

## AMA develops Active Learning Pedagogies and Mobile Applications in University STEM Education



Partnered with CUHK, HKU and HKBU, Dr. Fridolin Ting (back row right 3), Teaching Fellow of AMA, and his team lead off a project titled “Developing Active Learning Pedagogies and Mobile Applications in University STEM Education” with a funding support of HKD 15 million from UGC Funding Scheme for Teaching and Learning Proposals (2016-19 Triennium). Under this project, 13 active teaching pedagogies, mobile applications and platforms have been developed with approximately 35,000 international and local users (students and teachers) per month. These technologies not only enable student-driven learning, but also serve as platforms for knowledge sharing and dissemination.

On 28 August 2019, Dr. Ting and his team met media and shared the latest development of the project. They also gave a demonstration on three mobile applications “*Yo Teach!*”, “*Badaboom!*” and “*Cell Game*” they developed.

### About the PALMS project

PolyU's PALMS, the UGC teaching and learning project for Pedagogic & Active Learning Mobile Solutions, aims to improve students' overall learning outcomes through active learning. Its objectives include:

- Increase students' overall learning outcomes through active learning;

- Explore and develop active learning pedagogies to increase student engagement in STEM higher education;
- Develop an online platform to promote and encourage wider adoption of active learning among Hong Kong STEM instructors;
- Use and improve quantitatively rigorous and valid methods to evaluate the impact of active learning strategies on student learning outcomes in STEM (science, technology, engineering and mathematics) education; and
- Adapt existing or develop new mobile applications to enhance active learning.

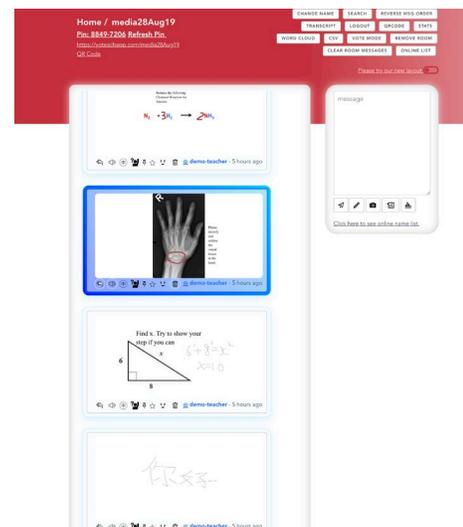
## About the mobile applications

### YoTeach!

Designed to enhance “Question and Answer” Pedagogy in STEM, *YoTeach!* is the only existing backchannel educational app with machine learning for Math symbol and handwriting recognition. It allows teachers and students to handwrite mathematical expressions on their mobile devices, and instantly recognizes and automatically converts the handwritten expressions to text using a LaTeX handwriting recognition software engine. By simply creating a room and then setting a password, students can join a chatroom via a URL or QR code generated by the instructor.

There are over 17,000 users per month internationally at its peak, and 10,000+ discussions rooms created since its launch.

URL: <https://yoteachapp.com/>



## Badaboom!

A game based learning platform with Machine Learning Hand Writing Recognition, *Badaboom!* supports images, word clouds, emoji, LaTeX equation editor, formulas and videos from YouTube and/or Vimeo embedded in question & answer choices. There is an option to enter question and answer as a mathematical equation with LaTeX Output. There have been over 1000 quizzes made and approximately 800 users per month internationally.

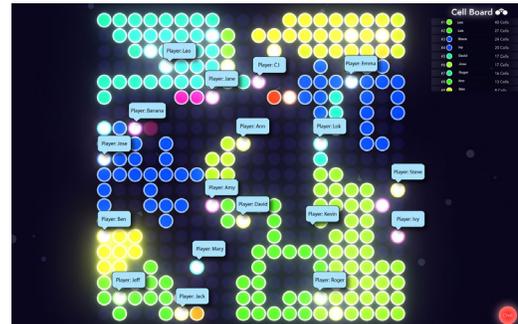
URL: [www.badaboom.hk](http://www.badaboom.hk)



## Cell Game

*Cell Game* is an online multiplayer competitive survival game. Combining gaming and education, *Cell Game* aims to let players learn and review knowledge through entertainment. In *Cell Game*, knowledge is your weapon. 10,000+ Questions were attempted in the 1st pilot run by 120 students. The *Cell game* teacher interface has more question and answer options than any other educational gaming platform, including hand-writing math recognition responses.

URL: <https://the-cell-game.com/cloud>



## Media coverage

HKET - <https://rplg.co/bd899520>

Sing Tao Daily - <https://rplg.co/b7318700>

Ming Pao - <https://rplg.co/b9b4a370>

Educators - <https://www.educatorshk.com/?p=13873>

## Enquiry:

Tel: (852) 2766 – 5641

E-mail: [palms.hk@polyu.edu.hk](mailto:palms.hk@polyu.edu.hk)

Website: [www.palms.polyu.edu.hk](http://www.palms.polyu.edu.hk)