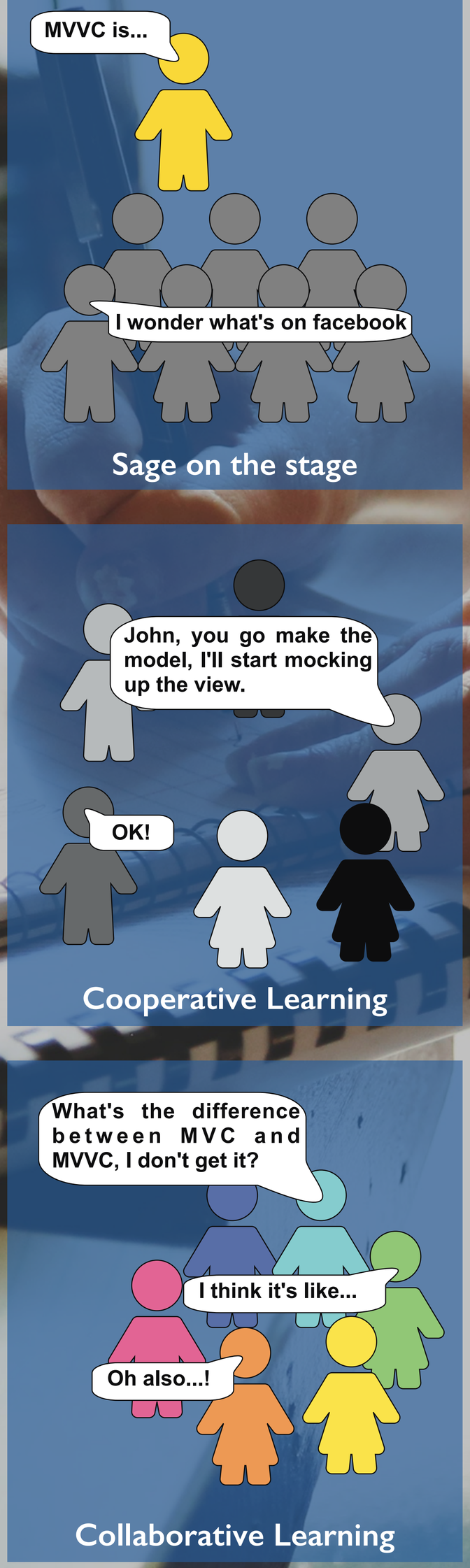
Student Collaboration in IT and Engineering Education

Mr. Timothy Boye BIT RMIT



Sage on the stage

Cooperative Learning

Collaborative Learning

What is Collaborative Learning?

Collaborative learning is a learning approach where students and instructors (often now considered facilitators) work together to build knowledge through interaction and participation. Backed by Vygotskian social constructivism, collaborative learning allows students to work together on difficult tasks they would otherwise struggle with alone (See: Vygotsky's Zone of Proximal Development in 'Mind and Society' 1978). By working together they build on each other's foundational knowledge and assist each other in completing tasks such that the knowledge they gain will better prepare them to complete similar tasks in future. The students are presented with new ideas and new information which is adapted, assimilated or accommodated in their minds building on their preexisting knowledge to form new knowledge.

Are your students collaborating?

Often mistaken for collaboration, cooperation is an activity that also includes some interaction and participation. Conversely cooperation's discussion activities tend to be focused more on administration than on content and learning. That is students tend to split work up to complete individually and interactions are primarily focused on facilitating that division of labour rather than working on tasks together. Whilst cooperation can still assist in learning basic teamwork skills, the division of labour and the very basic interactions mean that students are less likely to develop knowledge together or learn from each other. In fact, Paulus (2005) found that when students are presented with tasks to be completed collaboratively even when explicitly told to collaborate they were likely to merely cooperate. Thus careful tasks design is needed to facilitate collaborative activities.

Where to from here?

This research seeks to investigate collaborative learning activities in IT and engineering classrooms at the host university. The host university has an advertised strong focus on collaboration in its program including studio programs, group work in most subjects and internal internship programs. The research seeks to investigate and develop case studies of these activities. This in-depth analysis of the phenomenon of collaborative learning within these classrooms will lead to actionable insights into teaching and learning within related contexts.

What is your experience of Collaborative Learning as a student or teacher?

I'd like to hear from you. Use the sticky notes or QR code below to leave some of your thoughts and experiences on collaborative learning in IT or engineering.

CORE Student Travel Award Recipient.
This research is supported by an Australian Government Research Training Program Scholarship.

timothy.boye@uts.edu.au
Casual Academic and Research Student
Building 11, Level 5, Room 204
Faculty of Engineering and Information Technology
University of Technology Sydney
PO Box 123, Broadway NSW 2007

Scan for:
Feedback, Digital poster,
Contact details, and
Full reference list
http://boye.co/ACE2019