Promoting Student Engagement Through Micro-Lecture Captures With Embedded Quizzes

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INTRODUCTION

Over the past decade, higher education has witnessed an increasing student demand to integrate modern technologies as part of the teaching, an example of which is lecture capture. Furthermore, there is supporting evidence that engagement with lecture capture has a positive impact on student achievements, including greater commitment to the course and better performance in summative assessments and examinations.

The action research methodology has been selected to implement a novel approach to support student engagement, namely micro-lecture captures with embedded quizzes, thus experimenting with the latest feature of lecture capture, released in January 2017. Following a first pilot cycle, a refined approach was adopted, with a greater integration of the micro-lecture captures with embedded quizzes as part of the curriculum. The action-research methodology employed and cycles realised to date are depicted in Figure 1.
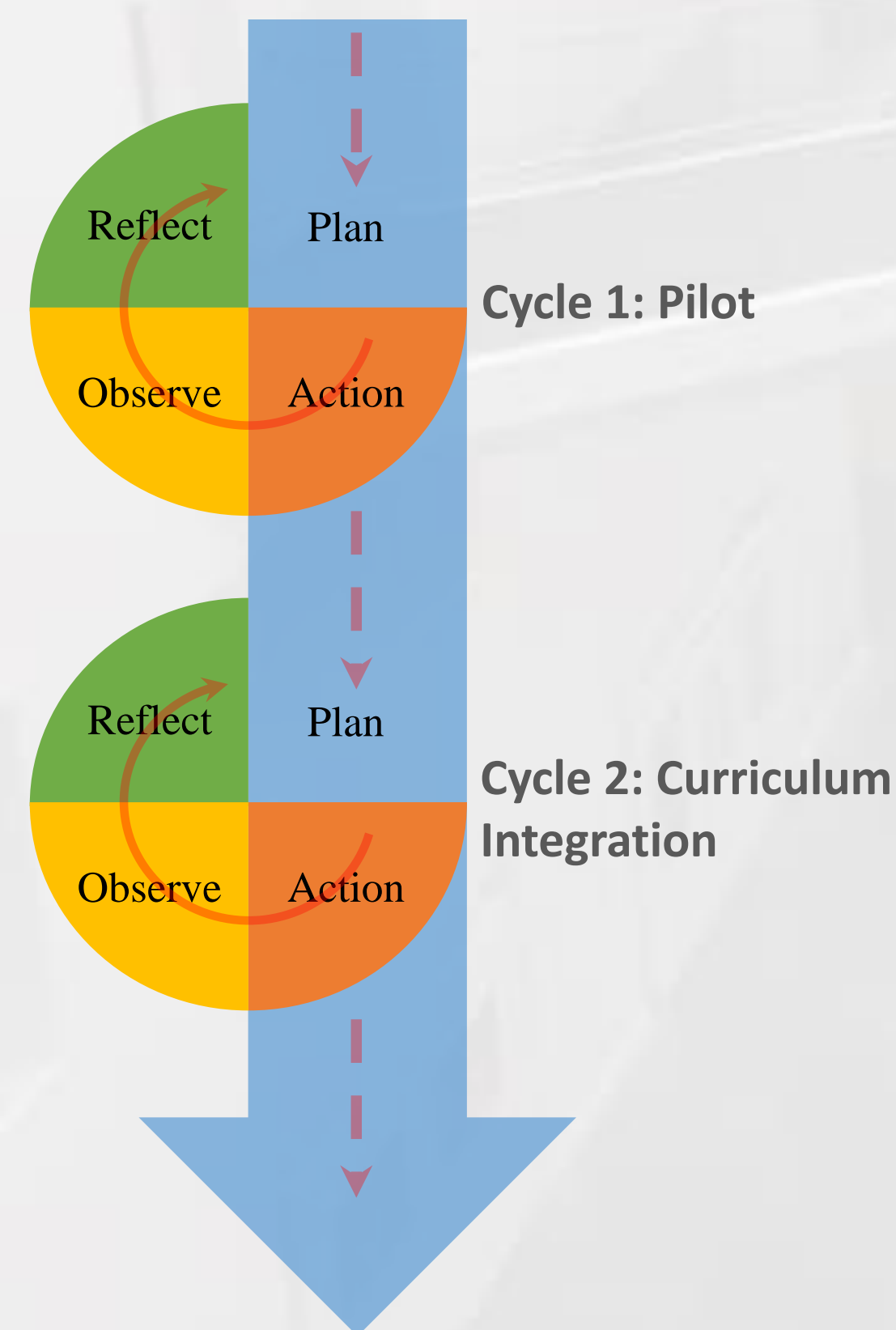

Figure 1: Action-research cycles completed to date.

APPROACH

The micro-lecture capture format aims to condense a one-hour lecture recording, seen as too much and too daunting by students, into a short four minutes video to stimulate student engagement. The addition of embedded quizzes stops the micro-lecture capture at predefined times with a question that must be correctly answered in order to access the rest of the video. This ensures an active learning experience, and better engagement with the material. Moreover, the class results being accessible, problem areas can easily be identified, thus influencing the content of the next face-to-face session.

RESULTS

The micro-lecture captures with embedded quizzes all followed a similar format, with a total of four quizzes; the first three having an explicit answer in the micro-lecture capture, and the last question aiming to challenge pre-conceived ideas about the following topic to be tackled. The viewing patterns, depicting the number of views along the video, can then be analysed, and yielded some very positive results. Indeed, students engaged with the material as expected, with spikes in the number of views where the answers to the quizzes are located, as shown in Figure 2.
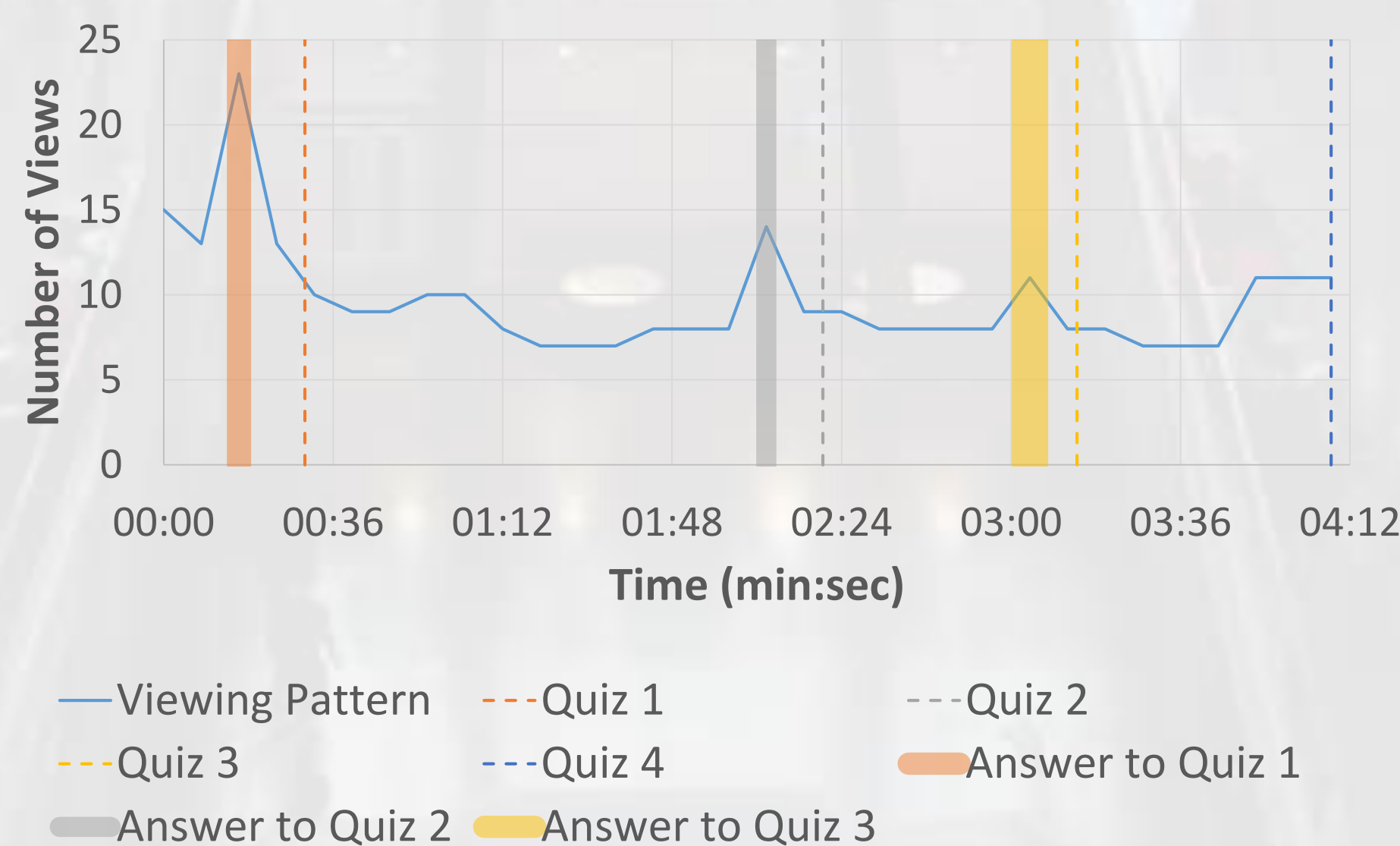

Figure 2: Typical viewing pattern.

ANALYSIS

In addition to the viewing pattern evidence, a survey of the students revealed an 86% satisfaction rate, with 71% of the participants acknowledging that the benefits of the initiative were in the combination of the micro-lecture capture format and embedded quizzes. Finally, the most striking piece of evidence is the increase in student engagement with the lecture capture content, jumping from 3% originally to 63%. By better incorporating the micro-lecture captures with embedded quizzes in the curriculum, an increase in overall use of the VLE was also noticed, as presented in Figure 3, with the available resources being viewed twice as many time as prior to the intervention.
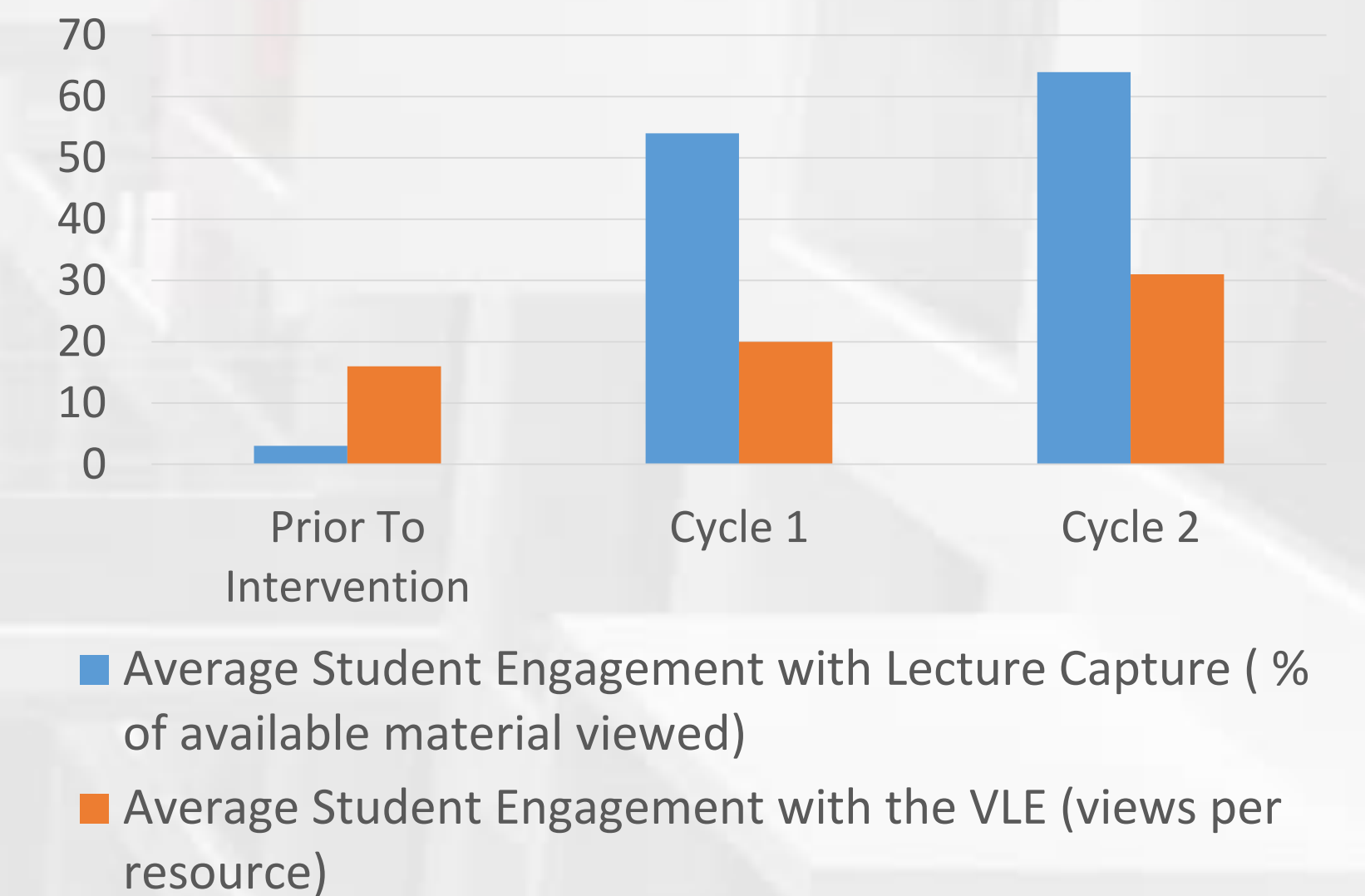

Figure 3: Improvements in student engagement.

CONCLUSIONS

Preliminary evidence of the benefits of micro-lecture captures with embedded quizzes has been provided through the viewing pattern and analysis of student engagement with both lecture capture and the VLE. This is further supported by a survey of the students that perceived this as a positive initiative for their studies.

The next step is to implement this practice to a unit during the whole 2017-2018 academic year to further evaluate the impact of micro-lecture captures with embedded quizzes on student engagement and achievements.