A Tale of Two Cities: Teaching CP with Story-Telling

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— Abstract -

This presentation is all about story-telling. It tells the story, the pedagogical innovations and experience of the co-development of three MOOCs on the subject of "Modeling and Solving Discrete Optimization Problems" by The Chinese University of Hong Kong (CUHK) and the University of Melbourne, each with unique culture and tradition. The MOOCs feature the Fable-based Learning approach, which is a form of problem-based learning encapsulated in a story plot. Each MOOC video begins with an animation that follows a story adapted from a Chinese classic. The heroes of the story encounter various optimization problems requiring technical assistance from two professors from modern time via a magical tablet granted to the heroes by a genie old man. The animation thus sets the stage for lecturing modeling and solving techniques. The new pedagogy provides a movie-like immersive experience to the learners, and aims at increasing learners' motivation and interests as well as situating them in a coherent learning context. In addition to scriptwriting, animation production and embedding the teaching materials in the story plot, another challenge of the project is the remote distance between the two institutions as well as the need to produce all teaching materials in both (Mandarin) Chinese and English to cater for different geographic learning needs. The project and production spanned across 2016 and 2017. The MOOCs have been running recurrently on Coursera since January, 2017. We present learner statistics and feedback, and discuss our experience and preliminary observations of adopting the online materials in a Flipped Classroom setting at CUHK.

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