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Multidimensional Discussions on an Interactive Mobile Platform for Language Education
A case at The University of Hong Kong

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Abstract—Many lecturers in universities are held in big lecture theater which may not be the most desirable environment to carry out effective class discussions. “iClass”, an interactive mobile learning platform developed and adopted in the University of Hong Kong, enables real-time interactive discussion among students and lecturer through their tablet PCs and smartphones and facilitates classroom discussion of various sizes and styles, gathering opinions from all classmates in an organized manner that is conducive to effective and fruitful discussions. It is a useful tool in facilitating multidimensional discussions that accommodate various types of discussion and teaching styles required in language learning. Learning no longer stresses on the one-way knowledge transmission from teachers to students, but in enhancing the capacity of the student to develop critical thinking ability to analyze issues from multiple angles in an organized and logical way. Discussions have hence become an increasingly important part of interactive learning. This system encourages more active participation from students to foster a more interactive class environment that is optimal for effective language learning and teaching.

Keywords—Interactive teaching; mobile learning; smartphone; multidimensional discussions;

I. IMPORTANCE OF CLASS DISCUSSIONS IN LANGUAGE EDUCATION

Despite the advocacy of small class teaching and its recognized benefits to learning, many classes in universities or schools are still held in big lecture halls and classrooms, which may not be the most desirable environment to carry out effective class discussions. Some students may not be as outspoken as others and prefer expressing their opinions in written words rather than verbally in front of the whole class. Moreover, with the limited time scheduled for each class, it is sometimes difficult to ensure every student gets a fair share of time to articulate their ideas. iClass, an interactive mobile learning platform using tablet PC and smartphone developed and adopted in the University of Hong Kong, comes in timely as an interactive system that facilitates classroom discussion of various sizes and styles, gathering opinions from all classmates in an organized manner that is conducive to effective and fruitful discussions.

With its keyword function, iClass accommodate different types of discussion and teaching styles to address the learning needs of different subjects. To initiate a class discussion, the teacher simply has to add a new topic, put in the question concerned and the aspects to be discussed. Students, with their smartphones, tablets or computers, can then log into the class and topic and contribute their ideas by typing relevant keywords.

After submission, teachers can obtain a list view of students ideas. This is particularly useful for follow-up discussion, as the teacher may refer to an interesting point and then call upon the student to elaborate, clarify or substantiate the idea to enrich the discussion. As with the case cited in Fig. 1, the teacher may invite the student to explain his rationale behind suggesting carbon tax as the non-technical solution to climate change.

II. FACILITATING DIFFERENT TYPES OF DISCUSSION

Different subjects and topics require different modes of discussion. Some need a general pool of ideas while others expect a two-sided or even six-sided view on the issues under inquiry. iClass provides support for different types of discussion, ranging from one-dimensional to six-dimensional.

III. ONE-DIMENSIONAL DISCUSSION

If the teacher wants to generate general points on a certain topic, he or she can initiate a brainstorming session using
iClass. For instance, in discussing the topic on sustainable development, the teacher may ask students to give examples of renewable energy. The student can then type in keywords such as ‘wind power’, ‘hydropower’ and ‘solar energy’ and submit their answers to the system. Every student can contribute as many examples as possible at the same time, and the system will display all the ideas gathered on the screen. The teacher can refer to the examples raised and pick up a few to follow-up on. Instead of feeding ideas to students, this style of open discussion makes learning a more engaging experience, which is especially helpful when the class size is large.

IV. TWO DIMENSIONAL DISCUSSION

Other than stimulating general discussion, the system enables teachers to conduct class debates effectively by offering a clear view of the two sides of the same issue. This is relevant and important in subjects like liberal studies or social administration which often demand students to hold a balanced view on the issues concerned. For instance, in evaluating the effectiveness of a social policy, such as the legislation of standard working hours, the students have to brainstorm the positive and negative impacts of the policy. Under the tab on positive impacts, students may input keywords such as ‘work-life balance’, ‘less exploitation’. On the other hand, negative impacts may include ‘lower productivity’, ‘less welfare’ and so on. After listing out both sides of the issue, the class can carry out a debate on the implementation of the policy based on those ideas generated. During the debate, students can easily refer to the points on the screen from time to time. It also helps students to construct stronger arguments and formulate convincing rebuttals by considering the opponents points of view.

V. SWOT ANALYSIS

Aside from presenting a two-dimensional view, the system facilitates the four-dimensional SWOT analysis by encouraging students to identify the strength, weakness, opportunities and threats of particular projects or policies. This analytical structure is originally developed by Albert Humphrey in the 1960s in his analysis of business companies, and is later widely adopted for business ventures and all kinds of projects. While SWOT analysis is useful for strategic planning by identifying both the internal and external factors affecting a project, it also proves to be a good analytical framework for discussions beyond the business field.

In fact, the SWOT analysis model is used for an Engineering management class in the university. In discussing the competitive industry in Hong Kong, the professor guided the students to approach the topic from four angles by brainstorming its strengths, weaknesses, opportunities and threats.

As shown in Fig. 2, after submitting their answers to the system, both the professor and students get a clear table view of the ideas immediately. In the past, class discussions are often difficult to carry out when the class is not active or responsive enough. With the support of iClass, the teacher can conduct and coordinate effective class discussions based on the points contributed by students, at the same time making the class more interactive by responding directly to their ideas.

VI. SUMMARIES

As illustrated, the system is a useful tool in facilitating multidimensional discussions that accommodate various types of discussion and teaching styles required in language learning. In today’s world, learning no longer stresses on the one-way knowledge transmission from teachers to students, but in enhancing the capacity of the student to develop critical thinking ability to analyze issues from multiple angles in an organized and logical way. Discussions, whether they are between teachers and students, or among students themselves, have hence become an increasingly important part of interactive learning.

The system is also a good and easy way to keep record of the discussion content for each lesson, which can then be used for review during the next lesson, or for the students’ future reference when they prepare for essays and examinations. By stimulating the brainstorming of ideas and providing an easy way to contribute ideas in class, iClass encourages more active participation from students to foster a more interactive class environment that is optimal for effective language learning and teaching.

REFERENCES


Figure 2. SWOT of competitive industry in HK