

Beyond and Between “Traditional” MOOCs

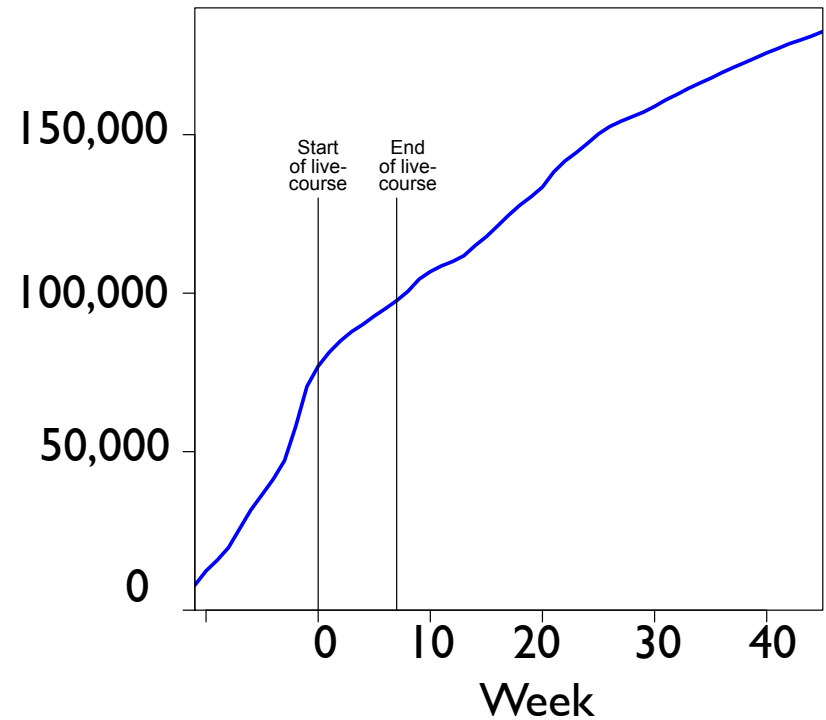
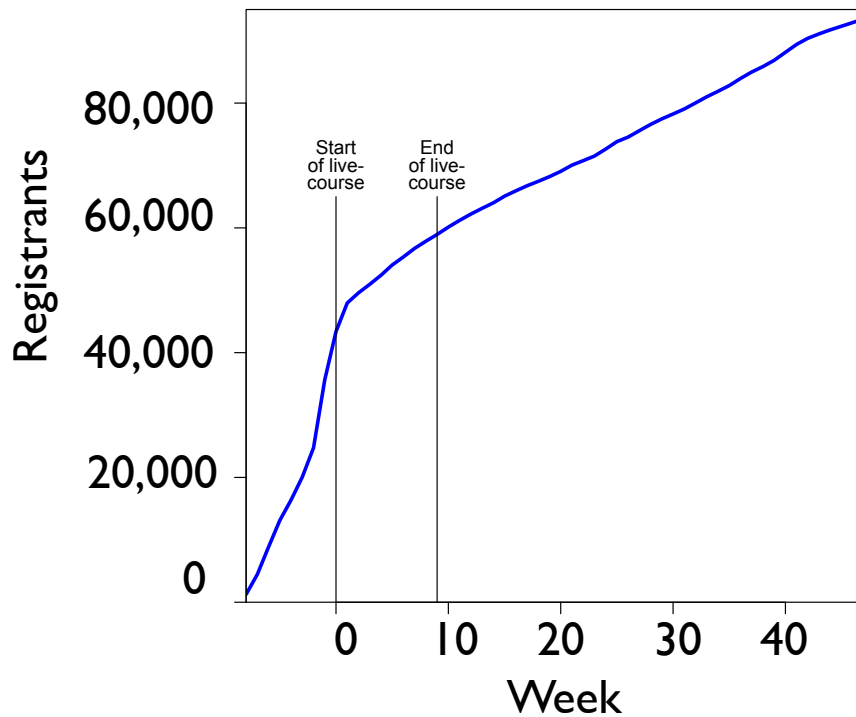
A Comparison of Learner Intent and Behaviour in Live and Archived MOOCs

Jennifer Campbell • Alison Gibbs
Hedieh Najafi • Cody Severinski



Background

- 78% of completed Coursera courses remain available after the session ends
- Here is the continuous registration for two UofT courses:



Purpose of Study

- To investigate the potential use of archived-MOOCs as learning resources for beyond and between live sessions.
- Identify potential differences in learners' patterns of usage and learning outcomes including
 - Demographics
 - Motivation for enrolling
 - Intended behaviour
 - Actual behaviour

The MOOCs

- **Statistics Making Sense of the Data (STATS)**

(Instructed by Alison Gibbs and Jeffrey Rosenthal)

- 8 week course
- 7 quizzes, 2 peer-assessed assignments
- 62,500 enrolled by the end of the live session

- **Learn to Program: The Fundamentals (LTP1)**

(Instructed by Jennifer Campbell and Paul Gries)

- 7 week course
- 7 quizzes, 3 assignments, final exam
- 80,000 enrolled by the end of the live session
- Sequel: Learn To Program: Crafting Quality Code (LTP2)

Definition of Terms

- **Archived-MOOC:**

- Post live-session, self-directed course with minimal or no instructional support or cohort presence, no deadlines, no peer-assessment, and no opportunity to earn a Statement of Accomplishment (SoA). All materials are available on registration.

- **Live-learners:**

- Learners who register in a live-MOOC in time to earn an SoA.

- **Archived-learners:**

- Learners who are active in an archived-MOOC.

Research Questions

- How do learners' learning experiences differ in live- and archived STATS and LTP1?
 - What are **demographic differences** between live-learners and archived-learners?
 - How does live- and archived-learners' **motivation** differ?
 - How do live- and archived-learners' **self-regulative practices** differ?
 - What are the differences in live- and archived-learners' **patterns of use** of learning materials?

Data Sources

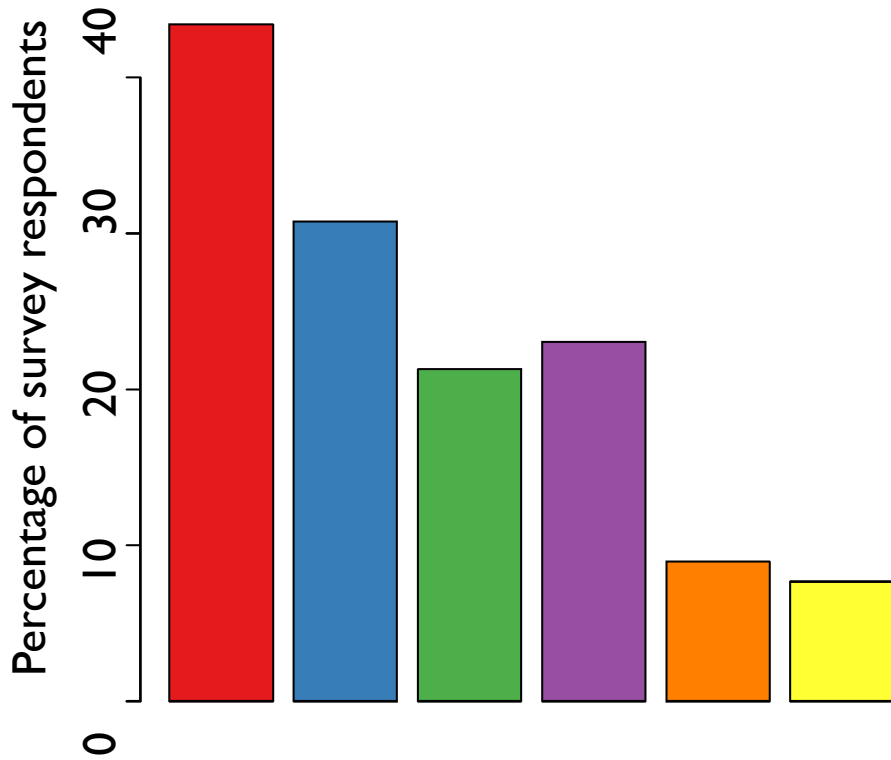
- Survey data
 - Pre-course survey (live-learners)
 - Post-course surveys (live-learners)
 - Archived-learner survey (archived-learners)
- Database data
 - Record of events (e.g., quiz submissions, discussion forum posts, videos watched, etc.)
- Clickstream data
 - Log of all user activity.

Findings

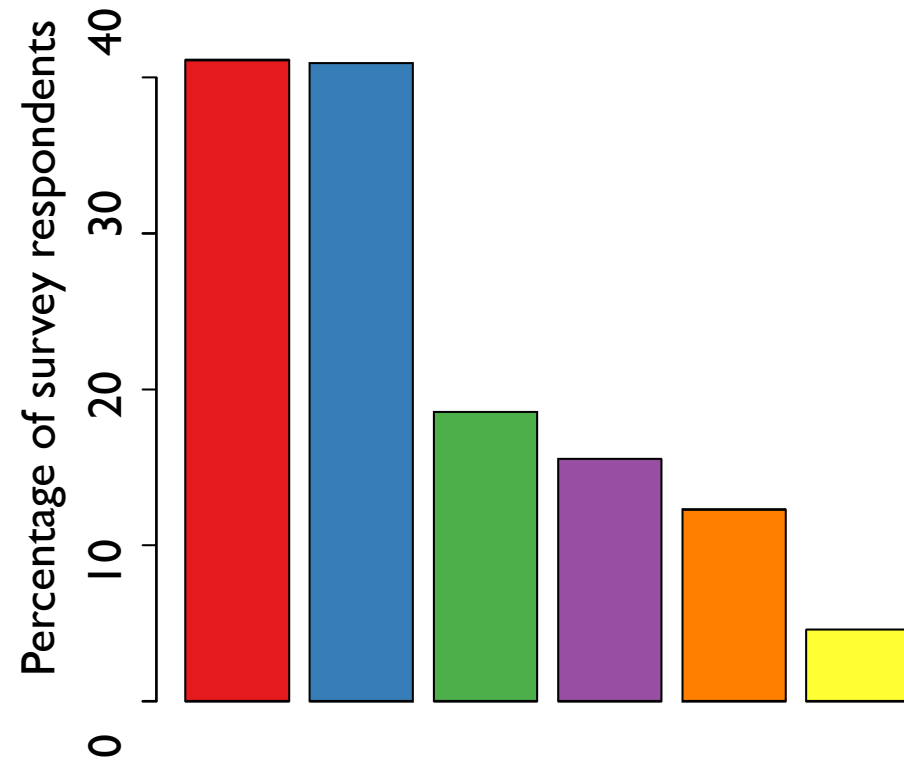
Why Enrolled in Archived-Mode?

- didn't complete
- arrived too late
- need for studies
- need for job
- browsing
- educator

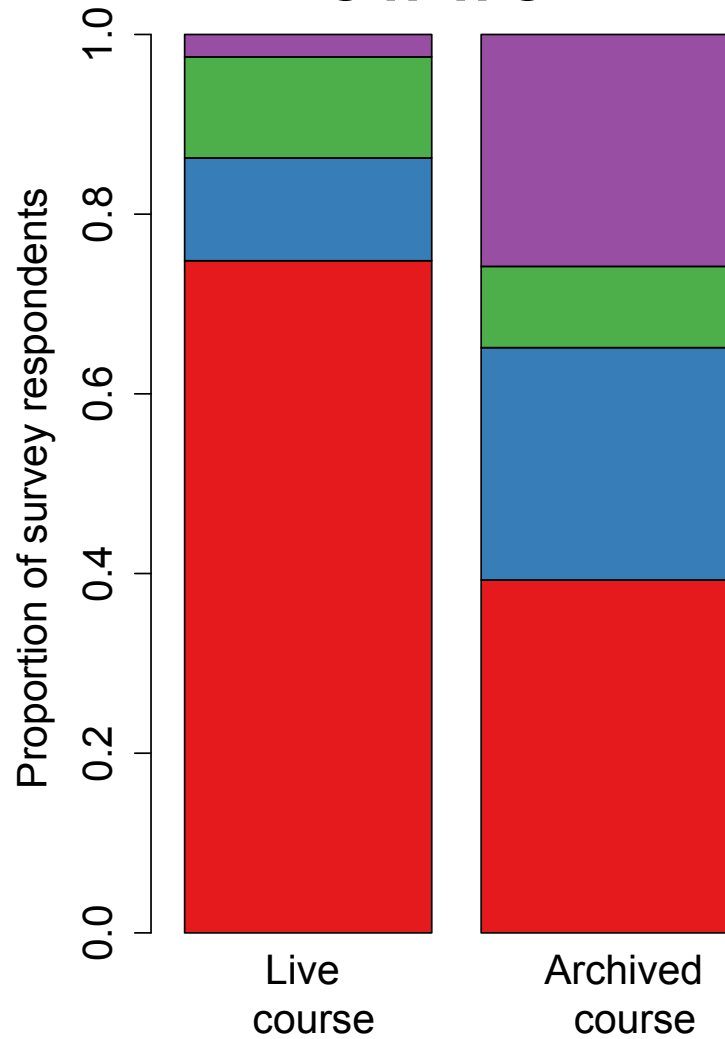
STATS



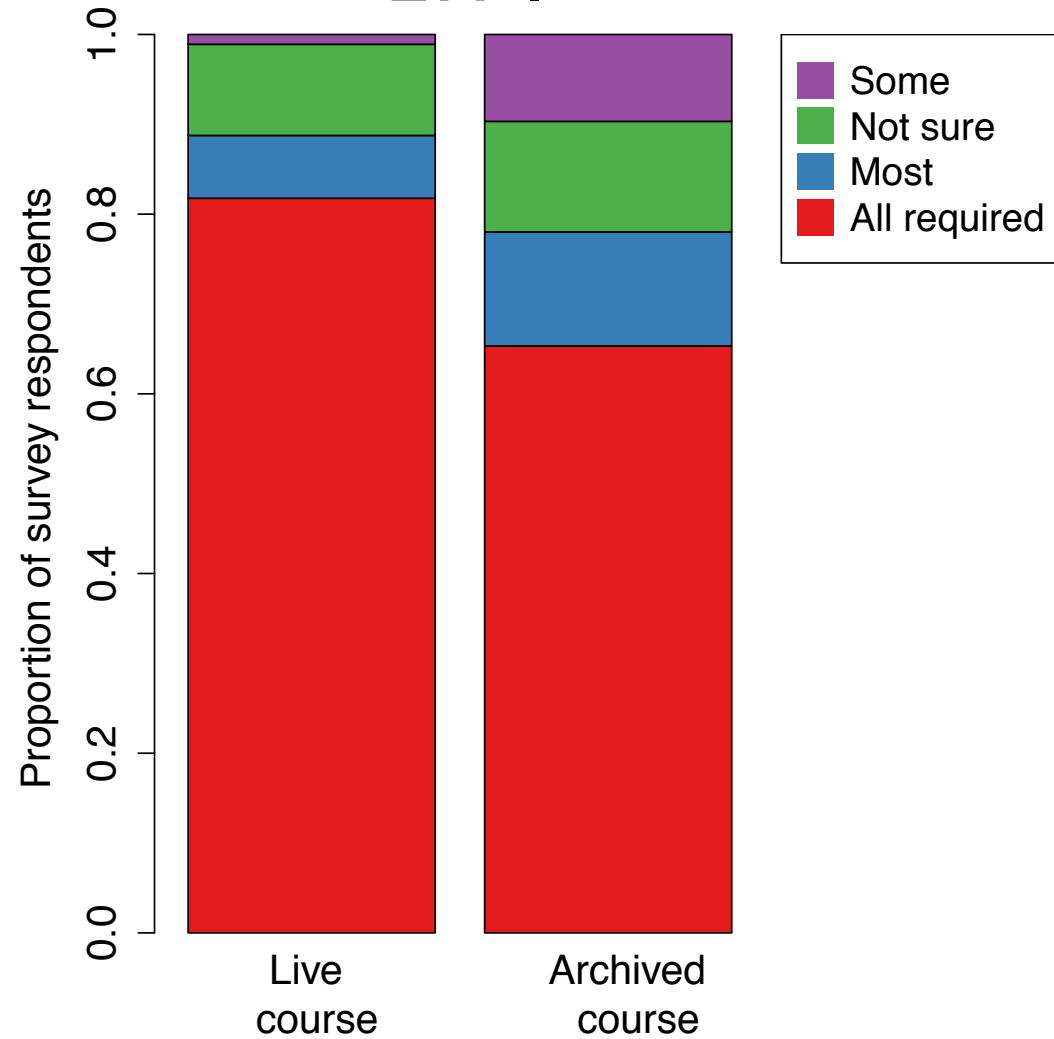
LTP I



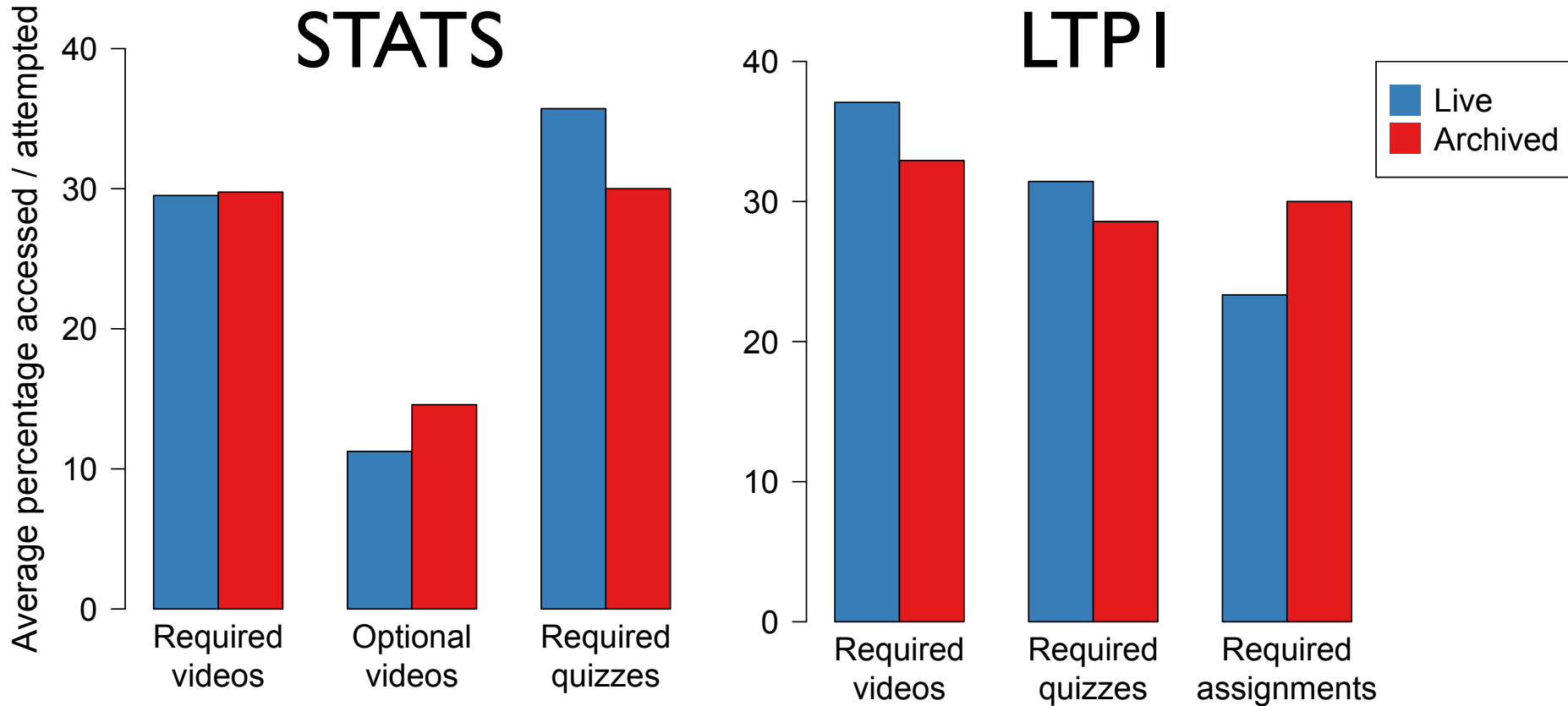
Planned Work STATS



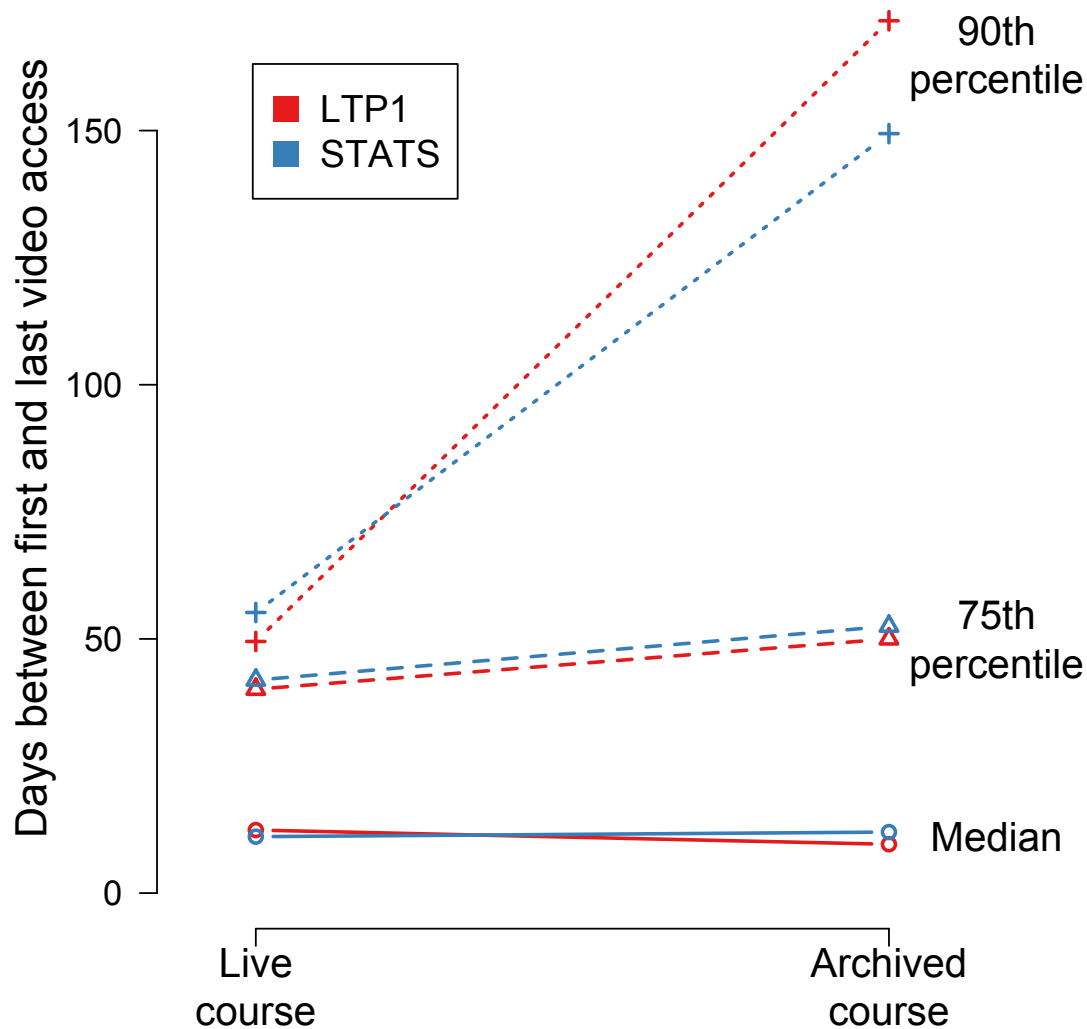
LTP I



Learner Behaviour



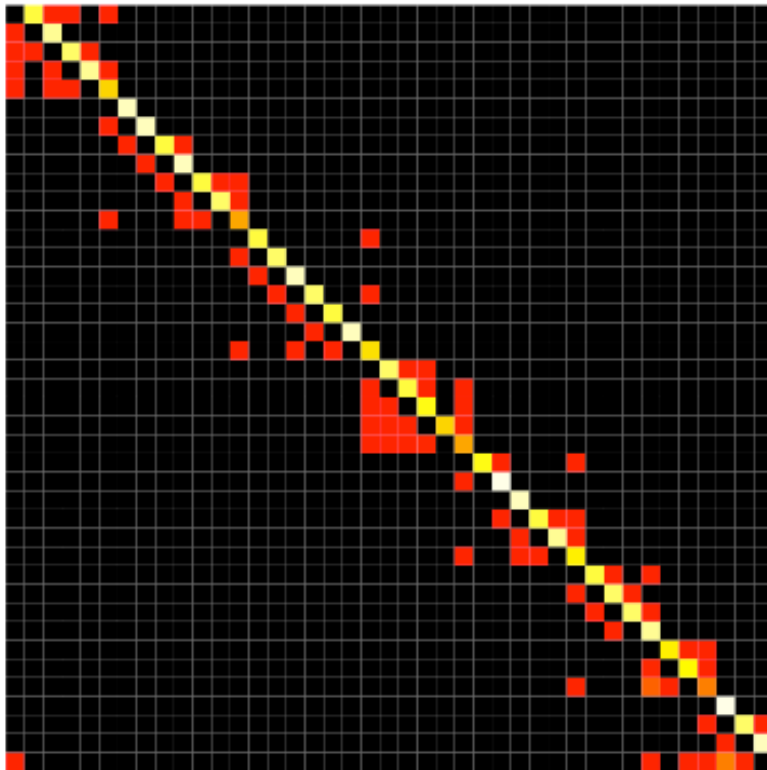
Time between first and last video access



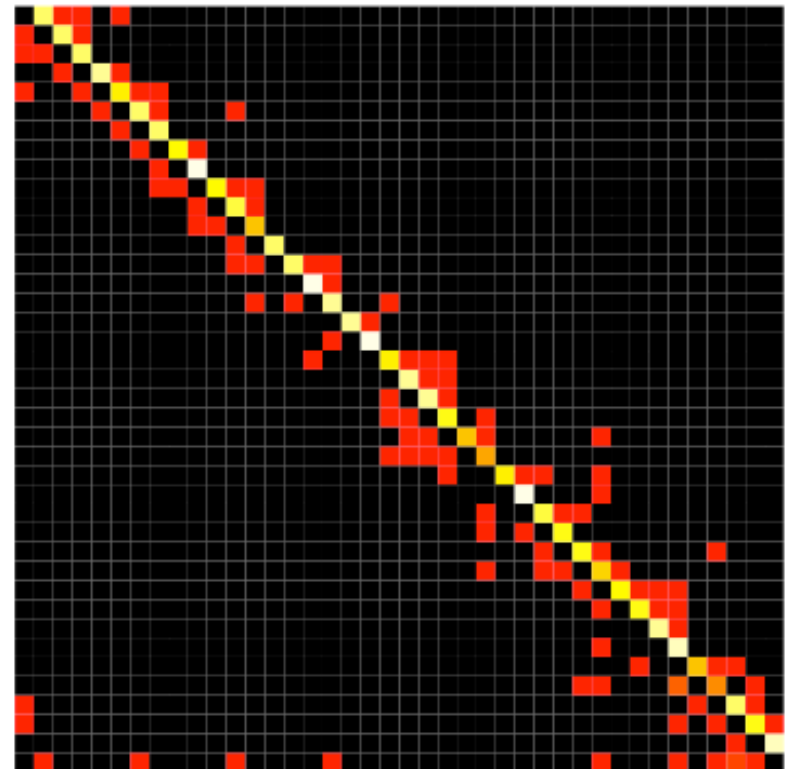
Sequence of Videos Watched



LTPI: Students intending to do all required work



Live course

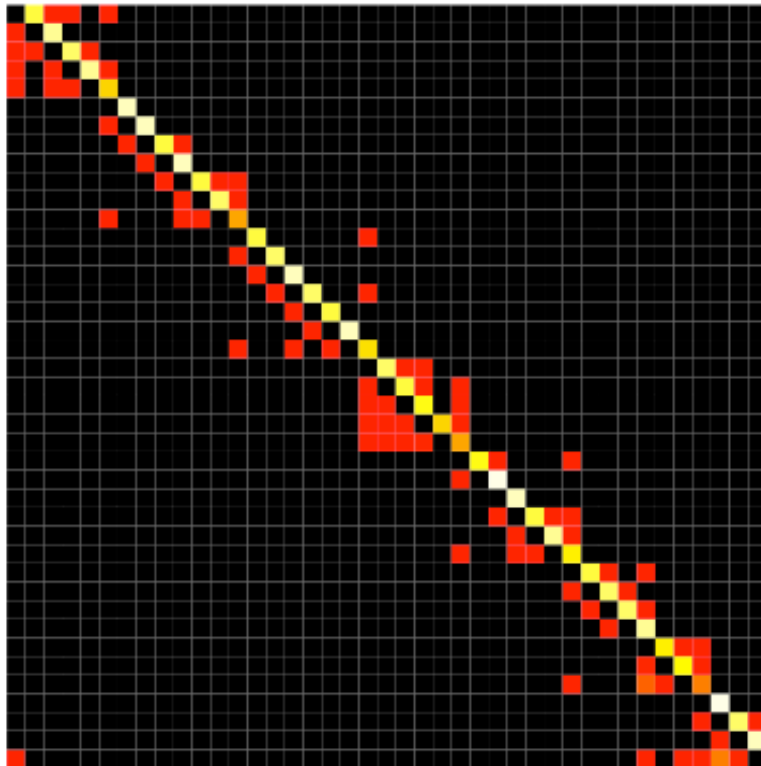


Archived course

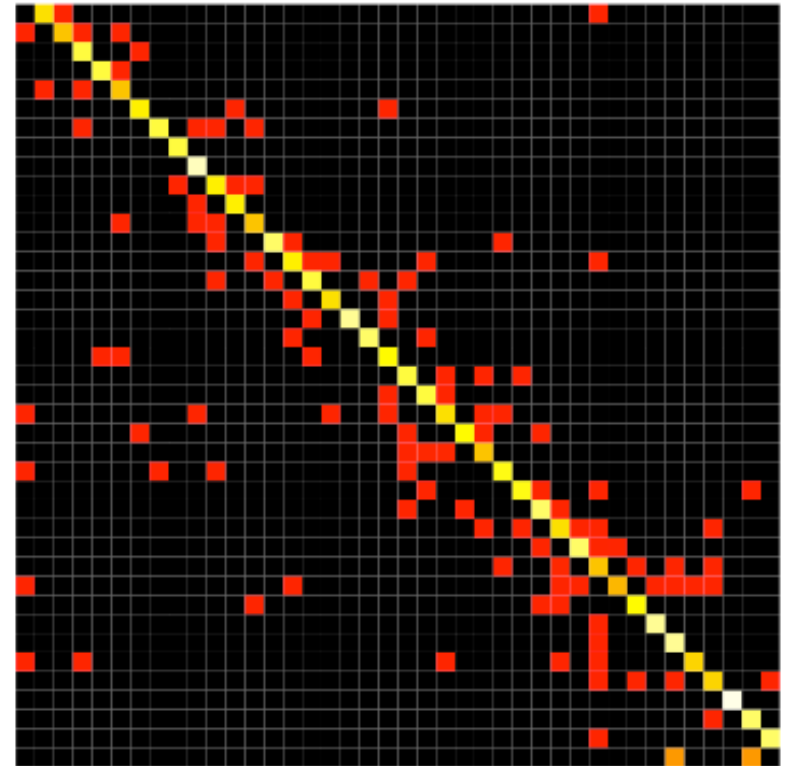
Sequence of Videos Watched



LTP I: Students intending to do most of the work



Live course

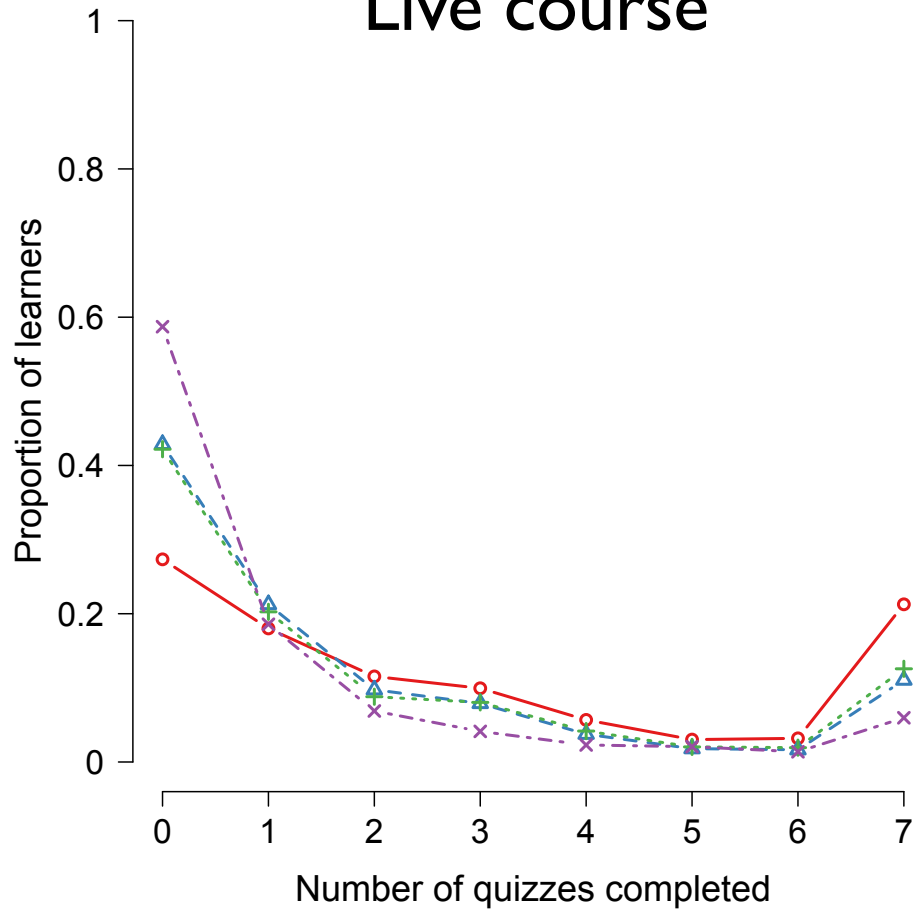


Archived course

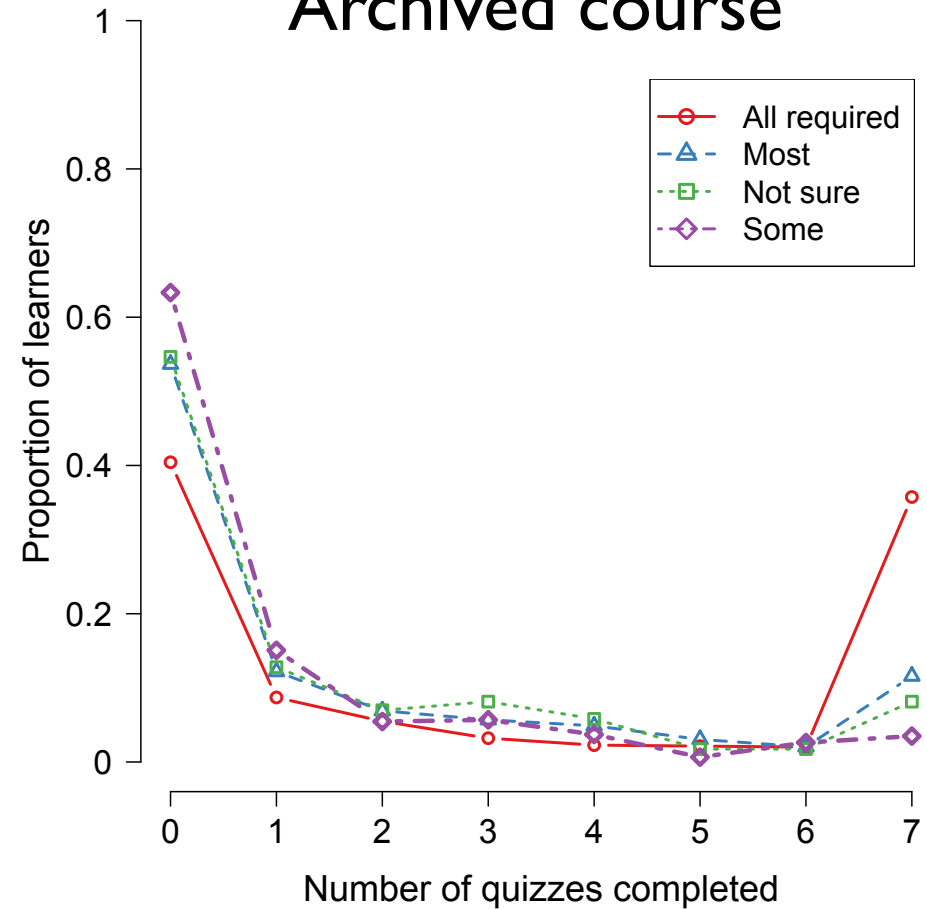
Number of Quizzes Completed

STATS

Live course



Archived course



Discussion Forum Interactions

- Percentage of learners who viewed a thread:

STATS:	LTP1:
Live: 45%, Archived: 31%	Live: 42%, Archived: 37%
- Mean number of views:

STATS:	LTP1:
Live: 11, Archived: 15	Live: 20, Archived: 20
- Percentage of learners who posted on a thread:

STATS:	LTP1:
Live: 12%, Archived: 9%	Live: 15%, Archived: 13%
- Mean number of posts:

STATS archived: 5	LTP1 archived: 4
-------------------	------------------

Activity between quiz reattempts

Is there evidence of self-regulation?

- Percentage of learners who accessed a **lecture video** between reattempts of a quiz:

STATS:

Live: 29% Q1, 13% Q7

Archived: 37% Q1, 10% Q7

LTP1:

Live: 19% Q1, 7% Q7

Archived: 31% Q1, 12% Q7

- Percentage of learners who visited the **forums** between reattempts of a quiz:

STATS:

Live: 8% Q1, 3% Q7

Archived: 10% Q1, 2% Q7

LTP1:

Live: 4% Q1, 7% Q7

Archived: 23% Q1, 10% Q7

Transitions between LTP courses

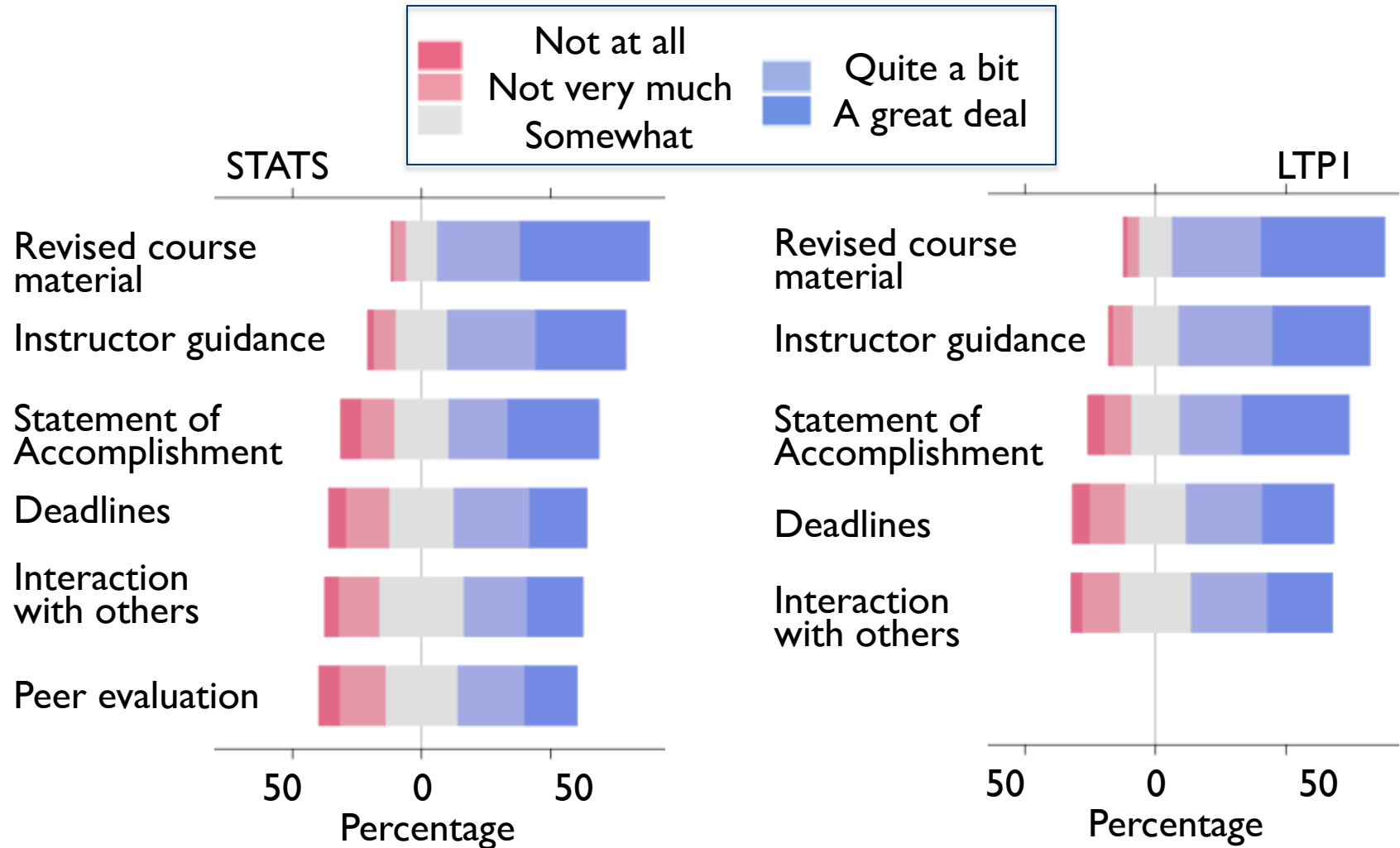
- LTP1 was available as an archived course during its sequel, LTP2.
- 13% of the active live-learners in LTP2 were active in the archived LTP1.
 - 93.1% accessed at least one LTP1 video. On average, 9.4 videos were accessed, 4.1 fewer than the general population of LTP1 archived-learners.
 - 22% submitted a quiz and 8% submitted an assignment.
 - 75% viewed a forum thread not at all or at most once.

Conclusions

Summary of Archived-learners

- Why enroll?
 - Missed or did not complete live-MOOC.
- Learner intentions?
 - Significant proportions plan to complete all work.
- Learner behaviour?
 - Similar mean numbers of videos accessed and assessments attempted as live-learners; similar order of video access.
 - The proportion completing all quizzes or assignments is comparable to live-learners.
 - Although fewer archived-learners view and post to the discussion, the archived discussion forum is used.

Why retake in live-mode?



Potential of Archived-MOOCs

- The absence of instructor and cohort presence, deadlines, and ability to earn SoAs do not appear to negatively impact learners' ability to achieve their intended goals.
- Discussion forums are valuable resources even when mostly inactive.
- The use of LTP2 by LTP1 learners illustrates the potential of archived-MOOCs as remedial resources.

Post by STATS Archived-learner

*“Yes, I'd like to add my voice to those showing their appreciation for keeping this MOOC in archived mode. I also call it a "dead MOOC" and **I'm fascinated by how a dead MOOC can still function so well. The discussion forums are still relevant, I can take the assignments thanks to the sample answers provided.**”*

- Posted 25 April 2014

Acknowledgements



Open Utoronto

Laurie Harrison, Stian Håklev, Will Heikoop