EFFICIENT INSTRUCTIONAL STRATEGIES FOR MAXIMIZING ONLINE STUDENT SATISFACTION

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ABSTRACT

The key to the success of any online program is dedicating attention to student satisfaction. Student satisfaction with what and how they learn in an online classroom is an important variable to understand and can help instructors and course designers create an environment that fits students' needs. This can be achieved with adequate course design, appropriate instructional methods, and an understanding of individual students' needs. Course design should be user-friendly, easy to navigate, and incorporate clear guidance, rubrics, and constructive feedback and allow interaction with the instructor and other students. It should incorporate effective visual, written, and animated content in a relevant and realistic context. Using audio, video, and mobile tools of communication has a positive impact on students' online learning experiences. The students' individual differences, such as technology self-efficacy, personality, and engagement, impacts their course satisfaction. Extroverted, conscientious, and open students are more likely to be satisfied with their online learning experience while introverted students may need additional instructor help to succeed and be satisfied with the course. Engaged students are also more satisfied with online courses and motivated to learn.

Keywords: efficiency, assessment, course design, online teaching, online learning, student satisfaction

INTRODUCTION

Key to the success of any online program is dedicated attention to student satisfaction (Dziuban et al., 2015). Unlike campus-based students, who may be geographically-limited to a school regardless of their satisfaction with their learning experience, online students can change institutions from the comfort of their own home. This is not to imply that higher education faculty should prioritize student satisfaction over other educational variables (e.g., learning, engagement, etc.), but rather that satisfied students are more likely to continue with their online education. With this is mind, it is important to reinforce the significance of student satisfaction in postsecondary online programs (Calli, Balcikanli, Calli, Cebeci, & Seymen, 2013; Cole, Shelley, & Swartz, 2014). Equally important, student satisfaction with an online course is associated with enhanced performance (Wang, Shannon, & Ross, 2013), so attention to student satisfaction is likely to benefit other aspects of the learning experience. Satisfaction is a broad concept that incorporates several factors that affect student's experiences with online learning and the fundamental components of academic satisfaction are found in course design, instructional methods, and individual student differences. Key to implementing strategies that maximize student satisfaction is attention to practical, manageable approaches that faculty can integrate within their instructional load.

COURSE DESIGN AND INSTRUCTION FACTORS

Course design is a critical factor in creating a favorable environment for quality learning and student satisfaction with online courses (Gray

& DiLoreto, 2016; Ilgaz, & Gülbahar, 2015). Course design involves creating individual and group activities, writing lectures, developing curriculum, setting expectations and objectives, and administering assignments (Anderson, Rourke, Garrison, & Archer, 2001). AlHamad, Al Qawasmi, & AlHamad (2014) noted that an online course that is designed in a way that allows easy navigation will translate into students being interested in interacting with it. AlHamad et al. examined the perception and satisfaction of students enrolled in online classes and found that one of the factors that students thought was an advantage to online learning is the permanence of material presented in the class. Almost 73% of the students in this study indicated their preference for the material to be posted by topic or in advance for the entire course (AlHamad et al., 2014). Lee (2014) noted that the elements of course design, such as clear assignment guidance, use of rubrics and constrictive feedback, as well as the instructor's knowledge of the material, were closely associated with course satisfaction. Students also expressed that positive interaction, learner control, and course clarity (Cole et al., 2014; Price, Arthur, & Pauli, 2016), as well as the use of effective visual, written, and animated content, was important in making online learning satisfactory (Calli et al., 2013). In a study by Kuo, Walker, Belland, and Schroder (2014), the online course design was the most important factor in student satisfaction. Within the course design, Kuo et al. suggested that the two elements that stood out as the strongest predictors of student satisfaction were learner-content and learner-instructor interactions.

To encourage students' participation and the use of an online learning platform, it should be user-friendly with features that allow students to have a discussion, check grades, access documents, and send and receive messages (Wang et al., 2013). Ilgaz and Gülbahar (2015) conducted a mixed-method study investigating students' satisfaction with online learning. They found that instructional content, communication and usability, teaching process, advantages of delivery approach, competencies of e-tutors, and variety of instructional material were the factors that mainly affected students' satisfaction in online classes. In a study by Sawang, Newton, and Jamieson (2013), students expressed their satisfaction with an interactive online course that incorporated context that is relevant and realistic towards their course objectives. To increase student satisfaction, online courses should be organized to allow reflection and provide a platform for interaction and collaboration. Online courses should be designed with clear goals in mind and organize the reading materials, lectures, and assignments in units (Kauffman, 2015). Equally important, faculty should utilize student feedback to identify course components that students are particularly satisfied with, then prioritize consistent integration of these components throughout the online course design.

Many online classes are supported by a centralized curriculum with readings, assignments, and discussion questions in place. However, in addition to the basic course requirements, each instructor can contribute to the course design by adding information unique to that course and information that will allow students to better communicate with their instructor. To maximize student satisfaction, instructors should:

- Post a preannouncement and instructor's contact information prior to the first day of class. This will allow students to become familiar with course expectations, set up tutoring (if needed), and communicate with their instructor regarding any questions or concerns a student may have.
- Post announcements for all weeks in a timely manner, so students can access weekly information as early as they need during each week.
- Post a message to clarify the purpose for each forum if an online classroom has different forums for postings, such as communication, participation, or other purposes.
- Post instructions on participation requirements and writing format specific to the course in the section that allows instructors to post additional material.
- Reinforce the late submission, participation, and quiz-taking policy in the first week by posting a message in discussion forum as well as posting a separate announcement in the designated area.
- Post an announcement with the expectations for grading time and updates on posted grades.

TECHNOLOGY AND COURSE DESIGN

Research indicates that student satisfaction with technology is highest when technology promotes real-life interactions and active engagement. In a study by Blau and Barak (2012), students were more likely to participate is course activities when audio chat was used. Another interesting finding from this study is that students felt more comfortable discussing sensitive topics using a text-only medium (Blau & Barak, 2012). Video communication may also have a positive impact on students developing an emotional connection with their online course instructor (Borup, West, & Graham, 2012). Many students in this study indicated that using video-based communication makes the experience of communication more real, and for a majority of students it helped them develop a connection with their instructor (Borup et al., 2012).

The integration of technology can help facilitate real-life interactions in a manner that is amenable to both the asynchronous nature of the online classroom and faculty workloads. For example, Flipgrid (flipgrid.com) provides a social learning environment through a video website discussion platform in which faculty can pose a question to the class and then students can respond by recording a 90-second video. This creates a discussion thread since students can respond to other classmates as well. Similarly, technologies such as VoiceThread (voicethread.com) allow for multimedia interaction in a manner that allows faculty to reuse initial instructional content while promoting active engagement between class peers.

Another technological innovation in online learning is the integration of mobile communication. There are several mobile tools, such as attendance reporting, reinforcing feedback, and grading results, that can influence students' satisfaction with their accomplishments. For example, Remind (www.remind.com), a messaging app that facilitates easy push-notifications to students in an assigned class, allows faculty to send notifications directly to students' mobile phones. Notifications may include updates when grades are posted, new content is available, or announcements are updated. The value of technologies such as Remind lie in the efficiency with which a faculty member can push one-to-many communications. With Remind, notifications can be sent to an entire class, a small group of students, or to an individual student. Reminders can be scheduled for the entire course in advance or as just-in-time instructional communications. Faculty can also spark students' interest by attaching content-specific memes and additional informative links to the course material. Remind sends messages in real time, which fosters an instructor's social and teaching presence by depicting them as assessable, approachable, and actively engaged in the course. Integrating mobile technology connects students to the online classroom which, in return, fosters students' intrinsic enjoyment of their online learning experience (Chaiprasurt & Esichaikul, 2013).

SOCIAL, COGNITIVE, AND TEACHING PRESENCE

The Community of Inquiry framework (CoI; Garrison, Anderson, & Archer, 2000) incorporates three elements that provide a foundation for collaborative learning and understanding students' satisfaction with their online learning experience: social presence, cognitive presence, and teaching presence. As indicated by the CoI model, meaningful collaborative learning is achieved when all elements are present within an online course (Garrison et al., 2000). The CoI framework can be used to help design online courses and clarify students' expectations (Cleveland-Innes, 2012; Shea et al., 2014) as well as predict students' satisfaction with online courses (Akyol & Garrison, 2014).

Social presence refers to the ability of individuals to establish themselves as a "real" person in an online class (Garrison et al., 2000). Social interactions within the online environment facilitate support by establishing collegial learning communities that lead to students improved performance and satisfaction (Borup et al., 2012; Zhan & Mei, 2013). The essential components of social presence are open communication, group cohesion, and affective expression (Garrison, 2016). The presence of these components in an online class allows students to freely express themselves, work in collaboration with other students, and reflect their emotions (Tolu, 2013). Two examples of efficient strategies for fostering social presence are:

- Instructors should post their biography, including education background, hobbies and personal interest. Including a photo or video maximizes the personalized nature and can be created for re-use across multiple courses or terms. Faculty can also encourage

students to post their biographies and photo to promote comradery with classmates. Sharing personal characteristics with the learning community can establish personal relationships, encourage interaction, and help students feel emotionally connected to other students and their instructor (Huahui, Sullivan, & Mellenius, 2014).

- Since most of the social interactions happen in the discussion forum, instructors should set an example of how to establish purposeful and personal communication. Asking students to acknowledge information, come up with resolutions as a group, reflect on posts that present a different point of view, address students by their name, and provide personal examples during the discussion, can all have a positive effect on establishing an open channel of communication and building emotional connections with other students.

Cognitive presence highlights the ability to explore information, construct knowledge, and come up with a resolution through collaboration (Garrison, 2016). Students' perception of how well they are doing in class depends on their perception of cognitive presence (Akyol & Garrison, 2014). The presence of this element ensures that students are progressing in achieving their learning goals (Gregori, Torras, & Guasch, 2012). Course design and teaching approaches play an important part in the exhibition of the cognitive presence and helps to enhance students' satisfaction with the learning experience. There are a number of quick and easy ways that faculty can promote cognitive presence in the online classroom; for example:

- Collaborative learning groups are an effective way to foster cognitive presence. Faculty assign students to groups and each group is given an assignment they must complete together. Collaborative learning groups allow students to work through challenges, work with students from different backgrounds, and build lasting skills beyond the classroom.
- In addition to collaborative learning, cognitive presence can be achieved through sustained reflection on the learning outcome (Shea et al., 2014). Receiving personalized feedback on the assignments and completing quizzes can provide students with checkpoints on their academic achievement throughout the class.

Teaching presence is a multidimensional construct that consists of instructional design and organization, facilitation and discourse, and direct instruction to help students achieve desired learning outcomes (Anderson et al., 2001; Garrison, 2016). To help students stay engaged and succeed in an online course, the design should incorporate clear expectations for the activities and submissions and clear guidelines for communication. For example:

- Post an announcement
- Send each student an individualized message that includes detailed course expectations, such as posting requirements, late policy, feedback return policy, major projects, and general conduct.
- Respond to students' questions or phone calls within 24 hours.

Teaching presence is also established by facilitating discourse and providing feedback. Faculty promote students' interest in course material and activities by facilitating discussions and interactions, and providing timely feedback (Anderson et al., 2001; Kauffman, 2015). To promote student satisfaction and engagement—without overburdening instructional workload—faculty can:

- Incorporate real-life experiences when teaching in the discussion forum (Liu & Yang, 2014).
- Apply prepared discussion posts to reply to students' posts. These posts facilitate deeper dialog and learning by clarifying content confusion, bridging concepts, and asking probing questions. Instructors can save time for other teaching matters by saving these posts in a Google docs file to quickly paste them when needed for content topics.
- Integrate weekly classroom assessment techniques in the discussion forum by asking questions about points of confusion, areas of interest, and application of ideas.
- Share motivational quote announcements to foster student motivation.
- Provide personalized feedback on content and formatting for each assignment so students can learn from their mistakes and

improve their skills and knowledge with each submission.

AGENCY AND ASSESSMENT

Agency and assessment are key components of student satisfaction with an online course. Agency refers to students' ability to initiate and control their activity in the online classroom. Students' sense of agency, represented by motivation, time management skills, and multitasking ability, affects their satisfaction with online learning (Dziuban et al., 2015) and hinges on students knowing how they are doing in class (Dziuban et al., 2015). When students can assess their progress in class, as well as receive timely feedback from the instructor, they are more satisfied with their learning experience. Thus, the instructor plays an important role in fostering student agency.

Grading assignments in a timely manner, providing substantive and holistic feedback, and answering student questions within 24 hours helps to maintain consistency in the learning students learning environment. Instructors can also post tutorials on how to help student effectively utilize the online learning features in the classroom. Constrictive and detailed feedback provides students with an understanding on what they are doing well and areas that need improvement. When students have a clear understanding of what they need to work on, it can save them and the instructor time, as it allows both to focus on the areas that contribute to improved learning and a better final grade.

INDIVIDUAL STUDENT DIFFERENCES

Research has identified a number of student characteristics that impact an individual's satisfaction with online learning. While faculty cannot control the individual student differences that enter their online classrooms, there are several student characteristics relevant to online learning that a faculty member can influence: technology self-efficacy, personality, and engagement.

Technology self-efficacy

Self-efficacy is an individual's belief in their ability to carry out a specific behavior and produce desired outcomes (Burger, 2015). In online education, technology self-efficacy is an important factor affecting a student's learning experience and is reflected in course satisfaction and an intent to continue with online learning (Sawang et al., 2013; Wang et al., 2013). Students' confidence in using the Internet and other technology used in online courses may affect their learning experience and satisfaction with online learning (Kuo et al., 2014). According to Kuo et al. (2014), Internet self-efficacy, together with perceived interaction with the instructor and other classmates, was a significant predictor of student satisfaction with an online course. Similarly, Wang et al. (2013), found that students who had previous experience with online learning had higher technology self-efficacy and were more likely to receive higher grades.

Stress-free course navigation can help foster positive experiences with technology for students. The main point of making the online platform easy to navigate is to help eliminate the amount of time wasted by clicking and scrolling for material. Students can spend that time learning the course content and familiarizing themselves with important additional elements of the course such as assignment due dates and supplemental material. Instructors can upload a classroom tour video and additional technical trouble-shooting videos, such as the basic functions of Microsoft Word and Power Point, to the main announcements page. These videos will help students master locating important items in the classroom and ease their anxiety if they are not tech savvy. These videos are most effective if posted prior to the course starting in order to help students have an initial positive experience with the online learning platform. Zoom, a video platform for video conferencing, webinars, and screen sharing, is an effective resource to make these videos (zoom.us). This software is easy to use and can provide synchronous modeled learning. Screen sharing with Zoom is an excellent mechanism for students who need step-by-step guidance when it comes to course navigation. Instructors can share their screen with students to help guide them through the classroom, which builds a strong sense of self-efficacy for students.

Personality

Personality refers to a set of behavioral and thinking patterns that are consistent across time and situations (Burger, 2015) and influence a person's outlook on the world (Kirwan & Roumell, 2015). Students' individual differences can indicate their interactions, engagement, and involvement in their learning (Bolliger & Erichsen, 2013). Student personality has been investigated in several studies focusing on course experiences and satisfaction

with online learning. Among all personality traits, research highlights the relevance of extraversion, conscientiousness, and openness in relation to students' online learning experiences.

The experience of learning online is different for introverts and extraverts (Pavalache-Ilie & Cocorada, 2014). Introverts may have a higher preference for online learning (Kim, 2012), but they are more likely to disapprove of course work that requires them to work in a group with other students (Pavalache-Ilie & Cocorada, 2014). Blau and Barak (2012) also found that introverts expressed greater readiness to participate via text chat, where extroverts preferred to partake in discussions using more revealing communication media. The amount of participation and the quality of the discussions was also higher in extroverts. With that, introvert learners may need additional follow-up in asynchronous communication, such as email or forums inside the classroom (Blau & Barak, 2012). Bolliger and Erichsen (2013) reported that introverts were more likely to be dissatisfied with a course content and intuitives with the amount of interaction, while feelers expressed a need for more flexibility in a blended learning environment. Judgers, in the same study, expressed a need for improving the course design and increased interaction (Bolliger & Erichsen, 2013). A great way to identify these students is to send a welcome email to them during the first day of class that outlines course expectations and major due dates, and instructors can use this opportunity to ask students if they identify as an extrovert or introvert to help tailor instruction. Once this information is gained, instructors can capitalize on it to help increase student satisfaction by having a clear understanding of how certain students best learn. This also helps save time in the long run by knowing up front how to adjust their teaching strategies and build rapport that it is most beneficial for students. For example, for an individual with an introvert personality, instructors can utilize email, and private course messaging to check in with the students and foster conversation. For individuals with more extroverted personalities, instructors can post discussion questions via Flipgrid to appeal to a more interactive and social experience.

Given the characteristics of conscientious students, who are strong willed and have an intrinsic motivation to succeed (Costa & McRae, 1995), it is more likely that they will complete their online courses. Keller and Karau (2013) explored the relationship between the Big Five personality dimensions and students' impressions of their online courses. They found that the personality factors of conscientiousness, agreeableness, and openness were significant predictors of students' impressions of online learning. Conscientiousness was the most consistent predictor of all studied dimensions of engagement, value to career, overall evaluation, anxiety/frustration, and preference for online learning. This means that conscientious students are more likely to be satisfied with their online course. Agreeable and open students scored higher on a value to career dimension, indicating that their course perceptions may be influenced by the aspects of online course that can bring value to their future career (Keller & Karau, 2013). Students who score low on this personality dimension could benefit from additional support and guidance from their instructor. Building rapport is a beneficial way to increase intrinsic motivation for online learners. Instructors can build rapport by welcoming students to class with a welcome phone call the first week of class. During this phone call, instructors can connect with the students by sharing similar interest, hearing why the student decided to go back to school, and learning about the students various academic and professional goals.

Another effective way to strengthen intrinsic motivation is to help students connect with the course material. Posting supplemental discussion questions about real-world events and personal examples, and getting students to share their thoughts and opinions, is valuable. Finally, instructors can show empathy by understanding that students occasionally have situations that arise that can prevent them from progressing in the course. Building rapport at the start of the course saves time on the back end due to the relationship built when teachers are trying to motivate a student that may be struggling with progressing in the course.

Online learning can be challenging due to the asynchronous communication between the student and an instructor, and the fact that learning is self-directed. Students with high scores on the dimension of openness are intellectually curious, open to new experiences, and willing to question their own values (Costa & McRae, 1995).

Sawang et al. (2013) examined the role of student characteristics on online learning satisfaction. They found that the factor of openness significantly contributed to students' satisfaction with an online course (Sawang et al., 2013), which may be related to open students having less fear of challenging course work (Johnson, Miller, Lynam, & South, 2012) and believing in their academic capabilities (Di Giunta et al., 2013).

Engagement

Engagement is an important contributor to student satisfaction with an online course, their motivation to learn, and their performance (Martin & Bolliger, 2018). Dziuban et al. (2015) examined the relationship between student satisfaction and engagement. Engaged learning relates to students' expectation for their instructor to provide a stable and organized learning environment. The elements of engaged learning include a student's ability to "engage, reflect, understand material, collaborate, find information, question, understand course requirements, and manage their own learning" (Dziuban et al., 2015, p. 129). How students view any of these elements in the online classroom may affect their satisfaction with their learning experience. Calli et al. (2013) studied how the factors of perceived playfulness, ease of use, and multimedia content effectiveness may affect student's satisfaction in an online learning setting. They found that all three factors affected perceived usefulness and therefore satisfaction with an online course. The process of reflecting on the course content, referred to as learner-content interaction, was deemed the most important predictor of student satisfaction in a study by Kuo et al. (2014). Learner-content interaction is a process where individual learners elaborate and reflect on the subject matter or the course content. To ensure student engagement in online courses, instructors can promote student interactions with other learners and the instructor by doing the following:

- participate in student discussions at least every other day,
- encourage students to comment on other participation posts and share their perspective,
- provide quality feedback in a timely manner,
- ask students to incorporate required and outside reading to their discussion posts and assignments, and
- consider student individual differences when creating course activities and teaching techniques.

CONCLUSION

Student satisfaction with what they learn and how they learn in an online classroom is an important variable to understand, as it can help instructors and course designers create an environment that fits students' needs. It can be achieved with adequate course design, instructional methods (Kaufman, 2015), and an understanding of individual students' needs (Bolliger & Erichsen, 2013). Course design should be user-friendly (Wang et al., 2013), easy to navigate (AlHamad et al., 2014), and incorporate elements such as clear guidance, rubrics, and constructive feedback (Lee, 2014). Students also expressed their preference for a course design that allows interacting with the instructor and other students (Kuo et al., 2014), incorporates effective visual, written, and animated content (Calli et al., 2013), has a variety of instructional material (Ilgaz & Gülbahar, 2015), and has relevant and realistic context (Sawang et al., 2013). The use of technology is a newer element within course design that is gaining popularity due to students' responses and increased learning satisfaction. Using audio, video, and mobile communication tools has a positive impact on students' online learning experiences (Blau & Barak, 2012; Borup et al., 2012; Chaiprasurt & Esichaikul, 2013). Another factor that emerged from the literature was the effect of students' individual differences, such as technology self-efficacy and personality, on their course satisfaction. Conscientious and open students are more likely to be satisfied with their online learning experience (Keller & Karau, 2013; Sawang et al., 2013). Despite the fact that introverted students may have a higher presence for online learning (Kim, 2012), they may need additional help from the instructor to succeed and be satisfied with the course (Blau & Barak, 2012; Kim, 2012). Also, engagement is a vital contributor to student satisfaction with, their motivation to learn in, and their performance in an online class (Martin & Bolliger, 2018).

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