

Effective Implementation of the

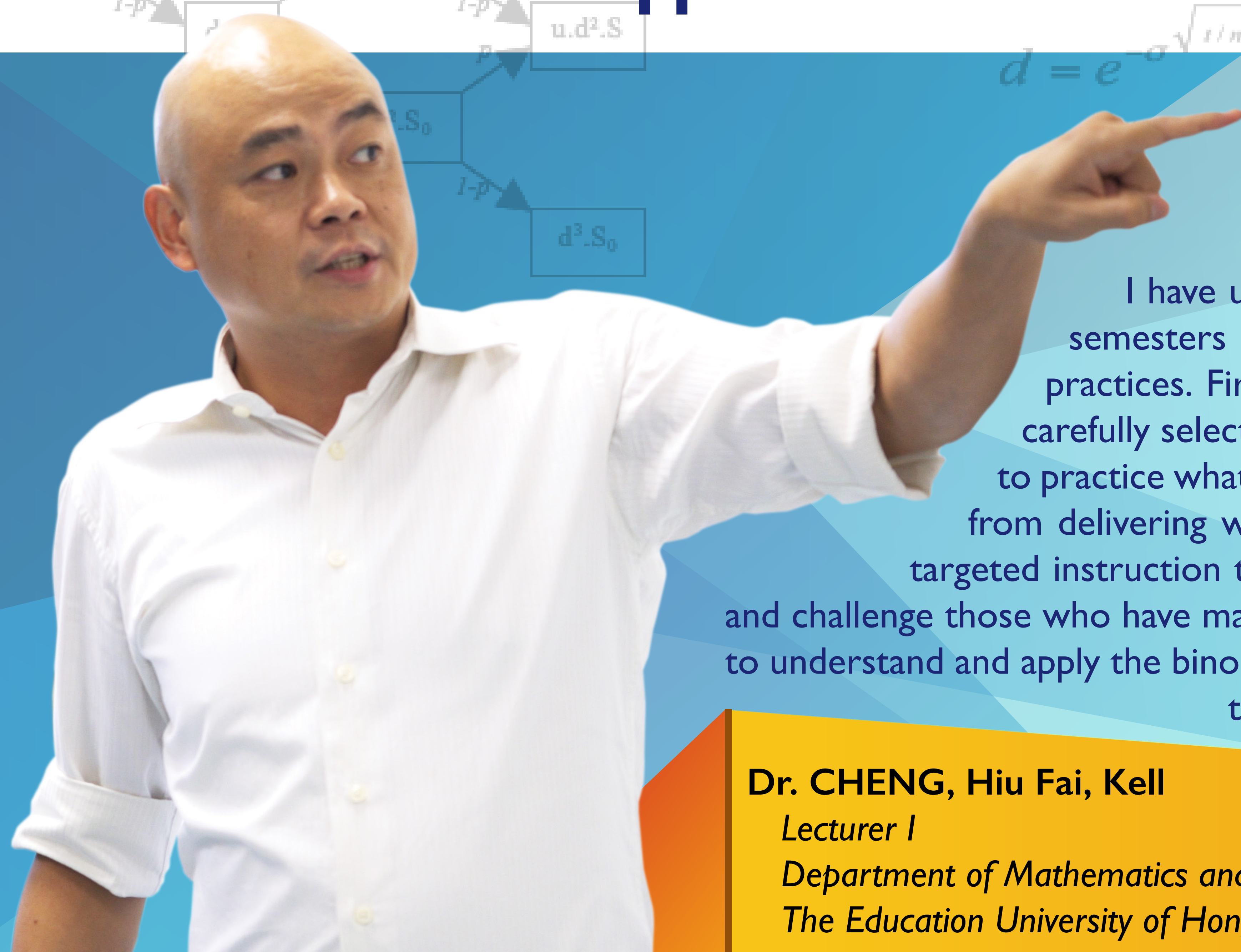
Flipped Classroom

Approach

in Hong Kong Higher Education for Enhanced Learning Outcomes

The Flipped Classroom in

Mathematics of the Financial Markets



“ I think flipped classroom approach facilitates individual learning and group learning, and ultimately enhancing active learning and deep learning.

I have used this approach for the very same topic, Binomial Model, for two semesters in a row, as this topic is very complicated and involves a lot of practices. First of all, I started to encourage students to watch a video that I carefully selected for them before coming to class, and then students came to class to practice what they had learned with their peers and the teacher face to face. Freed from delivering whole-class instruction during that hour or so, I was able to deliver targeted instruction to students one-on-one or in small groups, help those who struggle, and challenge those who have mastered the content. On top of this, more students tended to be able to understand and apply the binomial model better and quicker, compared to the traditional lesson on the same topic with different batch of students previously.

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Flipped Classroom

Intervention Design

Topic: Binomial Model

- 01 Learning Objectives for topic:
Describe a binomial tree and its branches.
- 02 Calculate and explain how to use options to increase consistency of returns, and put the odds in your favor.
- 03 Apply the binomial model to different practical settings.



Lessons Learned

Engaging in the flipped class redesign is a rewarding experience, and a few noticeable changes have been spotted in terms of the individualized instruction and students’ improved learning performance in class, which are important to quality teaching and learning in higher education. The flipped classroom approach also provides me with greater flexibility over the classroom time as students have the time to engage lesson content at a deeper level. This is, at times, achieved by having students use technology to complete rudimentary study of basic concepts ahead of classroom time, so that they will be ready for deeper learning during the class. However, there are several things I will think about more for the forthcoming flipped class in the next semester to ensure success, such as, ways to motivate more students to complete the pre-class learning activities, and evaluating and checking their pre-class work quickly at the beginning of class.

	Before class	During class	After class
Activities	Watch 1 short video carefully selected by the instructor from YouTube, about the introduction of Binomial model	Lecture, small group discussions, in-class worksheet	
Goals of activities	To enable students to get a feel of the simple unit of binomial branches first from the video	To help and facilitate students to work their way up to a bigger and more complicated binomial tree model together with their peers and the instructor face to face	
Assessments	nil	Instructor monitoring for understanding. <ul style="list-style-type: none">• Mini-summary from each student group• Clarify difficult or complicated concepts• Clear up misconceptions	One assignment: a worksheet with 5-6 practices that are more challenging in relation to the binomial options pricing model (BOPM)