

## Part B Project Summary

<b>Project Title:</b> Building a Community of Practice (CoP) for Mathematics Teachers: Using Cognitive Tools and Communication Platforms inside and outside Digital Classrooms for Developing Mathematics Concept of Learners (建立數學教師專業發展社群:運用認知工具及溝通平台在數碼教室內外發展學習者的數學概念)	<b>Project Number</b>  <b>2013/0541</b>
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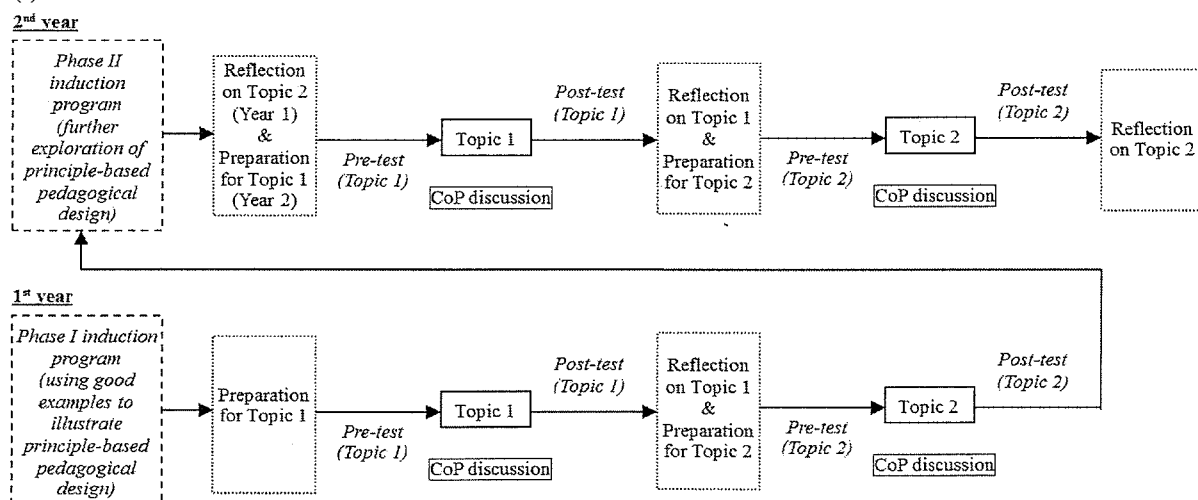
Name of Organization: Department of Mathematics and Information Technology (MIT), The Hong Kong Institute of Education (HKIEd)

- (1) Goals: To build a community of practice (CoP) which promotes mathematics teachers from the senior primary school sector to use cognitive tools and communication platforms in digital classrooms for mathematics concept development.  
Objectives: (i) To promote the shift from teacher-centered paradigm to learner-centered paradigm for the development of domain knowledge; (ii) To promote teachers and learners to transform the practice of passive learning into active, constructive and interactive learning; (iii) To promote teachers to continuously refine pedagogical designs based on learners' evidence of improvement and awareness of progress.

- (2) Targets: Mathematics teachers from the senior primary school sector in Hong Kong  
Expected number of beneficiaries: (a) Direct: Around 36 mathematics teachers and their 1,080 students in average from senior primary school sector; (b) Expected: All primary schools in Hong Kong

- (3) Implementation Plan – Duration: March 2015 - February 2017 (2 years)

(i) Process / Schedule:



(ii) Collaboration with other parties / partners: 8 to 15 primary schools in Hong Kong

- (4) Products:
- (i) Deliverables/outcomes: (a) A CoP for mathematics teachers; (b) Seven teacher development activities; (c) A cloud-based repository of e-learning materials; (d) Two rounds of dissemination seminars
  - (ii) Dissemination of deliverables / outcomes: (a) Dissemination seminars in local region; (b) Academic publications in the Asia-Pacific region

- (5) Budget: Total: \$1,701,700

(a) staff cost: \$1,044,540; (b) services: \$79,760; (c) equipment: \$216,000; (d) general expenses: \$346,590; and (e) contingency: \$14,810

- (6) Evaluation:

Pre- and post-tests with learners	To investigate learners' learning outcomes
Lesson observation (video analysis)	To investigate teachers' mathematics teaching performance
Content analysis of teaching reflection input	To investigate teachers' principle-based pedagogical designs
Focus group interview with each sub-CoP	To understand the effectiveness of CoP activities
Questionnaire survey with learners	To understand learners' self-perception of learning effectiveness