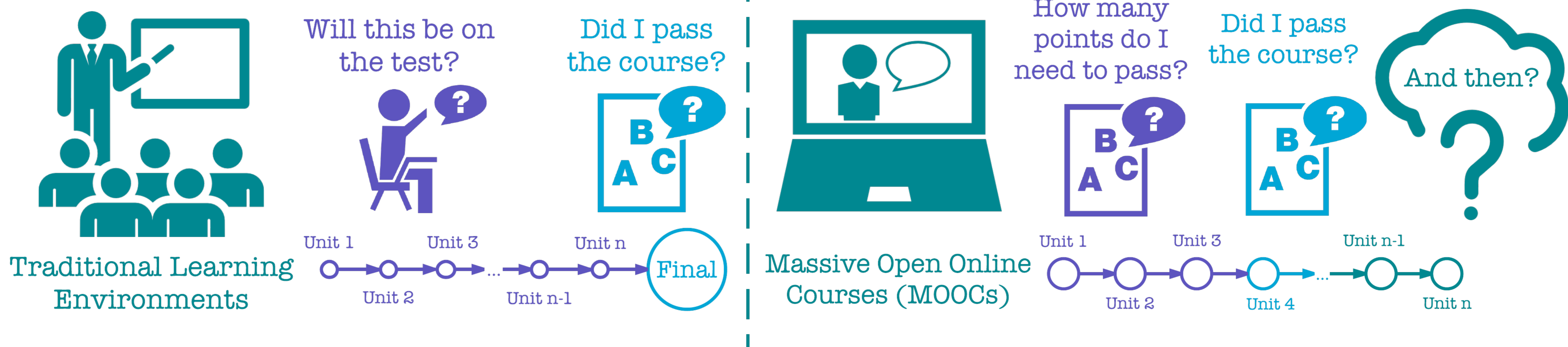


Certificate Achievement Unlocked: How Does MOOC Learners' Behaviour Change?

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<http://www.wis.ewi.tudelft.nl/projects/learning-analytics/>

Motivation:

MOOC learners can (and do) earn a passing grade before accessing up to 40% of the course content.

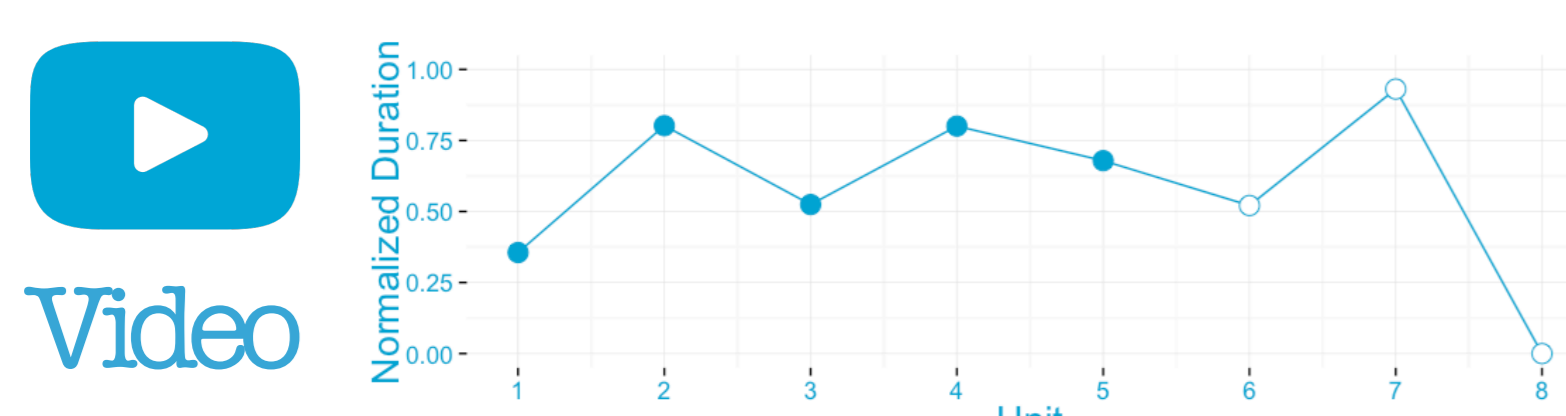
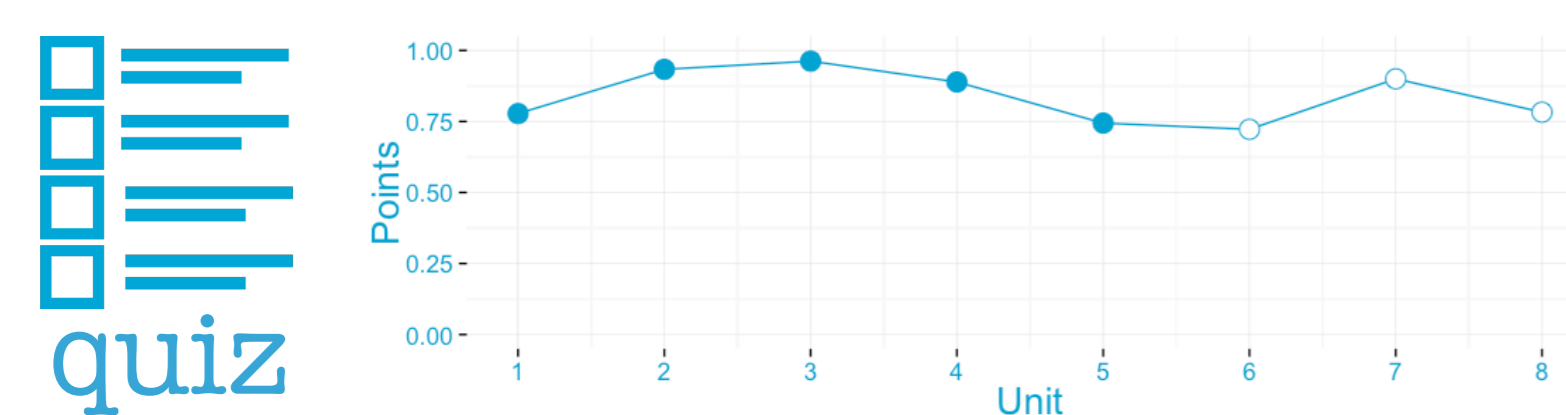


Research Question:

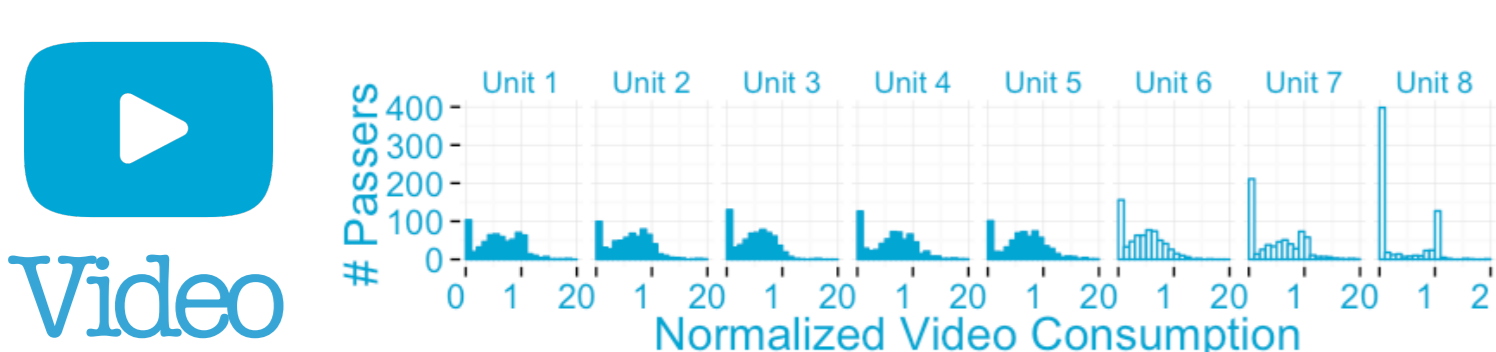
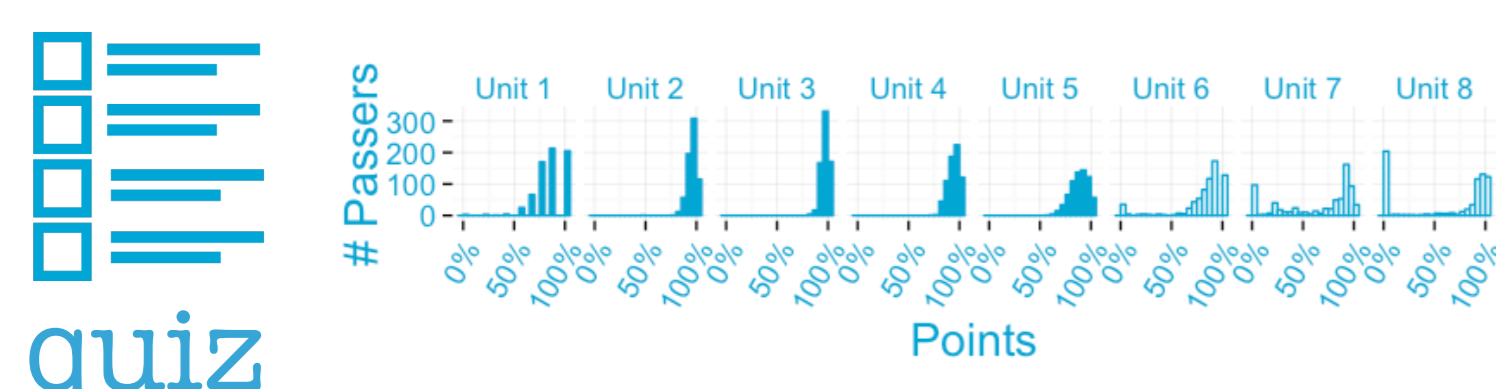
Do MOOC learners behave differently after clinching a passing grade?

Approach:

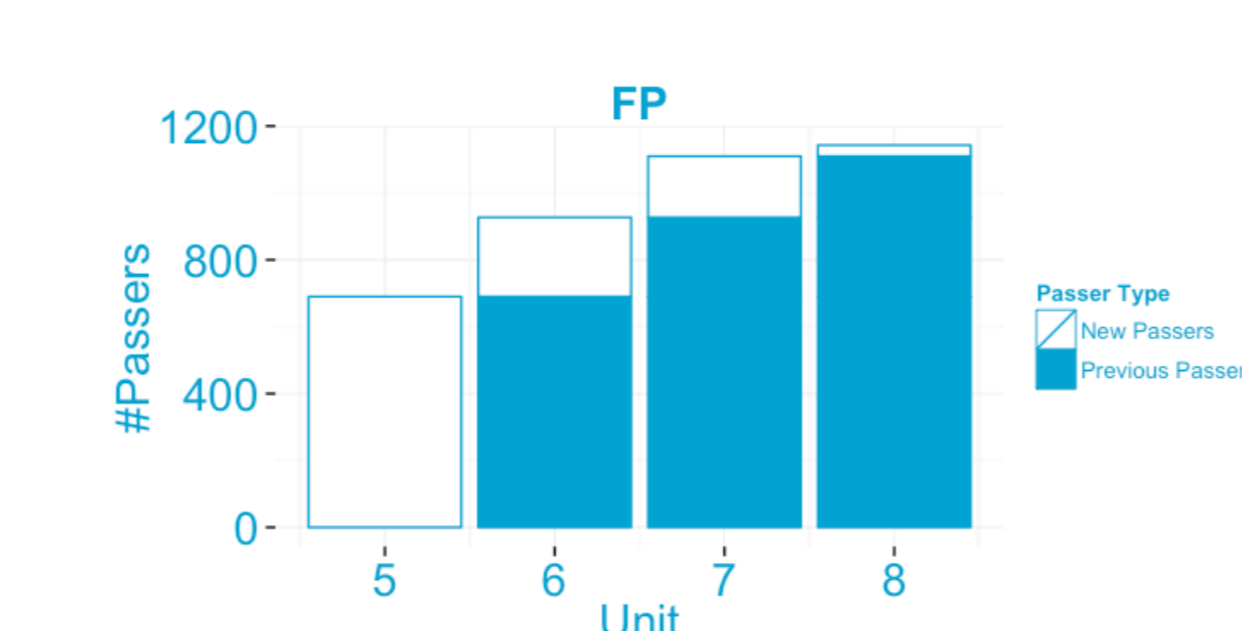
1. Aggregating activities of each learner by course unit from the data logs



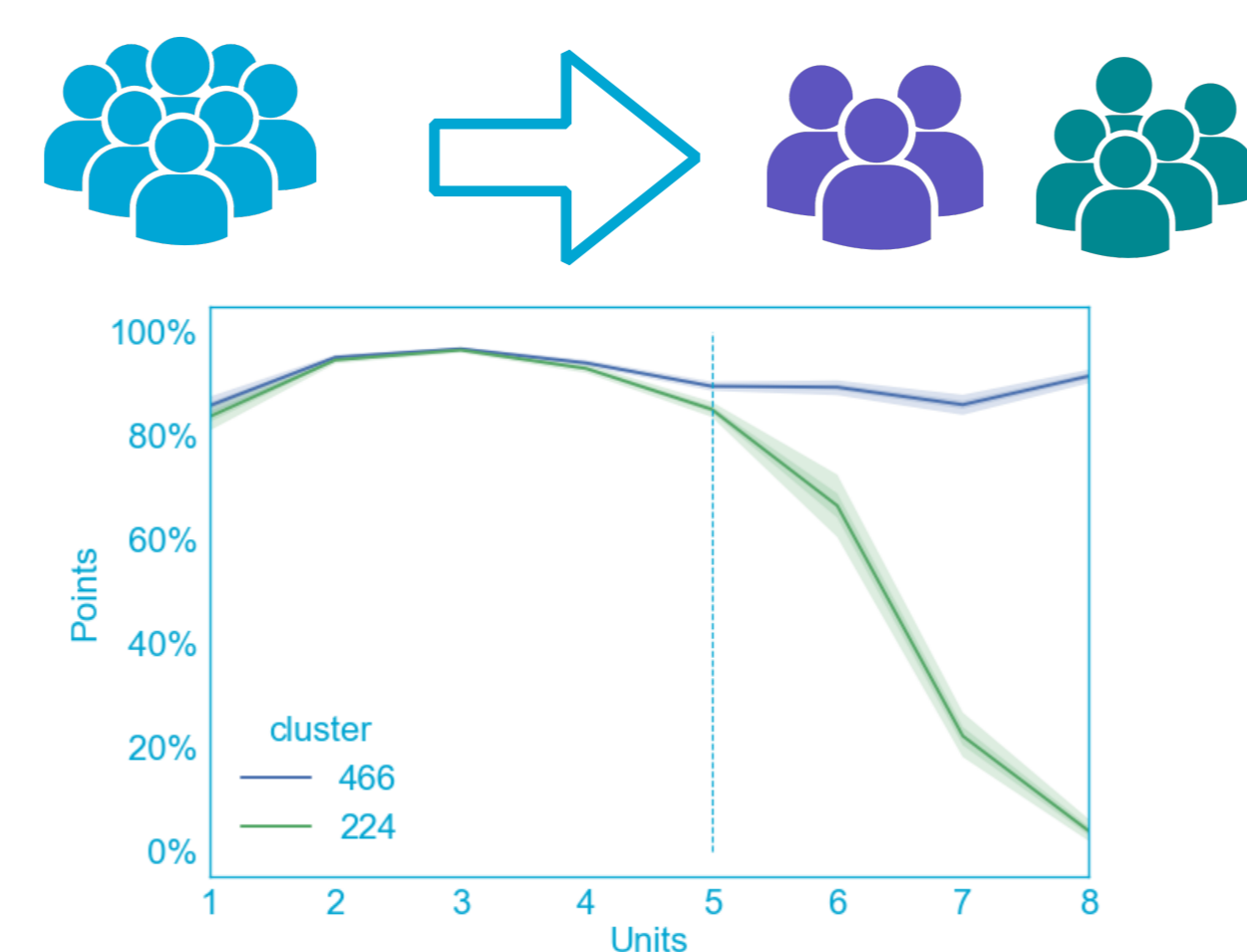
3. Aggregating passers' activities by units for each group of passers



2. Grouping passers based on the units they pass the course



4. Clustering passers from the same group based on their quiz points by units



Data Source:

4 DelftX MOOCs:
Functional Programming, Data Analytics
Solar Energy, Urban Sewage Treatment

#Materials	#Learners
31 units	86,725 registered
239 videos	34,992 engaged
586 questions	4,006 passed

Findings:

- ◆ Learner **behaviours on quizzes** are distinctive before and after passing.
- ◆ There are two dominant behaviour patterns: **“reducing scores”** and **“keeping scores”** after passing.
- ◆ The MOOCs differ in the **dominant post-passing behaviour**.

Conclusion:

This analysis highlights the need for course practitioners to design assessment systems which require learners to display mastery of an entire course's subjects before earning a certificate.

This analysis has been the first to specifically focus on the event of passing and the impact of this event on MOOC learners' behaviours.