%	5.9%

### 3.6 Impact of Gender on Class Participation

As it is clear from Table 5, split responses were received for the statements asking if male students participate more than their female counterpart and that female students participate less in male-dominated classes. It was not surprising as gender biasness was very rare in Singapore. These findings were different from Megan’s (2001) study which reported that male students participate more than

female students. However, it was a matter of concern that a considerable percentage of the students stayed ‘neutral’ for these statements.

A majority of the students disagreed with the suggestion that most of the students participate in those classes which are taught by an instructor from their own gender. This finding was also different from Crombie et al., (2003) study which showed a relationship between the instructor’s gender and the sex of the participating students.

Table 5: Impact of Gender on Knowledge Sharing.

Statement		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Male students usually participate in classroom discussion more than female students.	5.3%	21.8%	43.1%	25.5%	4.3%
2.	A majority of female students participate less in a male dominated class.	4.8%	17.6%	55.6%	19.3%	2.7%
3.	Most classmates take part in classroom discussion if the instructor is from their own gender.	1.1%	5.9%	44.4%	38.5%	10.2%

Table 6: Impact of Learning Environment on Knowledge Sharing.

Statement		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.	I will participate more in small class size (e.g. 15-25) than in large class size (e.g. more than 30).	13.3%	51.1%	20.7%	13.3%	1.6%
2.	I will participate more in small discussion groups (e.g. 4-6 students) than in large discussion groups (e.g. 10-12).	18.1%	47.3%	19.1%	14.4%	1.1%
3.	A casual sitting arrangement will enhance my class participation.	16.0%	48.9%	23.4%	9.6%	2.1%

### 3.7 Impact of Learning Environment on Knowledge Sharing

Around 65% of the students either 'agreed' or 'strongly agreed' with the statements that they were more likely to participate in small classes as well as in small discussion groups (Table 6). It is understandable as students with limited language proficiency may feel intimidated speaking in front of a bigger class.

### 3.8 Impact of Instructor's Teaching Style and Personality

An overwhelming majority (93.1%) of the students agreed with the statement that students participate more in those classes which are taught by friendly and motivating instructors (Table 7). However, 48.9% of the students agreed that they only participate in class discussions if specifically asked by the instructor to do so. Another 68.4% of the students agreed that they were less likely to share their opinions if the instructor was not open to different viewpoints. On the whole, it appeared that instructor's personality and behaviour were two important factors that determine students' level of class participation and knowledge sharing.

### 3.9 Barriers to Knowledge Sharing

Students were asked to indicate the importance of different barriers to their knowledge sharing in the class. A 7-point scale was used where 1 was 'least important' and 7 'extremely important'. The top three barriers (Table 8) to class participation were: inadequate language proficiency (mean score 6.13), lack of confidence (mean score 6.11), and shyness to talk in a gathering (mean score 6.02). The three least important barriers were: lack of incentives for knowledge sharing (mean score 5.15), fear of hurting feelings of others by presenting opposite views (mean score 5.30), and the influence of student's native culture (mean score 5.43). It was worth noting that mean scores for all the barriers were more than 5 which indicated that students considered these barriers very important in their knowledge sharing.

## 4 CONCLUSIONS

This study investigated students' perceptions of knowledge sharing through class participation in an Asian context. It was considered useful as many previous studies done in Western countries suggested that Asian students did not actively

Table 7: Impact of Instructor on Knowledge Sharing (N=188).

Statement		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Many students actively participate in those classes where lecturer is friendly and motivating.	34.6%	58.5%	5.9%	1.1%	-
2.	I usually participate only if instructor directly asks me a question or my opinion.	7.4%	41.5%	31.4%	18.1%	1.6%
3.	Students participate less if the instructor does not encourage differing views.	11.2%	57.2%	26.2%	4.3%	1.1%
4.	Students participate more if the instructor gives verbal recognition and appreciation for the contribution.	15.5%	57.2%	24.6%	2.7%	-

Table 8: Barriers to Class Participation and Knowledge Sharing.

	Statement	N	Mean Score (1~7)	Std. Dev.
1	Inadequate language proficiency	188	6.13	0.65
2	Lack of confidence	188	6.11	0.73
3	Shyness to talk in a gathering	186	6.02	0.66
4	Lack of enthusiasm for the course	182	5.83	0.75
5	Limited background knowledge and experience on the topic under discussion	185	5.77	1.05
6	Uninteresting discussion topic	188	5.68	0.61
7	Afraid of adverse feedback from other students and/or instructors	188	5.51	1.34
8	Influence of student's native culture	180	5.43	0.87
9	Fear of hurting feelings of others	183	5.30	1.07
10	Lack of incentives to participate and share	184	5.17	1.21

participate in class discussions. It was found that, on the whole, the students had a positive attitude towards class participation and were aware of its benefits. A majority of them agreed that factors such as language proficiency, native culture, confidence level, and learning environment influence students' knowledge sharing in the class. It was interesting to note that nearly two-thirds of the students said that instead of speaking in a big class, they prefer participating either in classes with small enrolments or classes where students are divided into small groups to discuss the assigned topic. In addition, they are more likely to participate in classes taught by friendly and approachable instructors or in classes where instructors appreciate students' ideas and contributions. Similarly, they prefer discussing contemporary, interesting, and challenging topics. They were less inclined to express their opinions on standard, routine and

theoretical topics or questions that needed fixed answers.

The students participating in this study were also asked about the possible barriers to their class contribution. Over two-thirds of the students agreed that limited English language competency was a major hurdle for many of their classmates. Some other barriers to knowledge sharing were: lack of confidence, shyness to talk in front of many students, and fear of hurting feelings of others by expressing opposite viewpoints. However, they felt certain factors such as selection of interesting discussion topics, encouraging remarks by the instructor, and adequate marks allocated for class participation were likely to stimulate their knowledge sharing in the class. Instructors can take advantage of students' positive attitude towards knowledge sharing and help them overcome some of the barriers faced by them. They can also help

students to improve their communication and presentation skills which may encourage them to actively take part in class discussions.

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