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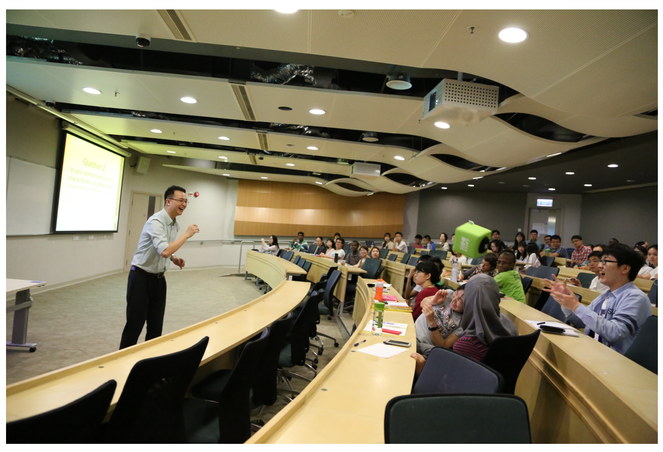
EDGE
Office of Education Development and Gateway Education 教育發展及精通教育處

THROWING QUESTIONS TO STUDENTS IN A LARGE CLASS

How Throwable Wireless Microphone Enhances Classroom Interaction

Abstract

In a traditional classroom setting, the passing of a regular microphone may discourage students to voice out and participate as moments of silence are often created. Throwable wireless microphone is an emerging technology to promote classroom interaction, participation and discussion in a large class setting at higher education level. Although the principles of adopting the throwable wireless microphone technology are well established, there is a lack of empirical evidence on the actual impact on participants.



Methodology & Findings

Quantitative feedback was gathered from a course with a total of 94 graduate students in the academic year 2017-2018 through a 5-point Likert scale classroom interaction questionnaire to investigate the impacts on active participants who had caught the throwable microphone and talked in class.

Comparison between active and non-active participants in classroom interaction survey

Mean (Active / Non-active)	t-Value	Mean Difference	
4.27 / 3.80	1.64	0.47	The use of throwable microphone provided a more dynamic learning environment.
4.33 / 3.20	*** 4.09	1.13	I had more interaction with my classmates.
4.27 / 3.12	*** 3.98	1.15	I had more communication with course instructors and tutors.
3.87 / 3.20	* 2.39	0.67	I get more direct feedback to support my learning.
3.87 / 3.16	* 2.03	0.71	My interest in the subject matter increased.
4.20 / 3.64	1.86	0.56	I had more opportunities to participate in class.
3.93 / 3.12	** 3.04	0.81	I am more willing to ask questions in class.

Mean Difference: 0.20 | 0.40 | 0.60 | 0.80 | 1.00 | 1.20

Active / Non-active

* p<.05
** p<.01
*** p<.001

Among the seven items in the questionnaire, five of them reported statistically better scores from the active participant group and the active participants had higher mean score in all seven items. Hence, active participants perceived a better classroom interaction than the non-active participants who only observed but did not speak in class.

Implications

Technology is particularly useful in enhancing classroom interaction. However, proper active learning pedagogy is equally important to deliver positive learning experiences to students. Instructors should design active learning activities that can make use of the throwable microphone. To maximize the positive effects, instructors should excite the class to lighten up the classroom atmosphere and draw attention from students. This can be initiated by a throwing action to a 'seems-to-be' random student, who is actually an active student identified by the instructors' experience and observation in class.

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