

Design Strategies for Developing an Engaging Online Course in Higher Education

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ABSTRACT

Online education is growing, but retaining students is still a challenge. However, student engagement is one of the factors contributing to student retention in online education. Online instructors and instructional designers should value student engagement in online courses. The first two weeks of an online course are critical; students start to familiarize themselves with the courses and connect with instructors, classmates, and content. It is also essential to consider these first two weeks as a deciding factor for students to take or drop online courses. Therefore, the online course design needs to be perfect from the beginning. Through the lenses of Technological, Pedagogical, and Content Knowledge (TPACK), this article discusses five strategies of designing an engaging online course, such as clear and consistent design, developing a detailed syllabus, creating a learning community, instructor presence, and prioritizing free educational materials. Online instructors and instructional designers may explore these strategies to improve student engagement in online courses.

Keywords: *Online education; distance education; student engagement; designing online course; higher education*

INTRODUCTION

Instructors need to know what to teach, how to teach, and what tools to use. Technology is becoming a valuable tool in education that educators can no longer set aside. Technology allows teachers to center learning on students (Dukuzumuremyi & Siklander, 2018; Wiburg, Parra, Mucundanyi, Latorre, & Torres, 2017) and motivates students to provide input and feedback on learning (Morales, Trujillo, Mucundanyi, & Castillo, 2019; Dukuzumuremyi, 2014). Technology also creates an opportunity for students to innovate, collaborate, and share (Parra, Raynor, Osanloo, & Guillaume, 2019; Jeong & Hmelo-Silver, 2016). Students use technology to engage in learning and create knowledge through discovery and hands-on activities (Wiburg, Parra, Mucundanyi, Torres, & Latorre, 2017; Lee & Hannafin, 2016). Students depend fully on technology in distance education as a part of instructions.

Online courses offer the flexibility of taking courses anywhere without geographical constraints, and the number of online students is increasing every year (Horvath et al., 2019; Seaman, Allen, & Seaman, 2018). Higher education institutions are equally crucial in using online courses to attract many students and increase enrollment (Goodman, Melkers, & Pallais, 2019). However, online education faces a lower retention rate (Glazier, 2016; Bawa, 2016). The lack of physical interaction in online education contributes to a lower retention rate. Online students who feel isolated do not engage in learning (Gillett-Swan, 2017) and have a high probability of not completing a course. Student engagement is one of the factors that can improve student retention and learning experiences (Czerkawski & Lyman, 2016; Glazier, 2016). Higher education institutions that focus on student engagement in online education improve retention and graduation rates. One of an online instructor's primary goals should be to engage, retain, and assist students in completing courses.

ENGAGEMENT IN AN ONLINE COURSE

Online students engage in learning when interacting with their classmates, content, and instructors (Martin & Bolliger, 2018; Gupta & Pandey, 2018; Angelino, Williams, & Natvig, 2007). The relationship between students and instructors allows students to develop “self-confidence, self-efficacy, and self-esteem” (Peacock & Cowan, 2019, p. 78). Online education provides a unique experience as the learning process takes place in a virtual environment. According to Khan, Egbue, Palkie, and Madden (2017), “unlike face-to-face courses, online courses present a unique challenge as the only social presence between the faculty and the student is via the Internet” (p. 107). Students also need to interact with their classmates to learn from one another (Berry, 2017; Sun & Chen, 2016). In addition to social interaction, students depend on instructors' guidance to navigate and familiarize themselves with online courses (Gray & DiLoreto, 2016; Kyei-Blankson, Ntuli, & Donnelly, 2016).

Students interact first with the content in navigating the course interfaces through Learning Management Systems. The more students are engaged in navigating online courses, the more they visit the courses to explore opportunities to connect and interact with instructors and other students. The engagement between students and content is regarded as the most critical interaction in online course design even though “student-content interactions have been relatively under-researched, particularly in comparison to instructor-student and student-student interactions” (Ertmer, Sadaf, & Ertmer, 2011, p. 174). Online instructors and instructional designers are using different strategies to overcome student engagement challenges and create a comfortable learning environment in online courses (Martin & Bolliger, 2018; Sanga, 2017; Budhai & Williams, 2016; Woodley, Mucundanyi, & Lockard, 2017).

Angelino et al. (2007) examined online students' engagement and emphasized that a learner-centered approach, learning community, and access to online services are critical to student engagement. These findings support the idea that students who are part of learning become active learners. Students come from different cultural backgrounds and take online courses with prior learning experiences. According to Heitner and Jennings (2016), “faculty who teach online who understand and value culturally responsive pedagogy and have the knowledge and skills to implement best practices in meeting the needs of diverse learners will enhance both teaching and learning” (p. 54). Valuing diversity in online courses creates an opportunity for the students to know each other, connect, share, and collaborate (Woodley, Hernandez, Parra, & Negash, 2017; Morong & DesBiens, 2016). Choosing textbooks that meet the course goals and speak to student lived experiences is the key to student engagement (Woodley et al., 2017). Therefore, diversity should be fundamental to online teaching and learning.

Budhai and Williams (2016) recommended online instructors to know the students' needs, apply differentiated instruction, and provide appropriate technology to support teaching and learning. According to Sanga (2017), “it becomes critical to carefully select pedagogies that work well in applicable contexts and then employing selected, relevant technologies to advance such pedagogies” (p. 21). Students learn in different ways, and online courses should include various course materials and application to real-world scenarios (Martin & Bolliger, 2018). Hence, the Technological, Pedagogical, and Content Knowledge (TPACK) framework has relevance for instructors and instructional designers in the design of and teaching in online courses.

TPACK AND ONLINE EDUCATION

The TPACK framework emphasizes the intersection of Technology, Pedagogy, and Content Knowledge (Mishra & Koehler, 2006; Benson & Ward, 2013). TPACK is the center of a Venn Diagram model with three circles representing Technological Knowledge, Pedagogical Knowledge,

and Content Knowledge (Anderson, Barham, & Northcote, 2013; Kraglund-Gauthier & Moseley, 2019). According to Stover and Veres (2013), “most faculty gain their Content Knowledge (CK) from their research and writing, their Pedagogy Knowledge (PK) from workshops conducted from their teaching and learning centers and their Technology Knowledge (TK) from workshops conducted by their IT departments” (p. 98). In addition to individual knowledge represented in the circles of the Venn Diagram, the educators who use TPACK take a step further in combining two knowledge, such as Technological Pedagogical Knowledge (TPK), Pedagogical Content Knowledge (PCK), and Technological Content Knowledge (TCK), before they fully integrate three knowledge (TPACK).

Online education happens in the technological environment of virtual learning and the TPACK framework can guide online course design. Researchers interested in using TPACK in online education highlighted that the course design is a focal point in engaging students (Anderson, Barham, & Northcote, 2013; Kraglund-Gauthier & Moseley, 2019). However, engaging students in online education is still challenging. Czerkowski and Lyman (2016) argue that “research on student engagement is yielding increasingly complex questions and issues, the need for research exploring engagement in the context of online learning is greater than ever” (p. 538). Online instructors and instructional designers are consistently searching and sharing strategies to design courses with a high level of engagement.

Through the lenses of TPACK, the author of this article used his experiences as an instructional designer and online instructor to share five strategies for designing online courses that engage students. Since 2015, the author has taught online courses at undergraduate and graduate levels and designed online undergraduate, master, and doctoral courses. The author also completed a doctoral program in Curriculum and Instruction with a concentration on Educational Learning Technologies and a Graduate Certificate in Online Teaching and Learning. Finally, the author’s dissertation focused on examining the factors of engaging college students in online learning.

FIVE DESIGN STRATEGIES FOR ENGAGING ONLINE STUDENTS

The first two weeks are vital to online students as there might be students who are not committed to online courses. It is an excellent practice to keep in mind that an engaging online course transforms the learning experience of new, undecided, and experienced students. The following strategies could guide instructors and instructional designers in designing online courses that engage students.

First Strategy: A Clear and Consistent Design

Online students who struggle to navigate the course do not engage in learning and may drop the courses. With a high dropout rate in online courses, the course design must be perfect from the beginning. Students log into online courses to see their classmates, contents, assignments, due dates, and rubrics of assignments. A clear and consistent design allows students to easily navigate the course and understand what is expected in the course. The homepage is critical in online courses as students first see the homepage. Instructors and instructional designers need to make sure the homepage welcomes students to the course and invites them to explore the course navigation and understand the course’s expectations. A clear design shows the general objectives for the course as well as the objectives for units or modules. In addition, a clear design should have required readings, assignments, and grading rubrics. It is a good practice to send reminders for the assignment deadlines using the Learning Management System Calendar. Besides, final projects can be introduced earlier with consistent reminders to check the progress and encourage students to complete the projects before the deadlines. Moreover, online students need to know the best ways to communicate with instructors and the instructors’ response time in case they have

questions. Thus, a clear design saves time for students to ask questions and instructors to address course navigation issues.

An online instructor should be consistent in course design by applying the same design to all modules or units. Having the same design across units or modules allows students to familiarize themselves with the course and know where to find the contents and assignments, how to submit assignments, and check grades. A consistent design helps students to dedicate more time to readings, assignments, and course projects. It is essential to provide extra resources to online students, such as information on digital libraries and Information Communication and Technology (ICT) support centers, to provide academic and technical assistance. Therefore, a clear and consistent design creates an opportunity for students to engage in the course content (Sun & Chen, 2016; McClary, 2013).

Second Strategy: Developing a Detailed Syllabus

Online students have other responsibilities besides taking online courses. Time management is critical to online students. Students adjust their existing schedules to allocate time for online courses. Therefore, it is a good practice to have a detailed syllabus which includes the course description and objectives of a course and units or modules, different ways of contacting an instructor, response time, weekly readings, list of assignments as well as their due dates and assigned grades or marks, netiquette and plagiarism statements, overall grading scheme for the course, course technology requirements, required textbooks, and policies for late assignments, syllabus updates, and incomplete grades.

Students take online courses from different geographical areas around the world. Hence, instructors need to clarify the time for submitting an assignment. Saying 11:59 pm confuses students; however, using the due time of an assignment as 11:59 pm Mountain Standard Time (MST) or Coordinated Universal Time (UTC) clarifies students' doubts about the deadline of an assignment. Moreover, there might be changes in the syllabus and instructors need to ensure that all students are aware of these changes, including minor changes. Some online students may not have access to the Internet for days due to different reasons such as traveling, being deployed in remote areas without access to the Internet, or other personal reasons. Notifying the changes at least two weeks ahead of updating a syllabus creates a comfortable learning environment for students to adapt to the changes and feel valued and respected. A syllabus connects students to content and instructor, and it is also a starting point for the students to communicate with their classmates. Through understanding the syllabus, students start identifying and planning for individual and group work.

Third Strategy: Creating a Learning Community

Students learn more when they collaborate, interact, and engage one another and create a learning community. Online courses mainly rely on discussion boards to engage students. Depending on the type of assignment, students can access the posts of their classmates before making the original posts, or instructors can prevent students from accessing any post before making their original posts. To increase student engagement, instructors can request online students to go back to their original posts and reflect on the replies to original posts. It is a good approach to recommend to students that they include required readings of the course to meet the courses' goals and objectives. Combining course readings and other readings outside of the course in discussion board posts or assignments motivates and encourages students to apply what they learn into real-world scenarios. Instructors can also use a whole class as a single group or divide students into different groups for discussion boards and assignments.

Besides discussion boards, instructors can use synchronous communications such as live conferences or virtual sessions for students to know each other and get immediate guidance from instructors. Due to the time difference between geographical areas, it might be impossible for all students to attend at the same time. It is a good practice for instructors to record live conferences or virtual sessions as learning resources for students who missed an opportunity to attend live meetings. Moreover, these recordings become a reference for students who attended synchronous class meetings as well. Collaborative tools, such as Google Docs, are also valuable tools for working in groups. Collaborative tools allow students to work synchronously and asynchronously. It is always essential for online instructors to clarify guidelines for working in groups. Finally, online instructors can involve students in their design by providing formative assessments to improve the design as students progress in a course with a better understanding of goals, objectives, and expectations. A learning community emphasizes interactions among students and instructors (Berry, 2017; Mucundanyi, 2019; Parra, Woodley, & Lucero, 2018).

Fourth Strategy: Instructor Presence

An online instructor's presence in a course is the center of student engagement and an example of a student-centered approach (Kyei-Blankson et al., 2016; Martin, Wang, & Sadaf, 2018). Online courses should not be a learning environment where students get a syllabus, complete readings, and submit assignments without getting consistent guidance from an instructor. An instructor must introduce the course and guide students on how to navigate the course. Recording an introduction video with an instructor sharing a computer screen helps students to see and understand the course navigation and expectations. This introduction video should be published on the first day of a course.

An instructor should also be present in discussion boards and live conferences to guide and answer student questions. Timely feedback is vital in online courses and students need to know when they should hear from an instructor, for example, within 24 hours or 48 hours. Clarifying and respecting an instructor's time to respond is a sign of the instructor's presence. Online instructors should check emails regularly and respond to students on time. Online instructors can also use announcements to address the whole class. Finally, instructors need to grade assignments before students submit the assignments of the following units or modules. Online instructors should provide detailed feedback on assignments that help students improve their future work and ensure that they meet the course requirements.

Fifth Strategy: Prioritizing free educational materials

Students in online courses face challenges of getting required textbooks on time based on the geographical location and adding the extra cost of textbooks to tuition and fees. However, more journals, publishers, and authors publish open source materials to make research accessible to the general public free of cost. Online instructors and instructional designers should first use open source materials. Open source materials remove the burden for the students to pay for educational materials and increases the availability of educational resources. As college students may be involved in research, instructors could encourage students to rely first on free digital libraries not only limited to Google Scholar. In case there are no free educational resources, instructors can explore textbooks and select affordable required textbooks that meet the course requirements.

While the books and articles are the most used readings in higher education, it is crucial to consider that students do not learn in the same way. Required readings may include books, journal articles, book chapters, video, and audio. Some students like to read while other students enjoy watching videos, listening to audio recordings, or playing educational games. Online students live in different geographical areas, and there might be educational resources available to communities that can be valuable to all students. Therefore, instructors could create an opportunity for students to use

local educational resources. Using different types of resources, such as text, audio, video, and educational games, allows students to interact and engage in the content (Woodley et al., 2017).

CONCLUSION AND RECOMMENDATION

Five strategies discussed in this article contribute to the TPACK knowledge in designing and teaching online courses. The first strategy of clear and consistent design focuses on technology. The second strategy of developing a detailed syllabus touches on technology, pedagogy, and content knowledge. The third strategy of creating a learning community helps instructional designers and instructors use the virtual environment's pedagogy to engage students on the content. The fourth strategy of instructor presence provides an opportunity for the instructors to adapt pedagogy students' deep learning and understanding. Finally, the fifth strategy of prioritizing free educational materials creates an opportunity for the instructors to use free content and increase accessibility of the required textbooks in higher education. Equally important, using open educational resources in online courses reduces the cost of buying textbooks.

Engaging students in online courses is not an easy task but a challenge. However, engagement in online courses is possible due to the commitment of instructors and instructional designers who are eager to create comfortable learning experiences for all online students. Engagement in online courses does not start in the middle of a course; it must be perfect from the beginning. Focusing on the strategies of engaging online students could improve the design of online courses. The five strategies in this article are not mandatory but a baseline that instructors and instructional designers could use in designing and developing engaging online courses. Online instructors and instructional designers may expand these strategies based on the nature of a course, diversity of students, infrastructure, and technology availability.

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