THE CHALLENGES OF ENGAGING HIGHER EDUCATION STUDENTS IN THE VIRTUAL CLASSROOM

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— COMMUNICATION —

TOPICS: Higher Education – Online learning Assessment – Student Engagement

Abstract

In March 2020, educators and students embarked on an unexpected experiment in online learning as COVID-19 shuttered schools and universities around the world. But the rapid transition to virtual education left faculty struggling to engage students the way they did in the classroom. Instructors want to connect with their students online, but they have faced many challenges to do so. The move online has shown us is that virtual learning is the way of the future, but only if we can provide educators the tools, they need to boost student engagement and embrace the capabilities of their web-conferencing platforms. In this brief paper, I'll examine the main challenges faculty have faced shifting to online synchronous learning, outlining how engagement is crucial to give higher education students the best possible learning experience and presenting an innovative platform that boost students' online engagement and that can also help Moodle become more effective in creating an engaging virtual classroom experience: Class, the new frontier of virtual classroom.

Keywords – virtual classroom, online education, higher education, student engagement.

1   INTRODUCTION

It is no secret that because of COVID-19 pandemic, distance learning, and synchronous learning specifically, has become more commonplace. Indeed, educational institutions, professors, academics and other entities in the industry have been doing their best to transition classes online. However, there is no doubt that it is harder to pay attention to a computer screen than to in-person lectures. There are plenty of distractors that can cause students to lose focus [1].

Distance learning forced educators to file away some of their most time-tested classroom management tricks. It is not that easy to get attention in Google Meet [2], Zoom or in other web conferencing platforms.

However, online synchronous learning has definitely had its benefits. Indeed, the assessment of online learning programs should also consider some of the unique aspects of this type of learning environment, as ''using established techniques for student success in traditional classrooms do not always work in distance courses'' (Serwatka 2002, p.48).

2   SYNCHRONOUS ONLINE LEARNING: WHY ENGAGEMENT MATTERS

The difficulty of staying connected, both technologically and socially, means that professors in 2020 are facing unprecedented challenges when it comes to student engagement. But why does engagement even matter? Why can't educators just lecture to the screen?

According to a recent study on online learning best practices [3], "student engagement increases student satisfaction, enhances student motivation to learn, reduces the sense of isolation, and improves student performance in online courses." In short, when students are engaged online, they learn more. Meanwhile, when students aren't engaging online, they are rapidly falling behind, and marginalized students experience that loss to a much greater extent. A 2020 McKinsey study [5] on learning loss

highlights the growing racial and economic disparities that can occur online when students and faculty aren't given the tools they need to thrive. To mitigate learning loss, McKinsey recommends focusing on engagement. "Along with access to both technology and live teaching, students need a daily schedule that builds in formal opportunities for engagement, collaboration, and feedback," the study reports. "System leaders should also empower teachers with new ways to share practices and receive professional development in an online format."

Indeed, faculty consider engagement a key factor when planning their lessons online. In Table 1, it is shown how 71% of US faculty prioritize way of increasing student engagement online.
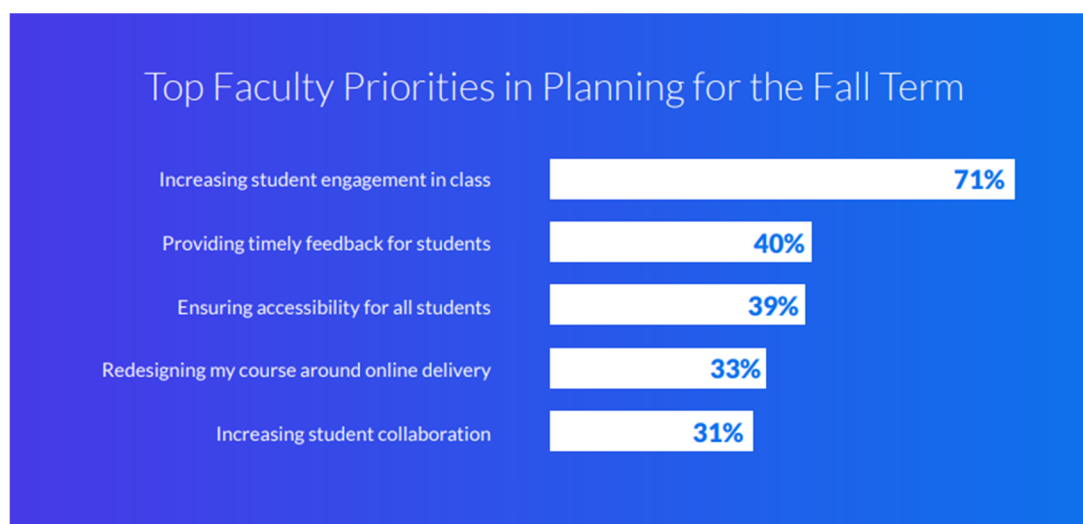

Top Faculty Priorities in Planning for the Fall Term

Increasing student engagement in class	71%
Providing timely feedback for students	40%
Ensuring accessibility for all students	39%
Redesigning my course around online delivery	33%
Increasing student collaboration	31%

Table 1 – Top Faculty Priorities in Planning for the Fall Term 2021 from "The Ultimate Guide in Engaging Student in the Virtual Classroom" by Class Technologies Inc.

Since student engagement, defined as student involvement in learning activities, has been shown in many studies to be the strongest predictor of students' learning and personal development (see seminal higher education works from Astin [7]; Pace [8]; Pascarella and Terenzini [9]), understanding how the online environment affects engagement should inform the implementation of online programs.

There are many elements that affects student engagement, both inside and outside of the classroom. Academic behaviors, including the use of strategies for self-regulated learning, quantitative reasoning, activities that promote higher-order thinking, and reflective and integrative learning can increase content knowledge as well as overall cognitive processing and are all linked to various aspects of achievement and success [10].

Communications with peers through collaborative learning and discussions with diverse others are also important elements of student engagement. Besides, there are environmental features that contribute to student engagement, such as the quality of interactions with students, faculty, and other types of staff, as well as an overall perception of a supportive environment [11].

A few studies have suggested that technology can have positive effects on student engagement (Chen [12]; Henrie et al. [13]). For instance, one study showed that using asynchronous technology tools promoted reflection, which leads to higher-order thinking (Robinson and Hullinger [14]). Others found that online courses increase the need for students to work collaboratively (Thurmond and Wambach [15]).

According to the study of Dumford and Miller (table 2), the significant relationships for engagement and amount of online course exposure reveal that the online environment might encourage certain types of engagement, such as more use of quantitative reasoning activities [10].

Engagement indicator	First-year R^2	First-year β	Senior R^2	Senior β
Higher-order learning	.021***	NS	.027***	NS
Reflective and integrative learning	.034***	NS	.070***	NS
Learning strategies	.036***	NS	.044***	NS
Quantitative reasoning	.050***	.013***	.100***	NS
Collaborative learning	.037***	− .025***	.080***	− .087***
Discussions with diverse others	.017***	− .011**	.020***	− .013**
Student-faculty interaction	.036***	NS	.075***	− .048***
Effective teaching practices	.025***	NS	.028***	− .022***
Quality of interactions	.038***	− .019***	.027***	− .012**
Supportive environment	.021***	NS	.027***	NS

**p < .005 (Bonferroni cutoff); ***p < .001

[a]Controlling for student characteristics: gender, transfer status, enrollment status, first generation status, age, SAT/ACT, major (arts and humanities as reference group), race/ethnicity (White as reference group), grades (mostly A's as reference group) and institutional characteristics: control (private/public), size

Table 2 – Dumford and Miller

The results of the regression models including all first-year students indicate that the proportion of online classes being taken has a statistically significant negative effect on 3 of the 10 engagement indicators. Specifically, the proportion of online courses taken by a first-year student had a positive effect on the amount of time spent engaging in quantitative reasoning activities. More online courses were related to more engagement. This suggests that while there appear to be some disadvantages to online learning in terms of engagement for first-year students, there are benefits as well [10].

2.1 Online Engagement is a unique challenge

Paradoxically, a major obstacle to engaging students virtually is technology. Although web-conferencing technology has been a lifeline this year, making virtual schooling a possibility, technology has also limited many teachers to a fraction [6] of the activities they once did in the classroom. Tried-and-true teaching techniques, like one-on-one discussion, group presentations, and assessments – are more challenging to facilitate in the virtual classroom. In an online environment, it is also challenging to make time for the casual community-building that happens naturally in a physical classroom. It can be difficult to center student voices and make space for differentiated instruction. With so many tools missing from their toolkit, educators are struggling to find ways to engage their students. That is where a complete and innovative platform comes in to boost student engagement and gives faculty the right tools they were looking for: Class, the new frontier of virtual classroom.

2.2 Creating an engaging learning experience: why Moodle is effective

There is no secret that engaging students online is challenging, especially in Higher Education. In the virtual classroom, and in remote learning in general, students can experience a lower level of engagement due to the lack of participation tools that videoconferencing platform can offer nowadays. Indeed, when COVID-19 pandemic happened, many universities and institutions were unprepared to shift their learning tools and experience online.

In June 2021 MediaTouch 2000 interviewed Martin Dougiamas, founder and CEO of Moodle, about the crucial role of remote learning and the importance of engaging students online:

"Unfortunately for many schools and universities that have thought of their online learning, this has been a huge change. They took a leap in the dark. Their first instinct was to replicate a classroom, so videoconferencing seemed like the ideal solution. But then many people realized that this was not enough, that it is not possible to manage the learning of hundreds, thousands but even only twenty students purely on video. More tools are needed to manage homework, assessments, and teaching activities… There are so many elements needed to create a great learning experience. This is what I have seen in the last year".

According to Dougiamas, live meetings alone are not sufficient to learn. They can be useful, but they are not the right tool make a student memorize or learn important concepts. "It takes engagement to

actually learn. You have to actually do things with your body to express your learning. Our brains work well if we are engaged, and we need to do more to achieve that goal".

However, Dougiamas affirms that the technology we have right now enables us to do things much better that we have done in the past. Face-to-face Education is one way to learn, but it does not mean it is the only effective one. Indeed, one of Moodle's goals is to bring quality to Education in universities and corporate. According to Dougiamas, it helps people use the internet better for their Education, and to promote a deeper type of Education. It promotes "more activities, more collaboration, more equality in the online process, rather than just sending people information" (Dougiamas).

Indeed, Moodle's unique features such as the Forum – that allows people to collaborate and talk – that has the widest range of use cases, or the Workshop – that allows to assess students all together and to let them assess each other – are great assets to boost engagement in the virtual classroom and online learning in general.

3   CLASS: THE NEW VIRTUAL CLASSROOM EXPERIENCE

As previously stated, online learning is the future, and that means it is more important than ever to support educators and engage students in the virtual classroom. Empowering teachers to engage students during and post COVID is not just about sharing information, it is about offering comprehensive support that reflects what teachers actually need and giving teachers space to share their knowledge and make a difference [16]. At the end of the day, when instructors are empowered to support students, everyone wins.

Keeping in mind this scenario, we have observed that Class makes online engagement easier. But what is exactly Class?

Figure 1 – a demo Class environment

Class is a web conferencing tool that adds essential capabilities for educators to the standard Zoom platform. Developed by Class Technologies Inc. by Michael Chasen (Blackboard), it makes you live the experience of a real classroom directly at home or in the office with a specific interface and selected tools based on the actual live learning experience through the software Zoom. Class was created to respond to many teachers, professors and trainers that want to bring their lessons online to the next level making them more interactive and engaging and guaranteeing the best managing options for faculty.

We have directly tested some of the main features of Class:

- Podium space for teacher/trainer

- Whiteboard (also on background)

- Test and assignments can be done, sent and graded directly on Class

- Grades are inserted directly on gradebook

- One-to-one meeting with a single student without leaving the virtual classroom

- Speaker View, Gallery View, Alphabetical View, Feedback View
- Presence check
- ID Verification
- Proctoring during exams
- Monitoring of students' participation (highly active, active, passive)
- Focus Tracking

3.1   How Class can boost online engagement for higher education students

Thanks to its tools to maximize the student's involvement such as giving feedback, planning one-to-one meetings with professors, and taking exams without leaving the virtual classroom, Class could be a great asset for universities and their diverse courses of very subject and major.

We have observed that Class increases student buy-in giving students a say in what, and how, they learn. In teaching tools, faculty may launch a poll asking students to vote on how they organize their work for their thesis, what kinds of assessments or projects they want to complete, or what sources they found more useful and why.

In teaching tools there is also the LTI integration through which faculty can link directly their LMS to the virtual classroom without leaving Class. Moodle can be integrated to access directly in the virtual classroom and to share material, tests, quizzes and importing grades without leaving the virtual classroom. Besides, faculty may want to split students in different groups to conduct project and group discussions. In Class, it is possible to use break-out rooms keeping the settings and the teaching tools available in the main classroom environment. Indeed, break-out rooms are a great web-conferencing tool to get students talking and engage in the class work. They can be used in lieu of small group discussions, with guiding questions shared via Google Docs, or in the chat to keep students focused. Like small group discussions, break-out rooms often encourage shy students to speak up in class and connect with their peers.

Class allows faculty to share different content at the same time. Splitting the content in different tabs, it is possible both for faculty and students to navigate through YouTube videos, assignments, scholarly resources, quizzes and much more. This option boosts online engagement for students who can browse and focus on different aspects of the lecture without leaving the Class environment.

3.2   The advantages of integrating Moodle in Class

As stated in the previous paragraph, Class is indeed a powerful tool to boost students' engagement. However, it could become even more effective if it is fully integrated with an LMS, specifically Moodle.

As previously stated, in Class' teaching tools it is possible to do the LTI integration through which faculty can link directly their LMS to the virtual classroom without leaving Class. So, Moodle can be integrated to access directly in the virtual classroom and to do a variety of learning activities that can be integrated in the virtual classroom environment. Integrating Moodle, it is possible to launch a quiz previously created in Moodle directly into Class together with importing grades without leaving the virtual classroom. Besides, using the proctoring feature, it is possible to monitor students who are taking an exam on Moodle. The feature allows faculty to see both the students' faces and their screens, in order to really check if they are doing the exams without cheating.

4   CONCLUSION

Nowadays online learning plays a crucial role in higher education, so there is an increased need to understand students' engagement and how faculty can be empowered to make their lectures more effective and then more engaging for students.

Indeed, technology used in online education continues to evolve rapidly and research must persistently address the impact of online learning in higher education. If a primary goal of online learning, and Moodle specifically, is to reach a wider range of students and provide educational opportunities for those who might not otherwise have such access, then it is important to ensure that online education students are partaking in equally engaging educational experiences that contribute to their learning and success.

Considering its innovative and complete tools, Class together with Moodle integration could be an important asset to reach this goal, allowing students and faculty to be more engaged during lectures and to work more effectively in delivering and receiving a high-quality type of education.

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