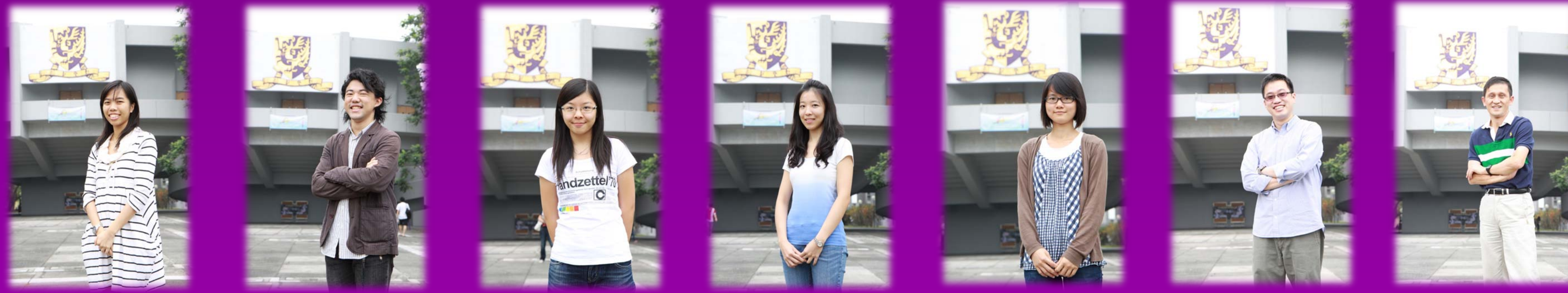


# Using Clickers in Learning Cell Biology (BIO 2120)

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## Abstract

In this poster presentation, we will share our experience about using clickers in teaching Cell Biology (BIO2120) in a large classroom with 260 plus students.

## Introduction

In lectures with large amount of students, interaction between students and the presenter is usually difficult and insufficient. This hinders active learning, which can make higher impact on students' growth. The introduction of clicker system aims at increasing student's participation in class and encouraging students to take the initiative.

In this semester, our team is trying to use clickers in teaching Cell Biology, with over 260 students. Feedbacks were obtained from students and presenters and summarized.



## Comments on the Use of Clicker

### 1. Immediate response facilitating interaction

The immediate statistics allows the presenter to know the degree of absorption of students. It also helps to reflect the clarity of the presentation. The presenter can then assess and adjust the pace of teaching and have in depth discussion with students pinpointing their main doubts on the presentation.

### 2. Simple interface with little technical problems

Both the software and the keypad have simple interface. It is easy for the presenter and students to use. And at the moment, we have encountered little technical problems. The system is relatively stable.

### 3. Quick delivery with student helpers

With our large class size, the delivery and collection of keypads can be time-consuming and chaotic. The recruitment of student helpers can reduce these problems.



## The Application of Clicker System in Class

Since there are around 260 students in the class, the amount of keypads is out of the cope of the presenter. Therefore, we have recruited about twenty student helpers to assist in the distribution and collection of keypads.



1. Delivery of keypads before tutorials by student helpers
2. PowerPoint presentation held by the presenter
3. Asking questions about the presentation using the clicker
4. Immediate summary of response
5. Discussion on the questions to clarify ideas, especially those with low response rate or high proportion of wrong response
6. Collection of keypads by student helpers

## Problems Encountered

### 1. Decrease in response rate

Some students may not be eager in participation after several times of using clicker. They may not have high motivation due to the lack of new stimulation and other incentives.

### 2. Incapable in individual keypad registration

Since our class size is too large, we cannot register the keypad in correspondence to individual student every time before class. This hinders us from having individual result recording and thus we are unable to provide students with more incentives, for example bonus mark, for responding in class.

### Possible Solution from Overseas Experience:

Students will have their own keypad after paying deposit. They will use it to respond to questions during class. At the end of the semester, the individual response rate can be calculated. However, the main concerns are the high investment cost and extra financial burden (for the deposit) posed on the students.

## Summary

From our experience, clicker system is useful in facilitating the interaction between the presenter and students and improving both the students' understanding on the topic and the presenter's quality of conducting presentation. With suitable incentive, it can be used repetitive during class and become an useful tool in motivating students' learning spirit.

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