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Exploring Online Learning Through Synchronous and Asynchronous Instructional Methods

Cynthia Mary Sisteck-Chandler
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A volume in the Advances in Mobile
and Distance Learning (AMD L) Book
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Table of Contents

Foreword	xv
Preface	xvii
Acknowledgment	xxvii
Chapter 1	
Asynchronous/Synchronous Learning Chasm	1
<i>Peter Serdyukov, National University, USA</i>	
Chapter 2	
The Importance of Synchronous Sessions in Online Asynchronous Classes	34
<i>Everett George Beckwith, National University, USA</i>	
Chapter 3	
Exploring Online Learning Through Synchronous and Asynchronous Instructional Methods	52
<i>Jamie Mahoney, Murray State University, USA</i>	
<i>Carol A. Hall, University of Phoenix, USA</i>	
Chapter 4	
Trifecta of Student Engagement: A Framework for Engaging Students in Online Courses.....	77
<i>Heather J. Leslie, University of San Diego, USA</i>	

Chapter 5

- The Importance of Social Presence and Strategies for Incorporating It Into an Online Course 107
Joshua Elliott, Fairfield University, USA

Chapter 6

- Using Learning Management Systems to Promote Online Instruction 123
Vaughn Malcolm Bradley, Montgomery County Public Schools, USA

Chapter 7

- Instructional Design and Online Standards 151
Lesley S. J. Farmer, California State University, Long Beach, USA

Chapter 8

- Process Considerations for the Development and Assessment of Virtual Education Doctorates 178
Erika Prager, Northcentral University, USA
Barbara M. Hall, Northcentral University, USA
Laurie Wellner, Northcentral University, USA
B. Andrew Riggle, Northcentral University, USA
Robin Throne, Northcentral University, USA

Chapter 9

- Precision Education: Engineering Learning, Relevancy, Mindset, and Motivation in Online Environments..... 202
Huda A. Makhluaf, National University, USA

Chapter 10

- The Transition of a School Counseling Program: The Shift From Traditional to Synchronous to Asynchronous Learning 225
Sladjana Sandy Rakich, National University, USA
Sonia Rodriguez, National University, USA
Ronald Morgan, National University, USA

Chapter 11

- A Study on the Effectiveness of College English Blended Learning Under MOOCs Philosophy in China 247
Zhaohui Dai, Shanghai University, China & University of Wisconsin, Madison, USA

Chapter 12

A Holistic Approach to Integrating ePortfolios as Instructional Methods in
Online Programs271

Barbara Miller Hall, Northcentral University, USA

Miranda R. Regnitz, Northcentral University, USA

Compilation of References 290

About the Contributors 326

Index..... 331

Chapter 4

Trifecta of Student Engagement: A Framework for Engaging Students in Online Courses

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ABSTRACT

This chapter describes a framework adapted from Michael Moore's three essential areas: student-content interaction, student-student interaction, and student-instructor interaction for engaging students in online courses. To be fully engaged in an online course, students need to be engaged with the course curriculum content, with their peers, and with their instructor. When students are engaged in all three areas, it is referred to as the Trifecta of Student Engagement. This chapter incorporates literature on each area of the Trifecta of Student Engagement: student-to-content engagement, student-to-student engagement, and student-to-instructor engagement as well as some suggested synchronous and asynchronous digital tools.

INTRODUCTION

Student engagement is an important concept when designing and teaching online courses (Meyer, 2014; Wankel & Blessinger, 2012; Everett, 2015). Although there is a lack of agreement on a single definition, student engagement has been associated with positive outcomes such as student success and development (Mayhew, et, al., 2016). According to the Glossary of Education Reform (2016, n. p.), student engagement

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“refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education.” Engaging students is a learner-centered teaching approach that has been recognized in education as being effective (Beaudoin, 1990; Darsih, 2018; Schreurs & Dumbraveanu, 2014). The term *engagement* in this chapter will focus on the asynchronous and synchronous strategies aimed at attracting student interest, attention, and motivation to learn as well as some suggested online tools that can facilitate student interaction.

Focusing on student engagement for online courses can impact the course experience for students and can improve their satisfaction, learning, and achievement (Leslie, 2019). In an online teaching professional development program, faculty who utilized teaching strategies that focused on student engagement saw an improvement in student grades, higher scores on teaching evaluations, and had students report that their learning improved. Research states that student engagement has been positively associated with student academic achievement, progression, retention, graduation, satisfaction, and deeper learning (National Survey of Student Engagement, 2017; Zilvinskis, Masseria, & Pike, 2017; Lei, Yunhuo, & Zhou, 2018). Focusing on strategies that engage students, then, can positively impact student success.

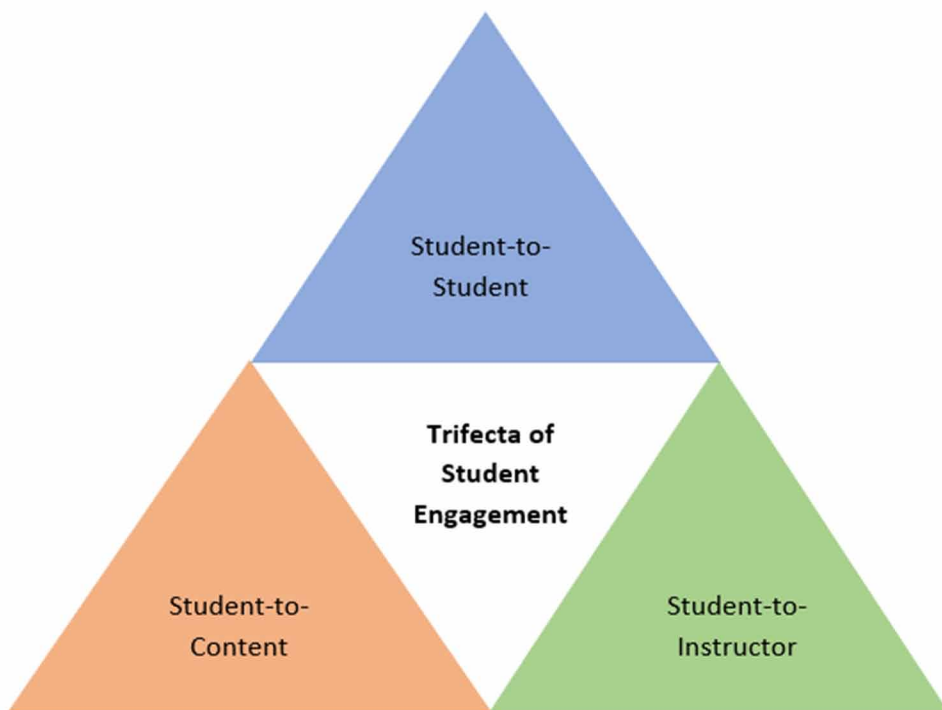
BACKGROUND

One of the major conduits of student engagement in online courses is interaction (Wanstreet, 2009). Interaction allows students to exchange ideas and construct meaning individually and with course participants. Further, interaction in online courses has shown to have a direct impact on student satisfaction, student achievement, and learning outcomes (Durrington, et al., 2006; Bernard et al., 2009). In his seminal research, Michael Moore (1989) outlined three types of interaction in online courses: learner-content interaction, learner-learner interaction, and learner-instructor interaction. Student-content interaction is “the process of intellectually interacting with content that results in changes in the learner’s understanding, the learner’s perspective, or the cognitive structures of the learner’s mind” (Moore, 1989, p. 2). Learner-learner interaction is the process of learners collaborating and communicating information with peers, which can be especially valuable in the areas of application and evaluation (Sharp & Huett, 2006). Learner-instructor interaction “is widely considered essential by educators and students alike. This interaction type includes three tasks to be performed by the instructor: to stimulate interest and motivation; to organize application of student learning; and to counsel, support, and encourage each learner” (Sharp & Huett, 2006, p. 4). It is important to note that the quality of interaction, including personalization and meaningful communication, impacts

Trifecta of Student Engagement

student satisfaction with the overall learning experience (Eom & Wen, 2006). A framework for student engagement, based on the three types of interaction, is referred to as the Trifecta of Student Engagement (Figure 1). This framework proposes that students, to be fully engaged in a course, need to regularly and meaningfully interact with their course curriculum content, with their peers, and with their instructor.

Figure 1. The trifecta of engagement (adapted from Moore, 1989)



The Trifecta of Student Engagement categorizes student engagement into three areas: student-to-content engagement, student-to-student engagement, and student-to-instructor engagement. Each area of the Trifecta intersects and overlaps with one another in a student-centered online learning community (Hoidn, 2017). The chapter is divided into the following sections:

- The Student-to-Content Engagement section focuses on motivational strategies that challenge and inspire students to engage with content.

- The Student-to-Student Engagement section focuses on social learning theory and constructivist approaches to facilitate student engagement with their peers.
- The Student-to-Instructor Engagement section focuses on building connections with students and faculty through feedback and communication strategies.

The following is a review of the literature for each area of the Trifecta of Student Engagement framework as well as suggested digital tools that can be used in practice.

Review of Literature: Engaging Students with Content

The first area of the Trifecta of Engagement aims to help students engage with course curriculum content (Figure 2). There are many strategies that can encourage students-to-content engagement. One way to get students involved in the learning process and interacting with the course content is through active learning. There is an abundance of research that supports the effectiveness of active learning. Consider one study that compared student performance in traditional lecture courses that used passive methods of content delivery to courses that used active learning techniques. Freeman et al. (2014) found that students in traditional lecture courses were 1.5 times more likely to fail than students who took courses where active learning was used. This study also found that examination scores were significantly higher for students where active learning was used. Active learning can encompass a wide variety of different activities where students move beyond passively absorbing content to actively doing something with content. One study explored the kinds of active learning activities students found engaging in online courses. Students reported that they were most engaged by application activities such as case studies, discussion forums about concepts, labs and group projects, research papers, and current event assignments (Dixson, 2010). Such studies demonstrate that active learning can promote students' engagement with content.

The Australian Survey of Student Engagement (AUSSE), which gathered student engagement data from over 25 Australian and New Zealand higher education institutions, defined active learning as “students’ efforts to actively construct their own knowledge” (Coates, 2008, p. vii). This survey found that students were most engaged when challenged to practice higher order thinking and reasoning such as analysis, synthesis, evaluation, and application. Thus, having students complete activities such as solve problems, ask questions, examine assumptions, compare and contrast views, and take part in critical thinking exercises can cultivate deeper learning and engagement with content.

Trifecta of Student Engagement

Strategies that challenge students to think deeply and critically can encourage students' engagement with content. One strategy to facilitate deep thinking and inquiry is the use of essential questions. McTighe and Wiggins (2013) describe the purpose of essential questions as challenging students to grapple with big ideas. Essential questions do not have a single "right" answer that students can simply look up or Google. Rather, essential questions can often lead to additional questions, epiphanies, critical insights, and inspired learning. An example of an essential question is: "How do we overcome prejudice and social bias?" Essential questions inspire students to ponder possibilities, solutions, and inquiries which can further their engagement and connection to course content. Essential questions were used in a classroom by a high school history teacher, Mr. P. Mr. P wanted to challenge his students to think more deeply about complex issues of the past and how they connect to the present, as opposed to memorizing an assortment of facts (Lattimer, 2008). Mr. P conscientiously crafted questions that brought to life the issues that would challenge students' assumptions and perspectives. He introduced the unit on personal freedom by connecting it to experiences that students could relate to such as curfew and dress code. Students took a position on issues, which could provide them with a lens for analyzing other issues that would be seemingly less relatable such as women's right to vote, Prohibition, and the rise of the KKK. Throughout the unit, students reflected on essential questions through Socratic seminars, informal discussions, and journal writing. Students' views evolved from "strident certainty to recognizing the tenuous balance between liberty and safety" (Lattimer, 2008, p. 329). Using essential questions as a teaching strategy had positive effects including increased student engagement, more consistent attendance and homework completion, and a 15-point increase in test scores. One student commented in an end-of-course evaluation, "This class made me think more than any other class I've ever had. I learned a lot about history, and I learned even more about how to think about history" (Lattimer, 2008, p. 329). Essential questions that provoke students to think critically and deeply can facilitate students' engagement with content.

Another area that has been studied in depth in terms of engaging students is the use of motivational strategies. There are many different theories that attempt to explain what motivates students and how to tap into students' motivation. Some literature focuses on approaches aimed at specific types of learners such as adults. Adult learning principles suggests that adult learners are engaged by content that is directly tied to their needs and goals (Knowles, 2005). Therefore, some recommend the use of relevancy-based or utility-value interventions that explain the value or relevance of content as a way to motivate students to learn the content (Harackiewicz, Smith, & Priniski, 2016). Some such interventions demonstrated positive outcomes on academic achievement and motivation (Lazowski & Hulleman, 2016). However, there is little consensus as to how to make content relevant and valuable to all students

(Albrecht & Karabenick, 2017). What is relevant and valuable for one student may not be relevant and valuable for another student. Therefore, giving students the opportunity to personalize content and learning may be a useful motivational strategy.

Some authors have advocated for the use of authenticity in course content whereby students are asked to solve real-world problems that hold significance outside the classroom. Newman, Marks, and Gamoran (1996) found that when elementary and middle school students engaged in authentic work that had value beyond school, such as a community project, the quality of their academic work improved. Going further, when students have some autonomy and choice, such as deciding what their project is, what community it will serve, and how they will demonstrate their learning, this can have a positive impact on intrinsic motivation and performance (Zuckerman, Porac, Lathin, Smith, & Deci, 1978). Giving students options to customize projects by following their passions and interests as well as freedom to make decisions in how they demonstrate their learning can allow them to be more creative and self-directed where they take more responsibility for their learning (Merriam & Bierema, 2014). Granting students agency, autonomy, choice, and trust to do work that is authentic and meaningful to them can allow engagement to occur.

A motivational model that has been effective when applied to online courses is the ARCS model (Keller & Suzuki, 2004). In this model, content must gain the attention of learners; bring relevance that connects content with the learner's goals, past experience, and learning style; build confidence so the learner believes they have the self-efficacy to accomplish the task; and satisfaction with the learning experience. This model has been validated in online courses in multiple countries and has been correlated with decreased drop-out rates and positive motivational outcomes (Keller & Suzuki, 2004).

Helping students form a meaningful connection to course content is another strategy to engage students with content. Some have found success in having students construct their own connections to content through activities such as critical self-reflection (Smith, Rook, & Smith, 2010). Smith, Rook, and Smith (2010) conducted a study to test metacognition and affect-based interventions on high school students using a journaling activity for 12 weeks. One group of students answered affective and metacognitive questions in addition to content-based questions from the textbook. Another group of students only answered content-based questions from the textbook. The group of students who answered the affective and metacognitive questions in addition to the content-based questions demonstrated better retention of content material and earned better grades than their counterparts. Engagement can occur when students have the opportunity to personalize course content and build a meaningful connection of course content to their lives.

Another strategy discussed in the literature to motivate students is to trigger their interest in learning the content. Students who develop an interest in the subject

Trifecta of Student Engagement

matter are more likely to perform better (Hidi & Harackiewicz, 2000). Interest can be developed by a momentary experience of being captivated as well as more enduring affects that lead to further exploration (Harackiewicz, Smith & Priniski, 2016). One method to attract student interest is to use novelty, complexity, or surprise, to trigger attention, excitement, or curiosity (Renninger & Hidi, 2016). One study found the use of inquiry-based learning in a science lesson for ninth graders aroused their interest (Palmer, 2008). The students' level of interest varied throughout the lesson, but the use of novelty, choice, physical activity, and social involvement correlated to the students' interest.

There is no one-size-fits-all approach to motivate students. Student motivation, interest, and perceived utility and relevance of content can vary widely and is dependent on many contextual factors (Albrecht & Karabenick, 2017). Keller and Suzuki (2004) note that student motivation can be influenced but not controlled. Thus, experimenting with methods aimed at attracting student interest and connection to course content are useful for influencing student engagement with content.

Suggested Digital Tools

After examining several strategies for engaging students with content, we can now turn our attention to some practical tools that can be used to facilitate students' engagement with content. Online asynchronous tools that instructors may find useful are blogs and videos.

Blogs

Blogs are like web journals and can be used to promote reflection, self-assessment, and sharing of insights. Blogging, like journaling, can be an effective way for students to connect content to personal experience. Through blogging, students can showcase their learning using text, images, hyperlinks, and media, and their peers can view and comment on their work. There are many free websites that students can use to set up their blogs. Alternatively, some Learning Management Systems have blogging tools included. As students become more proficient in using online technology, tools such as blogs can be a good medium for students to reflect and engage with content. A study examined 350 college students who used blogging as a reflective journaling activity in marketing courses (Muncy, 2014). A majority of students (60 percent) perceived the blogging assignment to be helpful or very helpful in getting them to think about the content. Muncy (2014) notes that several housekeeping items need to be in place for a blogging assignment to be successful including clear instructions that clarify the goals and expectations for the assignment (including reflection versus recitation or summary of content), training for students

on how to use the technology, and examples so students can see what constitutes a good blog. The use of blogs for reflective learning can be one way to have students engage with content.

Instructor-Created Videos

Another tool that instructors may find useful to engage students with content is video-creation software. There are many kinds of software to create videos and some institutions have licenses available for instructors. Some examples of video-creation software include Kaltura, Screencast-O-Matic, Camtasia, and Jing. Instructors can use this software to record their computer screen or themselves through a webcam and present content. Presenting content in different formats such as video can appeal to diverse student learning preferences, including audio, visual, and kinesthetic preferences (The National Center on Universal Design for Learning, n.d.). Some students may even prefer that their instructors utilize technology to deliver content in multiple formats such as video (Bork & Rucks-Ahidiana, 2013). Videos can convey instructor presence and add a human element, which are important in online courses. Videos can also be an effective way to demonstrate a procedure, explain a detailed method, or bring a process or idea to life using 3-D images, audio, and graphics. Faculty can use videos to introduce course material or instructions as well as highlight, explain, or reinforce content.

Choi and Johnson (2005) found that the use of instructional videos can be used to motivate learners by attracting their attention and can help with comprehension and retention of information through the use of visual and audio aids. Instructors can also humanize themselves to students (e.g. show that there is a human being on the other side of the screen) through the use of recorded webcam videos (Friend, 2017), which also falls into the area of instructor-to-student engagement. Faculty storytelling, anecdotes, personal experience, and sharing passion for the discipline can provide students with engaging content and make them feel closer to their instructor (Buffo, 2015). Faculty can support the course learning objectives by creating video lessons to teach the course material. Bork and Rucks-Ahidiana (2013) found that students “felt more like they were in a classroom lecture when instructors used audio and video materials. They noted that materials created by the course instructor provided a personal touch, creating a sense of the instructor’s presence in the course and giving students a feeling that the instructor was actively teaching them” (p. 21). It is a best practice to limit video length to about three minutes, otherwise engagement can decline (Crawford, 2019). Chunking content into easily digestible bite-sized bits can sustain engagement. Instructors can also have students create their own videos for presentations, reflections, and discussions in order for students to humanize themselves, learn new digital skills, and create engaging content for their peers.

Trifecta of Student Engagement

In conclusion, there are numerous ways to engage students with content. Some of the strategies described above for engaging students with content include:

- Using active learning techniques that challenge students to practice higher order thinking.
- Using motivational strategies that frame content as relevant, useful, valuable, and meaningful.
- Using essential questions that provoke students to think critically and deeply.
- Giving opportunities for students to make meaning of content by connecting it to their personal lives using digital tools like blogs for reflective learning.
- Presenting content in multiple formats such as video to appeal to different learning preferences.
- Giving students creative freedom to showcase their learning of content according to their passions and interests.

ENGAGING STUDENTS WITH STUDENTS

The second component of the Trifecta of Engagement is about facilitating student-to-student engagement (Figure 3). Humans are social beings and this affects how we learn. Researchers who have studied psychological well-being note that people have a need to experience a sense of community and belonging (McMillan & Chavis, 1986). In a learning setting, feelings of belonging can positively influence academic persistence and performance (Voelkl, 2012). Being part of a community and having a sense of belonging entails students building relationships with each other, which also improves the learning experience (Hargis, 2005). Student-to-student interactions and relationships have been shown to improve academic performance (Althaus, 1997) and increase student engagement (Voelkl, 2012), motivation (Ryan & Patrick, 2001), and satisfaction (Hiltz & Wellman, 1997).

Vesely, Bloom, and Sherlock (2007) observed that students and instructors perceived community as being very important in online courses, however they also believe it can be more challenging to build community in online courses compared to in-person courses. These authors contend that instructors have a leadership role to play in facilitating community in virtual classrooms. Elements of community that instructors may want to make explicit or co-construct with students include: (1) a shared sense of purpose; (2) an establishment of ground rules or agreements that govern behavior such as netiquette guidelines; (3) norms for interaction and participation; and (4) ensuring an environment of trust, support, and respect among learners. Setting the expectations and climate for students to engage with their peers should also include the rationale for such pedagogies. Namely, that students

have a lot to learn from each other and that peer-to-peer interaction contributes to the learning goals. Expectations for interaction can be reinforced and rewarded by providing students with rubrics to evaluate their participation and contribution to the learning community (Vesely, Bloom, & Sherlock, 2007).

When learners interact in a community toward a shared purpose, it is referred to as collaboration (Palloff & Pratt, 1999). Johnson and Johnson (2002) found that collaborative learning helps students achieve more together through collective efforts, than they can by working alone. Collaborative learning means that “learning is not only active but interactive” where learners are “actively involved in constructing knowledge by applying concepts to problems, and/or formulating ideas into words, and these ideas are built upon through reactions and responses of others” (Hiltz, Turoff, & Harasim, 2007, p. 60). The instructor’s role in collaborative learning is to encourage students to work together on an academic problem, project, or task that connects to the learning goals or outcomes of the course. Hiltz, Turoff, and Harasim (2007) found that when students work on a shared goal they also have the opportunity to interact socially, which can create a sense of community. This can further motivate students to regularly participate in the class (Hiltz, Turoff, & Harasim, 2007). The instructor can facilitate this process by soliciting students’ ideas, thoughts, opinions, and feelings while working on learning tasks (Ryan & Patrick, 2001) and regularly assisting their progress.

Palloff and Pratt (1999) suggest the process of community development mimics the five stages of team development known as forming, norming, storming, performing, and adjourning (Tuckman, 1965, as cited in Palloff and Pratt, 1999). To facilitate this group development process, Palloff and Pratt (1999) recommend creating opportunities for synchronous collaboration such as meeting in person or through web conferencing. According to these authors, indicators of a successful learning community are: (1) active participation, (2) sharing resources among students, (3) socially constructed meaning through questioning or agreement in order to achieve consensus on issues of meaning, (4) expressions of support and encouragement exchanged between students, and (5) a willingness to critically evaluate peers’ work (Palloff, Pratt, & Stockley, 2001). Further, they state that a recipe for a successful learning community is honesty, responsiveness, relevance, respect, openness, and empowerment.

In a study that examined graduate students’ preferences for interaction, Northrup (2002) found that students thought it was important for online instructors to promote collaboration and dialogue. Further, these types of interactive learning activities enhanced students’ motivation and improved academic achievement. Another study also found that online collaboration and dialogue improved undergraduate students’ cognitive learning (Krentler & Willis-Flurry, 2005). In addition, Krentler and Willis-Flurry (2005) found that students who collaborated via online class discussions

Trifecta of Student Engagement

more than 75 percent of the time earned a significantly higher course grade point average (GPA= 2.69) than all other students where the mean course grade point average was 2.49. Collaborative learning, then, can create a sense of connectedness and community in online courses and positively impact learning.

To have a sense of community and make connections, students need to find commonalities in background, motivation, and commitment (Caverly & MacDonald, 2002). To foster these connections, instructors can create opportunities for students to get to know each other through activities such as ice breaker discussions and through meaningful learning activities where students share their prior experience. Incorporating opportunities for student sharing allows students to get to know each other better as the course progresses and tends to result in more authentic conversations. Other practices that can strengthen student-to-student engagement include facilitating camaraderie during deep discussions where the instructor models thoughtful responses and a personal tone (Young & Bruce, 2011). Cultivating such interaction, cohesion, and relationship-building through dialogue can also enhance students' feelings of belonging and can protect against student attrition (Osterman, 2000). Feelings of belonging and being part of a community may be especially beneficial for students who come from marginalized populations (Pittman & Richmond, 2008).

Vesley, Bloom, and Sherlock (2007) found that students ranked instructor modeling as the most important factor in building community in online courses. The idea that students learn from instructor behavior coincides with social learning theory, which suggests that people learn from one another via observation, imitation, and modeling (Bandura, 1977). Instructors can model what has been referred to as *immediacy behaviors*, which “refers to communication behaviors that reduce social and psychological distance between people” (Arbaugh, 2001) or communication behaviors that enhance intimacy between people. Rovai (2001) suggests facilitating two kinds of interactions to promote a sense of community and connectedness among learners: (1) task-driven interactions that align to the learning goals, and (2) socioemotional interactions that enable the well-being of learners and help them develop friendships or bonds. Instructors can demonstrate immediacy by modeling interactions that build relationships. This can include affirming and recognizing students' input or effort, inviting sharing and participation, showing genuine curiosity and interest in students' thoughts and ideas, providing feedback that is personalized and helpful, expressing concern or consideration for students' well-being, and communicating a caring and compassionate attitude (Vesley, Bloom, and Sherlock, 2007). In an online course where students reported feeling a sense of community, the instructor maintained a course presence by posting to the course site daily, mostly through discussion forums (Rovai, 2001). The messages the instructor modeled were encouraging, personalized, and constructive. Instructor messages also mediated issues of student emotional distress, frustration, or confusion. The

instructor modeled substantive responses and constructive feedback in discussion forums and invited student suggestions for improvement.

LaRose and Whitten (2000) observed immediacy behaviors that instructors modeled which students, then, replicated in online courses. These behaviors included giving praise, using personal examples, addressing people by name, asking questions, soliciting opinions, and using humor. These behaviors contribute to what is called social presence, which is an essential component of building community. Social presence conveys a feeling of belonging and togetherness that make students feel connected to the class. Social presence theory classifies online interaction according to how well intimacy and warmth are transmitted between course users and their ability to form personal relationships (Lombard & Ditton, 1997). Social presence has also been correlated to improved learning outcomes (Rourke, Anderson, Archer, & Garrison, 1999). Instructors can enhance social presence in online courses in a number of ways including through informal discussion boards. Woods and Ebersole (2003) studied building social presence using informal discussion boards so students could get to know each other and found that students reported feeling more connected to their peers and were more satisfied with the overall course experience. Because there can be a lack of visual cues in online courses, social presence has to be intentional and apparent (Rovai, 2001). One study revealed some instructor immediacy behaviors that enhance social presence and can positively impact the online learning experience. These behaviors include providing frequent and specific feedback and compliments to students, addressing students by name in all correspondence, relating to students on a personal and professional level, and using emoticons to convey emotions and a supportive tone (Gunter, 2007). Gunter (2007) noted that additional research may be needed on immediacy behaviors that take into account differences such as gender.

A case study examining perceptions of feelings of sense of community from students in an online MBA program found positive correlations between feelings of sense of learning community and feelings of belonging, learning engagement, and overall satisfaction with the quality of online courses (Liu, Magjuka, Bonk, & Lee, 2007). Additionally, the results showed that sense of belonging to a learning community was positively associated with instructor presence and facilitation. The use of announcements to broadcast course-related news and instructor feedback was also correlated with the feelings of sense of community. The use of collaborative group work was associated with feelings of sense of community for the individual groups but not necessarily with the class as a whole. Some instructors in the study indicated that they did not see the importance or necessity of building community, stating that such activities were too time consuming. Other instructors seemed to see a need for creating opportunities for robust idea exchange and dialogue to facilitate the learning community. Student survey results showed that 80 percent of students

Trifecta of Student Engagement

perceived group work was helpful to their learning and 93 percent felt that sharing information and giving feedback to peers contributed to learning. Approximately 86 percent of students felt that collective knowledge is created through group work while taking online courses (Liu, Magjuka, Bonk & Lee, 2007). These results underscore the role that instructors can play in facilitating community as well as how student-to-student interaction and collaboration contributes to a sense of community, belonging, satisfaction, and engagement.

Suggested Digital Tools

After examining instructor strategies for facilitating student-to-student engagement through community building, we can now explore some digital tools for the online classroom that can serve as a medium for interactive student-to-student communication and collaboration. These tools include discussion boards, wikis, and synchronous web conferencing platforms, which may be included in some Learning Management Systems.

Discussion Boards

Discussion boards in online courses are a medium where robust conversations can take place. Because the discussion board is asynchronous, it allows students the time to reflect deeply and craft thoughtful responses (Dawley, 2007). A well-designed discussion board can allow demonstration of knowledge, community building, critical thinking, and reflection. Likewise, a good discussion requires effective facilitation by the instructor. Facilitating discussions that promote critical thinking go beyond asking students to recall information from textbook readings. The use of Socratic questioning techniques and question types can be an excellent resource for facilitators. One study found that the use of Socratic questioning in discussion boards positively impacted students' critical thinking (Lee, Kim, & Kim, 2014). Socratic question types include asking students to: clarify their answers, check their assumptions, provide reason and evidence, examine different viewpoints and perspectives, discuss implications or consequences, or discover the meaning of questions themselves (Lee, Kim, & Kim, 2014).

There are a host of other interactive discussion board activities that can promote student-to-student engagement and critical thinking. Examples include debates, negotiation exercises, role-play scenarios, and student-led discussions. Students can also share their papers, projects, or assignments via the discussion board for peer assessment and peer feedback. Peer assessment can improve students' writing as well as develop assessment and evaluation skills, critical thinking skills, and disciplinary skills (Baker, 2016). This can be beneficial for students' development of writing for

readership when work is not just reviewed and created for an instructor's eyes only (Jenkins, 2017). Students can review each other's papers before they submit them or answer questions about a case study, for example, and evaluate each other's answers. These types of peer assessment activities expose students to others' viewpoints, ideas, values, and perspectives. This can enrich the learning experience and give students skills in self-assessment, when a teacher is no longer present, to build skills for lifelong learning (Seifert & Feliks, 2019). The sharing of student work with peers also helps students develop bonds and contributes to the learning community (Hulett, 2019). Whatever discussion or peer assessment activity is chosen should align with the learning objectives of the course. An explanation of the rationale behind the activity and how it connects to the learning objectives can be a strategy to motivate students to engage (Harackiewicz, Smith, & Priniski, 2016).

Wikis

Another asynchronous digital tool that can be used in online courses to promote student-to-student engagement and collaboration is a wiki (Cilliers, 2017). A wiki allows students to collaboratively create and edit a shared post or document. Students and instructors can see all the versions of the post or document to track edits, additions, and changes. This allows the instructor and students to see who contributed to the wiki and what they contributed. A wiki can be used for creating study guides, summaries of what was learned, brainstorming sessions, creative storytelling, concept mapping, annotated bibliographies, or group projects. Su and Beaumont (2010) found that the use of wikis can promote collaborative learning and confidence through formative self and peer assessment by observing others' contributions. However, potential issues with student use of a wiki may include making mistakes such as accidentally deleting peers' posts or intentionally deleting peers' posts (Su & Beaumont, 2010). Su and Beaumont recommend that sufficient training be provided to students on how to use the technology as well as "do's and don'ts" for using the technology.

Web Conferencing Platforms

Synchronous digital technology that can be used to build community in online courses include web conferencing platforms such as Zoom or Blackboard Collaborate. These platforms allow instructors and students to meet virtually in real time and many have a robust set of interactive and collaborative features such as webcam, microphone, polling, white board, chat, and breakout groups. These functions allow the potential to create highly interactive and engaging learning sessions. Additionally, instructors can use web conferencing platforms to host office hours or meet one-on-one with

Trifecta of Student Engagement

students. McInnery and Roberts (2004) found that synchronous meetings were helpful for building community particularly during the ‘forming’ stage where students had the opportunity to interact, connect, warm-up to, and get to know each in real time. In order to ensure that synchronous learning sessions run smoothly, instructors should become highly familiar with how to use the various platform tools and plan out their sessions carefully. Additionally, students should be oriented to how to use the different features of the platform and how to participate and contribute meaningfully to the learning community.

There are many ways to engage students with their peers. As previously described, some of strategies for facilitating student-to-student engagement include:

- Setting the tone and expectation for interaction and participation through shared agreements, guidelines, and evaluation methods.
- Fostering a sense of community and belonging through tools such as asynchronous discussion boards and synchronous web conferences.
- Designing opportunities for students to collaborate through activities like group work, peer assessment, and wikis.
- Modeling effective interactions and communications that promote critical thinking and collegiality.

ENGAGING STUDENTS WITH INSTRUCTOR

The third component of the Trifecta of Engagement framework focuses on ways faculty can engage with students. Research has shown that student-faculty relationships have a significant impact on educational outcomes including persistence, satisfaction, effort, achievement, and learning (Pascarella, 1980; Endo & Harpel, 1982; Kuh & Hu, 2001). Theories of student engagement have been predicated on student-faculty interaction as being necessary for student integration and success (Spady, 1970; Tinto, 1975).

In one study, Endo and Harpel (1982) categorized faculty interaction as informal or formal. Faculty who interacted informally with students had a friendly relationship and showed concern for students’ emotional and cognitive growth. Faculty who interacted formally with students had a professional relationship and focused on academic and vocational topics. Other variables in the study included the quality of faculty advising and the helpfulness of faculty and their impact on students’ personal/ social outcomes, intellectual outcomes, academic achievement, and satisfaction with education. The results indicated that student-faculty interaction generally affected student outcomes even after controlling for demographic variables. The frequency of informal interactions as well as helpfulness of faculty positively impacted

personal/social outcomes, intellectual outcomes, and satisfaction with education. However, neither frequency of informal nor frequency of formal interactions were found to influence academic achievement, although the latter came close. Terenzini and Pascarella (1980) found that the frequency of intellectual and career-oriented student-faculty interactions had an impact on student achievement. Endo and Harpel's (1982) study confirmed that the frequency and quality of student-faculty interaction showed positive effects on personal, intellectual, and academic outcomes.

Another study identified instructor immediacy behaviors that positively influenced student satisfaction in online community college courses. These include an instructor's ability to clearly communicate expectations, the timeliness and accessibility of the instructor, the instructor's ability to provide clear directions about the coursework, and the instructor's expressed enthusiasm for student learning (Jackson, Jones, & Rodriguez, 2010). Other research has demonstrated that successful online instructors are those who provide meaningful and ongoing communication by emailing their students frequently, replying to email promptly, holding regular online office hours, being active in discussions, and using personal touches in the online classroom (Keengwe & Kidd, 2010). In one study, students were asked to rate various instructor practices in online courses. The instructor practices that students rated as most important to them were focused on interpersonal communication needs (such as email, feedback, and responses to discussion board postings) and information communication needs (such as providing course materials, examples, and instructor expectations) (Dennen, Aubteen, & Smith, 2007). Meeting virtually with students one-on-one or in small groups also enhances student-faculty relationships and those relationships have shown to have a positive correlation to student persistence, performance, and satisfaction (Gaytan, 2013).

Bower and Hardy (2004) posited that an online instructor's most essential job is to engage and sustain students in high levels of interaction and involvement. This may require instructors to invest more time into daily management of the online class than would be required for a traditional campus-based setting (Carroll-Barefield, Smith, Prince, & Campbell, 2005). The opportunity to develop more personal interactions with students in a more flexible format can also be a motivating factor for faculty to teach online (Hiltz, Shea, & Eunhee, 2004).

The role of instructor in an online environment is different than in a traditional classroom (Beaudoin, 1990). The focus has shifted from delivering information and transmitting knowledge to facilitating and stimulating the process of learning. This shift in teacher-centered instruction to learner-centered facilitation requires specialized pedagogical skills in anticipating learner needs, coordinating resources, moderating interactions, and mastering technologies (Jackson, Jones, & Rodriguez, 2010). The TPACK framework (Technological, Pedagogical, Content Knowledge) is a useful framework for the kinds of knowledge needed for effective facilitation

Trifecta of Student Engagement

of learning in an online environment (Harris, Mishra, & Koehler, 2009). Although the instructor role may differ, Chickering and Gamson's (1991) principles for good teaching have been shown to apply effectively to online courses as well (Crews, Wilkinson, & Neill, 2015). The *Seven Principles of Good Practice* are:

1. Encourages reciprocity and cooperation among students
2. Encourages active learning
3. Gives prompt feedback
4. Emphasizes time on task
5. Communicates high expectations
6. Respects diverse talents and ways of learning (Chickering & Gamson, 1991).

Crews, Wilkinson, & Neill (2015) found that these tried and true teaching principles were equally important in online education.

Another theoretical framework that can be used for effective student-instructor engagement is the community of inquiry (CoI) framework (Garrison, Anderson, and Archer, 2000). This model can be used for creating a meaningful (collaborative-constructivist) educational experience through the intentional development of three interdependent components: social presence, teaching presence, and cognitive presence. Social presence enables learners to feel comfortable expressing themselves authentically in terms of their personality and identity. It involves faculty expressing their emotions and creating open communication and group cohesion. Teaching presence involves the design, facilitation, and management of the learning environment to achieve the course learning objectives. It involves direct instruction and helping students build understanding. Cognitive presence enables learners to construct meaning of the learning experience through activities such as reflection and discourse. It involves exploration, integration, and resolution to guide students' thinking (Garrison, 2000). The individual components as well as the overall framework have been examined empirically for effectively building community in online courses (Arbaugh, 2007). Shea, Fredricksen, Pickett, and Pelz (2004) studied the Community of Inquiry framework for 935 online students in the SUNY Learning Network. These researchers found that there was a strong correlation between student satisfaction and high quality and timely feedback on assignments.

One of the most critical areas where instructors engage with students and influence their performance is through giving feedback (Dennen, Darabi, & Smith, 2007). Feedback can be provided in a variety of mediums including written, recorded audio, or video. Prompt feedback allows learners to examine their current knowledge, reflect on their learning, and receive recommendations for improvement. Pyke (2010) notes two types of feedback instructors can use: corrective and motivational. Corrective feedback attempts to provide information to the learner about their

performance while motivational feedback focuses on the goals of the learner. It is recommended that feedback be specific, objective, consistent, and timely (Sachdeva, 1996). Sachdeva (1996) suggests that a supportive environment be established with an open dialogue between student and instructor in a collaborative manner with mutually agreed upon goals that are reinforced through follow-up and action plans. Effective feedback is constructive, actionable, encouraging, and personalized, and focuses on specific behavior, effort, or accomplishment, rather than a judgment on student ability (Brookhart, 2008). Additionally, effective feedback targets the task, not the individual or identity, and should focus on the process, not just the results. Faculty can use their comments to teach, rather than justify a grade, focusing on what students should address in future work. Hattie and Timperley (2007) state that effective feedback must answer three major questions for the student: Where am I going? (What are the goals?), How am I going? (What progress is being made toward the goal?), and Where to next? (What activities need to be undertaken to make better progress?). Giving and receiving feedback is an important interactive component between students and faculty that can enhance the student-faculty relationship, improve student performance, increase satisfaction, and enrich the learning experience.

Suggested Digital Tools

Now that we have explored some strategies for enhancing student-to-instructor engagement through immediacy behaviors in the online classroom, we can now consider some digital tools that can be used as a medium for robust communication and instructor presence. These tools include online journals, webcam, and email, which may be included in some Learning Management Systems.

Online Journals

A virtual space where faculty can engage with students and provide personalized feedback is through online journals. Journals allow a space for reflection and metacognition where students can ask questions, share their struggles and successes, think about their learning, and receive one-on-one mentoring, coaching, and support from faculty. Journaling can be one of the most effective exercises to promote self-awareness, improvement, and reflectivity (Herndon, 1996). Reflection is an important part of the learning process and faculty can encourage students to reflect by using online journaling.

Webcam Videos

Another way for instructors to show their presence in an online course by utilizing a webcam. A webcam can humanize faculty to students by showing that there is a human being on the other side of the screen, which can help foster a sense of student-to-faculty closeness (Griffiths & Graham, 2010). Bork and Rucks-Ahidiana (2013) found that “Given the limitations of the asynchronous online environment for creating more personal connections, students found that hearing and/or seeing their instructor helped them to feel a sense of connection to the instructor and the course” (p. 210). Faculty can use webcams to periodically send check-in announcements to the class regarding upcoming assignments, activities, due dates, instructions, or course information. Faculty can also use webcams to give personalized feedback, support, and encouragement to students recorded as video. Webcams can be used in course activities, such as in the discussion board as an alternative to text-based posts. Lastly, webcam videos can be used to enhance instructions on assignments, explain criteria in rubrics, or give examples for students so they can see what constitutes quality work.

Email

Research has shown that students want personal attention from instructors and that students benefit from robust communication from faculty including personal emails (Gaytan, 2015). Sending students email messages can be a proactive strategy to encourage certain behavior (Supiano, 2018). Emails can be used as an intervention to mitigate student attrition and can positively impact student success (Inkelaar & Simpson, 2015). Faculty can send emails to students who have not logged into the course after a certain period of time; to students who are missing assignments or not participating; to students who are low performing; and to students who are high performing, in order to recognize students’ effort and reinforce positive behavior. Research has shown that student engagement and retention is less dependent on technology and more dependent on personal connection (Inkelaar & Simpson, 2015). Students need to feel acknowledged, have a sense of belonging, and feel like they are a significant part of the learning community and not just a number or course user (Seidman, 2012). This may seem like common sense, but often students drop out because no one was paying attention to their involvement in the course. This is why it is important for faculty to make it a point to connect with each student in a meaningful way. Oftentimes, the use of personal email can have a positive impact on student-faculty interaction (Young, Kelsey, & Lancaster, 2011).

There are numerous ways to engage students with their instructor. Some strategies for creating student-to-instructor engagement include:

- Adding instructor presence in the online course using webcam videos.
- Communicating regularly and meaningfully with students via email, discussion boards, online journals, and other channels.
- Giving personalized quality feedback.
- Sending email messages to motivate, recognize, and encourage successful student behavior.

FUTURE RESEARCH DIRECTIONS

Utilizing student-centered teaching strategies that engage students in learning continues to be a prominent topic in the literature. The Trifecta of Student Engagement is a useful framework when exploring online asynchronous and synchronous instructional methods. Future research is needed to explore methods and measures of student engagement that can inform teaching practices and pedagogies. In addition, there is a growing body of scholarship dedicated to advancing the understanding of what motivates students to learn and engages them in learning which contribute to advancing the overall field of education towards better learning experiences for students. See Additional Reading section for some titles on this topic.

CONCLUSION

This chapter provided a learner-centered framework for engaging students in online courses. This framework, which places students at the center of all course interaction, proposes that students need to be engaged with the course curriculum content, with their peers, and with their instructor in order to be fully engaged in a learning experience (Moore, 1989). Although this framework dates back thirty years ago when online learning was in its infancy, it is still applicable to online education as it has evolved today. This student engagement framework is still relevant and widely referenced much like TPACK framework (Technological, Pedagogical, Content Knowledge), Community of Inquiry framework, and Chickering and Gamson's (1991) principles for good teaching. New technologies and digital tools have since been developed which can be incorporated into various frameworks, but the foundation by which a meaningful, enjoyable, and valuable learning experience is built remains the same. Each area of the Trifecta of Student Engagement framework focuses on strategies aimed at engaging students. Learning theories, evidence-based teaching practices

and models, and empirical research were explored in an attempt to weave together findings from the literature with suggested updated digital tools to use. Those who design and teach online courses may continue to find this framework useful for designing and facilitating online courses.

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