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Applying Student Engagement and Learning Objectives Analyses to Improve Online Accounting Tutorial

PROBLEM/CONCERN: Low student engagement in self-guided, pre-term, online tutorial

GOALS: For Students – To be better prepared for core Accounting course; For Faculty – Inform design of core course based on students' learning experiences in Tutorial

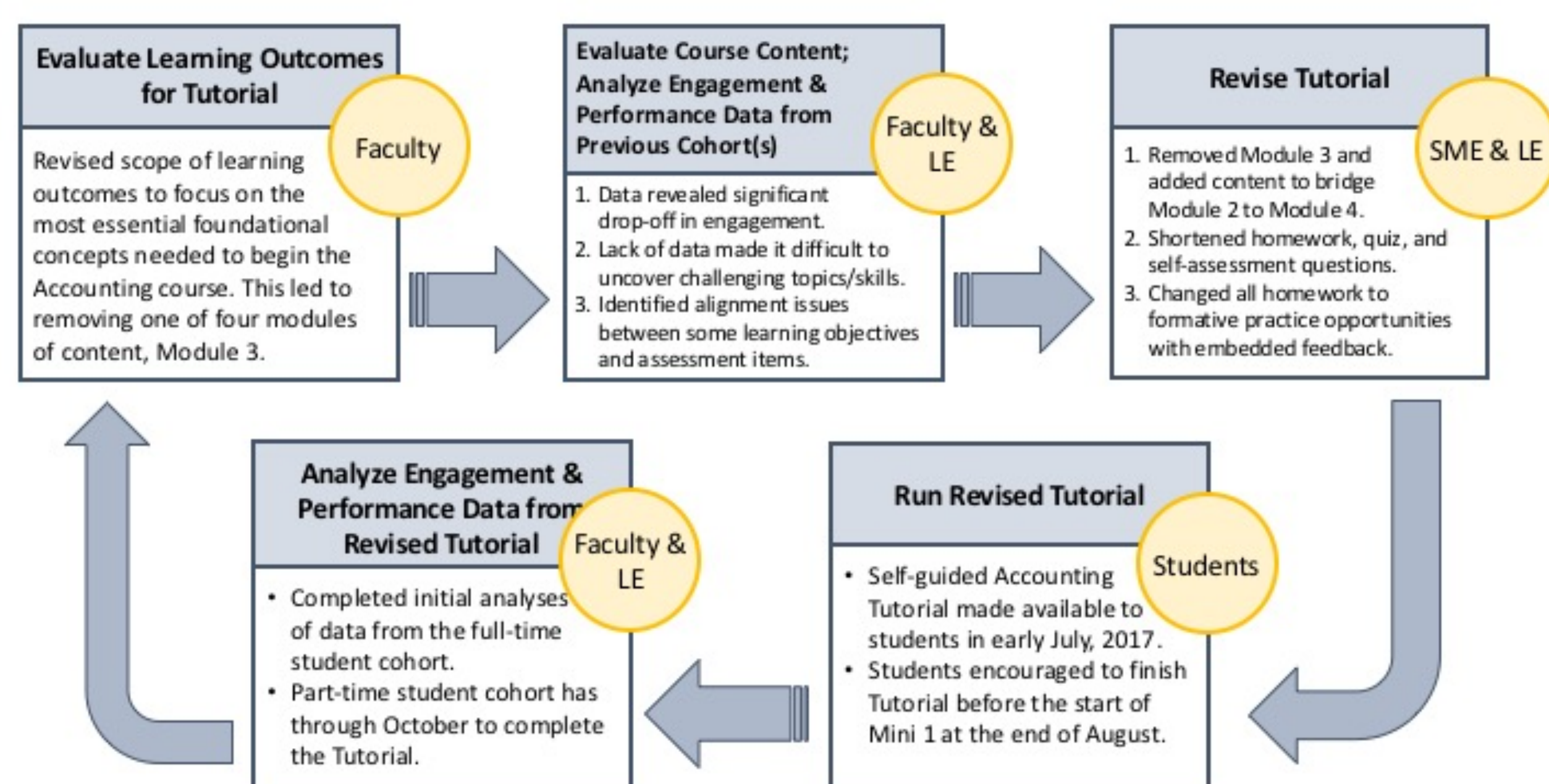
METHODS: Analyses of (1) learning objectives and (2) student data from Tutorial offered in summer 2016

INTERVENTIONS: Refine scope of learning objectives and alignment of content, along with formative and summative assessments

Project Design

Illustration shows our revision process with team roles. Actions taken are summarized for each step.

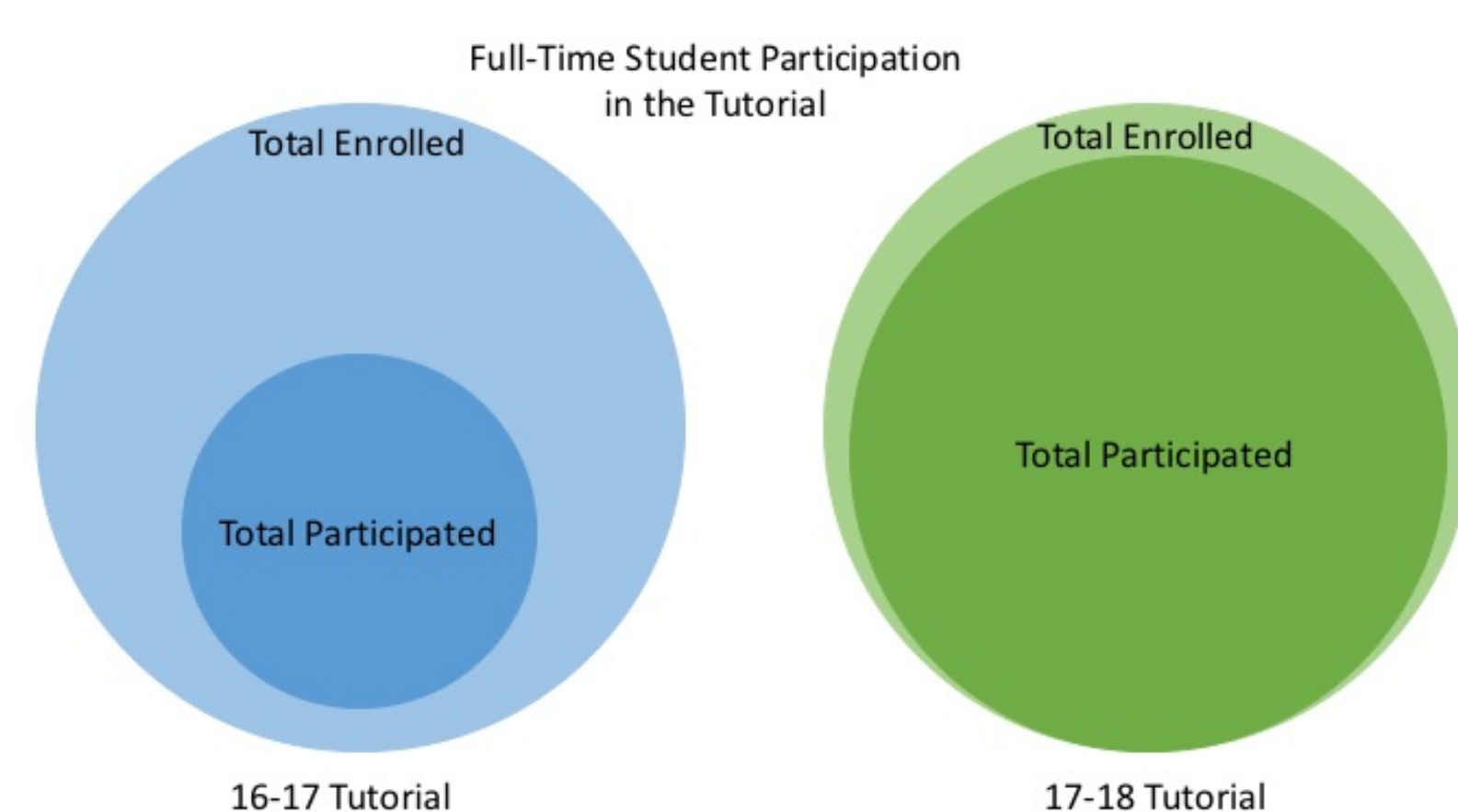
Faculty: Pierre Liang; Subject Matter Expert (SME): Wenjie Xue; Learning Engineer (LE): Kim Henry



Lessons Learned

1. Frequent, low-stakes, formative practice improved student engagement.
 - Configuring section homework as unlimited formative assessment with embedded feedback rather than single-attempt, scored assessment promoted practice of concepts and skills learned in each section of a module.
 - Follow-up: Evaluate Sections 2.1 and 4.4
2. Alignment of learning objectives and scope improved student engagement.
 - Eliminating Module 3 removed an obstacle to maintaining engagement.
 - Follow-up: Revise Quiz 4 and the cumulative Self-Assessment
3. The availability of more complete data sets for individual students and the cohort provides a more comprehensive and detailed picture of the learning experience which informs the design of the core Accounting course and the next round of improvements to the tutorial.

Project Evaluation

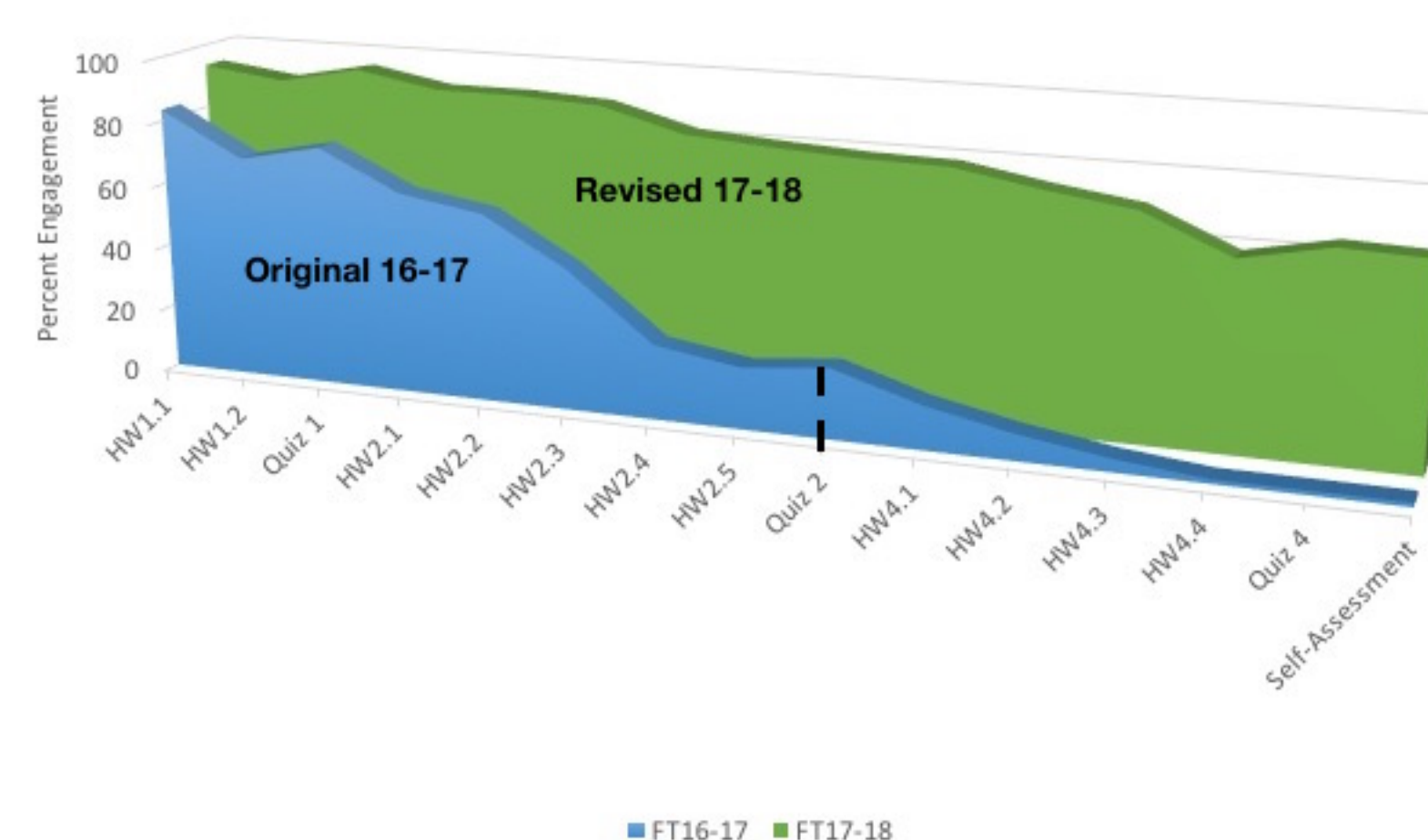


Students who completed at least one homework assignment or quiz were consider participants.

For the 16-17 Tutorial, 55% of the students (73) were in the participant set.

For the 17-18 Tutorial, 96% of the students (214) were in the participant set.

Homework and Quiz Engagement Comparison



Student engagement ranged from 93% to 70% in all but the last quiz and self-assessment for the revised 17-18 Tutorial. 63% of the participating students took the cumulative self-assessment.

The dotted line at Quiz 2 for the 16-17 Tutorial marks the placement of Module 3 in the original sequence. For consistent comparison, Module 3 participation percentages were not included in this chart.

AVERAGE SCORES



All homeworks and quizzes in the 16-17 Tutorial were scored assessments. The average scores varied and were generally lower than those for the revised Tutorial. (Note: Only one student took Quiz 4 and the self-assessment in the 16-17 Tutorial.)

With shortened homeworks consisting of formative practice with embedded feedback in the 17-18 Tutorial, most students worked until all question parts were correct as reflected by 100, or near 100, score on the homeworks.